

## Welcome to your CDP Water Security Questionnaire 2019

### W0. Introduction

#### W0.1

**(W0.1) Give a general description of and introduction to your organization.**

Anglo American is a leading global mining company and our products are the essential ingredients in almost every aspect of modern life. Our portfolio of world-class competitive mining operations and undeveloped resources provides the metals and minerals that enable a cleaner, more electrified world and that meet the fast growing consumer-driven demands of the world's developed and maturing economies. With our people at the heart of our business, we use innovative practices and the latest technologies to discover new resources and mine, process, move and market our products to our customers around the world – safely, responsibly and sustainably.

As a responsible miner we are the custodians of what are precious natural resources. We work together with our business partners and diverse stakeholders to unlock the sustainable value that those resources represent for our shareholders, the communities and countries in which we operate, and for society as a whole. Anglo American is re-imagining mining to improve people's lives.

FutureSmart Mining™ is our innovation-led pathway to sustainable mining and includes our far-reaching Sustainable Mining Plan. Aligned to the UN's Sustainable Development Goals, we have set out a series of ambitious 2030 goals and interim targets that relate to three major areas of sustainability – trusted corporate leader, i.e. advocating for the highest standards of governance to drive transparency and trust in mining and mined products; healthy environment; and thriving communities.

Our portfolio of world class competitive mining operations and undeveloped resources provides the raw materials to meet the growing consumer-driven demands of the world's developed and maturing economies.

De Beers has the global leadership position in diamonds, producing around a third of the world's rough diamonds, by value.

Anglo American has a world-class asset position in copper, with the potential to establish a leading position built around its interests in two of the world's largest copper mines – Los Bronces (a 50.1% owned subsidiary) and Collahuasi (44% owned joint operation), with Reserve Lives of 23 years and 69 years, respectively.

Anglo American Platinum (held through a 78% interest in Anglo American Platinum Limited) is the world's leading PGM producer.



Anglo American’s iron ore operations provide customers with niche, high iron content ore. In South Africa, we have a majority share (69.7%) in Kumba Iron Ore. In Brazil, we have developed the integrated Minas-Rio operation (100% ownership) which produces a high quality pellet feed product. In manganese, we have a 40% share in Samancor Holdings.

We are the world’s third largest exporter of metallurgical coal and our coal operations in Australia serve customers throughout Asia and the Indian sub-continent, Europe and South America. In South Africa, we supply thermal coal to both the export and domestic energy markets. We have reduced our thermal coal footprint by half in the last five years through a responsible divestment strategy. We do not intend to acquire any additional thermal coal assets. Over time, we expect to continue to reduce our thermal coal footprint but the way we transition the business will be considered and responsible. Our Nickel business in Brazil has capacity to produce around 45,000 tonnes per annum of nickel, whose primary end use is in the global stainless steel industry.

## W-MM0.1a

**(W-MM0.1a) Which activities in the metals and mining sector does your organization engage in?**

Activity	Details of activity
Mining	Copper Platinum group metals Iron ore Nickel Diamonds Other mining, please specify Metallurgical Coal; Thermal Coal
Processing metals	Copper Platinum group metals Nickel

## W0.2

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

	Start date	End date
Reporting year	January 1, 2018	December 31, 2018

## W0.3

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

- Australia
- Brazil
- Canada
- Chile
- Peru
- South Africa
- Zimbabwe

## W0.4

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

- USD

## W0.5

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

- Companies, entities or groups over which operational control is exercised

## W0.6

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

- Yes



## W0.6a

**(W0.6a) Please report the exclusions.**

Exclusion	Please explain
<p>Anglo American accounts for 100% of operations over which it holds management control. During 2018 we took the decision to exclude certain non-managed operations from our sustainability reporting, i.e. Debswana and Namdeb. These operations were previously included due to substantial management involvement; however, they are strictly defined as non-managed JVs. This is in line with industry best practice and aligns with the scope and boundary of sustainability reporting. A full list of those operations is available on page 84 of our Sustainability Report 2018 (<a href="https://www.angloamerican.com/~media/Files/A/Anglo-American-Group/PLC/investors/annual-reporting/2019/aa-sustainability-report-2018.pdf">https://www.angloamerican.com/~media/Files/A/Anglo-American-Group/PLC/investors/annual-reporting/2019/aa-sustainability-report-2018.pdf</a>). Our proportional share of independently managed operations is not included in our sustainability reporting scope. Acquisitions and divestments are accounted for from date of acquisition/until date of sale.</p>	

## W1. Current state

### W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	<p>DIRECT: Water use at our' operations includes, but is not limited to, drilling, ore processing activities, slurring of tailings, dust suppression, sanitation and hygiene, and cooling activities. Good quality (potable) freshwater is vital for the use in our change houses and offices for the health for our employees and fit for purpose water quality is vital for the development and growth of our operations. Thus, without sufficient good quality water, the integrity of our production and health of our workforce would be compromised.</p>

			<p>INDIRECT: Many of the goods we procure rely on good quality water in their production (e.g. steel and timber). Sufficient amounts of freshwater are also important in the supply of largely hydro-based electricity to our Brazilian operations. In addition, good quality freshwater is required to ensure the health and well-being of our surrounding local communities and employees, who use freshwater for consumption and sanitation Thus, an insufficient supply of these commodities would pose a risk to operational continuity.</p> <p>FUTURE: Future dependency on freshwater in direct operations will reduce as we implement initiatives to meet our 2030 freshwater reduction targets. With predicted global water shortfall of 40% by 2030, exacerbated by the impacts of climate change, it is anticipated that organisations in our value chain will reduce their dependency on freshwater too.</p>
<p>Sufficient amounts of recycled, brackish and/or produced water available for use</p>	<p>Vital</p>	<p>Not important at all</p>	<p>DIRECT: A large proportion of our operations are in water stressed regions, emphasising the importance of relying on lower quality water. Lower quality water can be used in many of our processing operations (from dust suppression to ore processing) and reduces our need for potable water. Thus, recycling and process water initiatives are vital to water security at our operations. Currently, approximately 70% of water required is met by recycled water. Increased water conservation and demand management and use of third-party grey water as opposed to fresh or potable water use is key to our strategy.</p> <p>INDIRECT: Indirect use of lower quality or recycled water is not common across our value chain. Accordingly, it is not deemed important to Anglo American currently. Hence there is an opportunity for Anglo American to focus on grey water use to leave fresh water in the catchments for our stakeholders to drink or use for other purposes.</p> <p>FUTURE: Future dependency on lower quality water in direct operations will increase as we implement initiatives to reduce freshwater and recycle more. With predicted global water shortfall of 40% by 2030, exacerbated by the impacts of climate change, it is anticipated that organisations in our value chain will also increase their dependency on lower quality and recycled water.</p>

## W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	Anglo American records consumption of water withdrawals or abstractions by all its operations (100% of facilities) on a monthly basis. Water meters and operational water balances are used to measure and monitor water withdrawal. The data facilitates performance tracking against water reduction targets. We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity
Water withdrawals – volumes from water stressed areas	100%	Since a number of Anglo American facilities are in water-stressed areas, we record water withdrawal from all of our water-stressed operations on a monthly basis. Water meters and operational water balances are used to measure and monitor water withdrawal. The data facilitates performance tracking against water reduction targets.
Water withdrawals – volumes by source	100%	Anglo American records the volume of water abstracted from different sources (surface water, ground water and third parties) at 100% of its facilities monthly. Water meters are used to obtain metered data. 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. It also enables us to meet our external reporting requirements in line with the Global Reporting Initiative (GRI) and ICMM guidelines.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sectors]	100%	In 2017, Anglo American started to report in line with the ICMM water reporting guideline across all its operations. Anglo American now records consumption of produced water withdrawn for all (100% of facilities) of its operations. Produced water in this case refers

		<p>to water entrained in ore.</p> <p>This is recorded monthly and is calculated based on the volume of ore produced.</p>
Water withdrawals quality	100%	<p>Anglo American measures withdrawal quality at its operations where it is relevant. The nature of mining and processing is such that large volumes of recycled or lower quality water are used, the quality of which is not vitally important and hence the quality of withdrawals is not necessarily monitored on an ongoing basis. Where this is a legal or process requirement in our operations, this is undertaken.</p> <p>Anglo American measures this water aspect for all its sites (100%) where its required on an ad hoc basis using sampling approaches and laboratories to determine qualities.</p>
Water discharges – total volumes	100%	<p>Anglo American’s water management standard requires operations to develop a water balance model, which includes measuring and monitoring discharges. Any excess water discharged to the environment occurs as a result of authorised discharges, spills owing to high rainfall or accidental discharges from various operations.</p> <p>The total volume of water discharged from Anglo American facilities is monitored and measured either through calculation or through metering as discharge occurs and is used to track environmental performance. Where a significant discharge occurs, as a result of a large rainfall event for example, then discharge volumes are estimated and not measured accurately. Anglo American measures this water aspect for all its sites (100%).</p>
Water discharges – volumes by destination	100%	<p>Anglo American’s water management standard requires operations to develop a water balance model, which includes measuring and monitoring discharges.</p> <p>The total volume of water discharged by destination (e.g. surface water, water to third parties etc.) from Anglo American facilities is monitored and measured either through calculation or through metering as discharge occurs and is used to track environmental performance. Where a significant discharge occurs, as a result of a large rainfall event for example, then discharge volumes are estimated and not measured accurately. Anglo American measures this water aspect for all its sites (100%).</p>

Water discharges – volumes by treatment method	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 its relevant sites (100%) as it occurs either through meters, sampling and calculations. Where a significant discharge occurs, as a result of a large rainfall event for example, then discharge volumes are estimated and not measured accurately.
Water discharge quality – by standard effluent parameters	100%	Water quality from discharges is measured at all Anglo American sites (100%) as it occurs using sampling approaches and laboratories to determine qualities.
Water discharge quality – temperature	100%	Temperature of discharge is monitored by Anglo American at sites where this is a legal requirement. Anglo American measures this water aspect for all its relevant sites (100%) using sampling approaches and laboratories monthly, or more regularly as required.
Water consumption – total volume	100%	Anglo American records total volumes of consumption of water from all its operations throughout the year (100% of facilities) monthly using metered data. This is done to track performance indicators and used to see whether water reduction targets are met.
Water recycled/reused	100%	Anglo American records total volumes of recycled / reused data from all of its operations throughout the year (100% of facilities) on a monthly basis. In 2017, Anglo American started implementing the new water-management standard and reporting requirements. The standard guides a risk-based, regional approach to water management, in line with global best practice and the ICMM water reporting guidelines. The first step for all operations was to complete a self-assessment and gap analysis against the water standard. This was completed in 2018 at several sites and showed that not all Anglo American sites have detailed water balances or hydrological models in place to allow for accurate and consistent reporting of recycled / reused water data across the Group for 2018. Accordingly, the recycled / reused data for some operations is estimated through





		calculation, whereas with others it is measured using meters. At year end, 60% of our sites had completed (or restated) their water balance.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Workers at all (100%) of our sites are provided with fully functioning WASH services (clean drinking, cooking and cleaning water; solid waste management and drainage; and hygiene information and education). The primary concerns of our company representatives responsible for public health is that of the quality of drinking water, the hygiene of change houses on site and food safety. We regularly swab facilities, undertake deep cleansing of change houses and sample drinking water to verify the quality. The results of these monitoring measures are reported internally monthly.

## W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	227,497	Lower	<p>COMPARISON: The reduction in withdrawals is primarily attributed to the exclusion of Namdeb and Debswana in the 2018 reporting scope as they are now defined as non-managed JV's. These operations previously accounted for 20% of total withdrawals in 2017. The divestment of our New Vaal coal operation since February 2018 also contributed to the reduction in total withdrawal for Anglo American. It is important to note that the analysis is based on the withdrawal data provided by the operations which has not been verified or validated against the water balance.</p> <p>FUTURE: In 2017, Anglo American revised its internal water reporting requirements to ensure alignment with the International Council for Mining and Metals (ICMM) guidance, in addition to the 2018 GRI Standards requirements. This revision has fundamentally shifted our site-level reporting of water and as a result we are currently ensuring data consistency and validity for many of the reporting requirements. It is anticipated that future volumes will decrease as we implement</p>



			<p>reduction measures to meet our 2020 and 2030 water reduction targets.</p> <p>We will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.</p>
Total discharges	86,422	Lower	<p>COMPARISON: The 14% reduction in discharge is attributed to the exclusion of Namdeb and Debswana in the 2018 reporting scope as they are now defined as non-managed JV's. These operations previously accounted for 21% of total discharges in 2017. It is important to note that the analysis is based on the discharge data provided by the operations which has not been verified or validated against the water balance.</p> <p>FUTURE: It is not possible to predict whether the future volumes will increase or decrease as discharge volumes in the mining sector are driven primarily by rainfall.</p>
Total consumption	141,075	Much lower	<p>COMPARISON: The substantial reduction in consumption is primarily attributed to the exclusion of Namdeb and Debswana in the 2018 reporting scope as they are now defined as non-managed JV's. These operations previously accounted for 20% of total consumption in 2017.</p> <p>FUTURE: In 2017, Anglo American revised our water reporting requirements to ensure alignment with the International Council for Mining and Metals (ICMM) guidance, in addition to the 2018 GRI Standards requirements. This revision has fundamentally shifted our site-level reporting of water and as a result we are currently ensuring data consistency and validity for many of the reporting requirements. We are working towards ensuring readiness to disclose accurate consumption and re-use/recycling data next year.</p> <p>For the purposes of CDP reporting this year we have reported consumption as withdrawals less discharge, hence our consumption figures balance. We recognise that this is not a true reflection of consumption, hence our consumption data going forward will change as our definition for consumption is more sophisticated than withdrawals less discharge and is in line with ICMM requirements. It is not possible to predict whether the future consumption volumes will increase or decrease as consumption volumes in the mining sector account for rainfall which is difficult to predict.</p> <p>We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production</p>

			against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.
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## W1.2d

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

	% withdrawn from stressed areas	Comparison with previous reporting year	Identification tool	Please explain
Row 1	58	About the same	WRI Aqueduct	<p>Anglo American Group analyses the water stress position of all its operations on a yearly basis. The water stress position of the Anglo American operations has not changed significantly during the last year. The percentage of water withdrawn from stressed areas has also not significantly changed since the previous year.</p> <p>The approach to evaluating whether an operation is in a water stressed area includes consideration of water security, operational water management, water quality and pollution risks, environmental protection and compliance, as well as mine dewatering. Anglo American also assesses the socio-economic needs of the area to understand which other stakeholders require water. For example, in South Africa a recently completed Regional Limpopo water balance for our Platinum operations indicated that the entire region will remain extremely water stressed till beyond 2028, when water will be freed up as coal fired power stations shut down. Future business plans in relation to the regional and catchment context for operations are assessed to understand whether there will be increased water demand from Anglo American. The WRI Aqueduct tool has assisted in this process to guide Anglo American on water stress in the basin. However, the approach that Anglo American has adopted in assessing water stress for its operations is more advanced as it takes these other factors into account.</p> <p>We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in</p>

				production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.
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## W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	72,240	Lower	<p>RELEVANCE: Withdrawals from fresh surface water are relevant as this is regarded as one of the key sources of water collected by mining operations.</p> <p>COMPARISON: The reduction in freshwater withdrawal is primarily attributed to our Los Bronces operation which implemented an operational efficiency strategy and short-term contingency plans to overcome its water security risks in 2018.</p> <p>FUTURE: It is anticipated that future volumes will decrease as we implement reduction measures to meet our 2020 and 2030 water reduction targets. We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.</p>
Brackish surface water/Seawater	Relevant	15	Much higher	<p>RELEVANCE: Withdrawals from brackish surface water/seawater now has limited relevance to our managed operations as only our De Beers Marine operation uses this source.</p> <p>COMPARISON: The significant reduction in brackish surface</p>

				<p>water/seawater withdrawal is attributed to the exclusion of Namdeb in the 2018 reporting scope as it is now defined as a non-managed JV. Namdeb accounted for 99% of the total brackish surface water/seawater withdrawal in 2017.</p> <p>FUTURE: It is anticipated that future volumes will remain low as we have only one operation using limited volumes.</p>
Groundwater – renewable	Relevant	112,950	Lower	<p>RELEVANCE: Withdrawals from groundwater are relevant as this is regarded as one of the key sources of water for some of our mining operations.</p> <p>COMPARISON: The significant reduction in brackish seawater withdrawal is attributed to the exclusion of Namdeb and Debswana in the 2018 reporting scope as they are now defined as a non-managed JV's. Namdeb and Debswana previously accounted for 15% of the total groundwater withdrawal in 2017.</p> <p>FUTURE: It is anticipated that future volumes will decrease as we implement reduction measures to meet our 2020 and 2030 water reduction targets. We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.</p>
Groundwater – non-renewable	Not relevant			<p>RELEVANCE &amp; COMPARISON: 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, hence there is no change from the previous year.</p> <p>FUTURE: It is anticipated that this approach will not change in the near future, thus reported non-renewable groundwater will remain the same.</p>

Produced/Entrained water	Relevant	6,182	Higher	<p>RELEVANCE: Produced water is relevant as Anglo American extracts water in the ore that is extracted during mining.</p> <p>COMPARISON: The increase in water produced is attributed to our Los Bronces site which used higher volumes in line with its strategy to reduce potable water use.</p> <p>FUTURE: It is anticipated that future volumes will increase as we improve our reporting in this category.</p>
Third party sources	Relevant	36,110	Lower	<p>RELEVANCE: Withdrawals from third-party sources are relevant as they can be one of the key sources of water for some of our mining operations.</p> <p>COMPARISON: The significant reduction in withdrawal from third party sources withdrawal is attributed to the exclusion of Namdeb and Debswana in the 2018 reporting scope as they are now defined as non-managed JV's. Namdeb and Debswana previously accounted for 12% of the total third party withdrawal in 2017.</p> <p>FUTURE: It is anticipated that future volumes will remain the same as we strive to reduce the use of potable water but increase the amount of wastewater from other organisations.</p>

## W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	44,157	Much higher	<p>RELEVANCE: Discharge to surface water is relevant as discharge on mining operations does sometimes occur when there are large rainfall events.</p> <p>COMPARISON: The increase in discharge can mainly be attributed to our Victor</p>

				<p>operations.</p> <p>FUTURE: It is not possible to predict whether the future volumes will increase or decrease as discharge volumes in the mining sector are driven primarily by rainfall.</p>
Brackish surface water/seawater	Relevant	4,298	Much lower	<p>RELEVANCE: Discharge to seawater is relevant for our De Beers Marine and Minas Rio operations that discharge seawater.</p> <p>COMPARISON: The substantial decrease in brackish/seawater discharge is attributed to our Minas Rio operations which suspended operation for 280 days due to two environmental incidents that occurred in March and the exclusion of Namdeb and Debswana in the 2018 reporting scope as they are now defined as non-managed JV's.</p> <p>FUTURE: It is anticipated that future volumes of discharge to sea water will increase as we align with normal operation conditions.</p>
Groundwater	Relevant	1,727	Much lower	<p>RELEVANCE: Discharge to ground water is relevant as a number of our operations discharge to groundwater.</p> <p>COMPARISON: The reduction in groundwater discharge is attributed to the divestment of our Kriel coal operation which accounted for 19% of groundwater discharge in 2017.</p> <p>FUTURE: It is not possible to predict whether the future volumes will increase or decrease as discharge volumes in the mining sector are driven primarily by rainfall.</p>
Third-party destinations	Relevant	36,241	About the same	<p>RELEVANCE: Discharge to third-party destinations is relevant as discharge at some mining or processing operations requires treatment while in other instances, we supply lower quality water to other parties.</p> <p>COMPARISON: A slight reduction in third-party destination discharge was measured in the reporting year and this is primarily attributed to the divestment of our New Vaal operation in February 2018.</p> <p>FUTURE: It is not possible to predict whether the future volumes will increase or</p>

				decrease as discharge volumes in the mining sector are driven primarily by rainfall.
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## W1.2j

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

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	51-75	About the same	<p>Recycled / reused water is defined by Anglo American as the total volume of worked water flows to tasks as a proportion (%) of the total volume of water flows to tasks in line with the Water Accounting Framework (WAF) definition that is also used by the ICMM. In 2017, Anglo American started to report in line with the ICMM water reporting guideline. Following the roll out process and engagements at sites, it was noted that not all Anglo American sites have detailed water balances or hydrological models in place to allow for accurate and consistent reporting across the Group. As a result, we are unable to report accurate recycled/reused water data for all operations in 2018 but would estimate that the volumes recycled, estimated to be at 70%, are about the same as the previous year.</p> <p>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. Anglo American has set ambitious targets in this regard, namely a 75% recycling rate by 2020. In striving to reduce levels of water usage, with the aim of operating a waterless mine, we are developing new technology initiatives that will result in far less mineral ore having to be processed. Our work towards a waterless mine focuses on evaporation measurement and dry tailings disposal, exploring innovative approaches to dry separation, and non-aqueous processing. For example, Coarse particle recovery (CPR) allows us to float particles at sizes two to three times larger than normal, consuming less energy and increasing production. It enables us to easily extract water from the process, leaving a waste stream that is dry and stackable. In pursuit of this target, all operations undertook a detailed self-assessment and gap analysis against the water standard in 2018. The majority of operations have completed this process and all sites' results</p>



		are to be finalised in 2019. Thus, it is anticipated that full recycled/reuse data will be available for all operations in 2019.
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## W-MM1.2j

**(W-MM1.2j) For your metals and mining operations, provide details of the volume of water recycled or reused by your organization and the proportion of total water use this represents.**

	Volume of water recycled or reused by your organization (megaliters/year)	% of total water use recycled or reused	Please explain
Row 1		51-75	<p>Recycled / reused water is defined by Anglo American as the total volume of worked water flows to tasks as a proportion (%) of the total volume of water flows to tasks in line with the Water Accounting Framework (WAF) definition that is also used by the ICMM. In 2017, Anglo American started to report in line with the ICMM water reporting guideline. Following the roll out process and engagements at sites, it was noted that not all Anglo American sites have detailed water balances or hydrological models in place to allow for accurate and consistent reporting across the Group. As a result, we are unable to report accurate recycled/reused water data for all operations in 2018 but would estimate that the volumes recycled, estimated to be at 70%, are about the same as the previous year.</p> <p>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. Anglo American has set ambitious targets in this regard, namely a 75% recycling rate by 2020. In striving to reduce levels of water usage, with the aim of operating a waterless mine, we are developing new technology initiatives that will result in far less mineral ore having to be processed. Our work towards a waterless mine focuses on evaporation measurement and dry tailings disposal, exploring innovative approaches to dry separation, and non-aqueous processing. For example, Coarse particle recovery (CPR) allows us to float particles at sizes two to three times larger than normal, consuming less energy and increasing production. It enables us to easily extract water from the process, leaving a waste</p>

			stream that is dry and stackable. In pursuit of this target, all operations undertook a detailed self-assessment and gap analysis against the water standard in 2018. The majority of operations have completed this process and all sites' results are to be finalised in 2019. Thus, it is anticipated that full recycled/reuse data will be available for all operations in 2019.
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### W-MM1.3

**(W-MM1.3) Do you calculate water intensity information for your metals and mining activities?**

Yes

### W-MM1.3a

**(W-MM1.3a) For your top 5 products by revenue, provide the following intensity information associated with your metals and mining activities.**

Product	Numerator: Water aspect	Denominator: Unit of production	Comparison with previous reporting year	Please explain
Diamonds	Total water withdrawals	Other, please specify  Thousands of carats	About the same	CHANGE: Water withdrawal at our managed diamond operations remained relatively consistent while production increased by 2%. This resulted in total withdrawal decreasing slightly (-2%) in the reporting year. USE: This intensity metric is used internally for tracking water performance. STRATEGY: Anglo has revamped its water strategy, starting with the implementation of the Group Water Management Standard in 2016, followed by the initiatives to support the implementation of its key components in 2017. A core element of the Standard is the development of water information and management practices. Thus, in 2018 all operations started the process of completing a self-assessment and gap analysis against the standard which will be finalized in 2019. Congruent to this work towards improved water-information management, Anglo American plans to continue implementing infrastructure improvements, water treatment/water recovery



				<p>technologies and managing environmental impacts, in order to address the specific water risks of each site.</p> <p>TRENDS: It is anticipated that our long-term water intensity will improve as we implement the above strategy towards achieving our 2020 BAU and 2030 stretch goal water targets.</p>
Platinum	Total water withdrawals	Other, please specify  Produced ounces (koz)	About the same	<p>CHANGE: Year on year comparisons show that total withdrawal intensity decreased slightly (-4%). This is due to the reduction in water withdrawal at our platinum sites from the implementation of various water efficiency initiatives and improved water management, combined with the increase in platinum production.</p> <p>USE: This intensity metric is used internally for tracking water performance.</p> <p>STRATEGY: Anglo has revamped its water strategy, starting with the implementation of the Group Water Management Standard in 2016, followed by the initiatives to support the implementation of its key components in 2017. A core element of the Standard is the development of water information and management practices. Thus, in 2018 all operations started the process of completing a self-assessment and gap analysis against the standard which will be finalized in 2019. Congruent to this work towards improved water-information management, Anglo American plans to continue implementing infrastructure improvements, water treatment/water recovery technologies and managing environmental impacts, in order to address the specific water risks of each site.</p> <p>TRENDS: It is anticipated that our long-term water intensity will improve as we implement the above strategy towards achieving our 2020 BAU and 2030 stretch goal water targets. We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.</p>
Copper	Total water withdrawals	Other, please specify	Much lower	<p>CHANGE: Total withdrawal intensity at our managed copper operations decreased in the reporting year. This was due to the reduction in total withdrawal achieved at our Los</p>



		Kilotons produced		<p>Bronces and El Soldado sites due to efficiency initiatives and also due to use of storage due to ongoing drought conditions. Copper production at our managed operations also increased by 21% in the reporting year which further compounded the decrease in water withdrawal intensity.</p> <p>USE: This intensity metric is used internally for tracking water performance.</p> <p>STRATEGY: Anglo has revamped its water strategy, starting with the implementation of the Group Water Management Standard in 2016, followed by the initiatives to support the implementation of its key components in 2017. A core element of the Standard is the development of water information and management practices. Thus, in 2018 all operations started the process of completing a self-assessment and gap analysis against the standard which will be finalized in 2019. Congruent to this work towards improved water-information management, Anglo American plans to continue implementing infrastructure improvements, water treatment/water recovery technologies and managing environmental impacts, in order to address the specific water risks of each site.</p> <p>TRENDS: It is anticipated that our long-term water intensity will improve as we implement the above strategy towards achieving our 2020 BAU and 2030 stretch goal water targets.</p>
Nickel	Total water withdrawals	Other, please specify Tons produced	Higher	<p>CHANGE: Water intensity for our Nickel operations increased (11%) due to a reduction in production from a 40-day planned maintenance stoppage at Barro Alto in the first half of 2018. Water withdrawal at our Nickel sites also increased by 7% in the reporting year which further contributed to the increased intensity.</p> <p>USE: This intensity metric is used internally for tracking water performance.</p> <p>STRATEGY: Anglo has revamped its water strategy, starting with the implementation of the Group Water Management Standard in 2016, followed by the initiatives to support the implementation of its key components in 2017. A core element of the Standard is the development of water information and management practices. Thus, in 2018 all operations started the process of completing a self-assessment and gap analysis against the standard which will be finalized in 2019. Congruent to this work towards</p>



				<p>improved water-information management, Anglo American plans to continue implementing infrastructure improvements, water treatment/water recovery technologies and managing environmental impacts, in order to address the specific water risks of each site.</p> <p>TRENDS: It is anticipated that our long-term water intensity will improve as we implement the above strategy towards achieving our 2020 BAU and 2030 stretch goal water targets. We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.</p>
Iron Ore	Total water withdrawals	Other, please specify  Megatons produced	Higher	<p>CHANGE: Iron-ore production dropped by 25% due to the pipeline incident-related stoppages at Minas Rio. Although the total water withdrawal at the iron ore sites has reduced by 6%, the significant decrease in production resulted in a substantially higher intensity factor for 2018.</p> <p>USE: This intensity metric is used internally for tracking water performance.</p> <p>STRATEGY: Anglo has revamped its water strategy, starting with the implementation of the Group Water Management Standard in 2016, followed by the initiatives to support the implementation of its key components in 2017. A core element of the Standard is the development of water information and management practices. Thus, in 2018 all operations started the process of completing a self-assessment and gap analysis against the standard which will be finalized in 2019. Congruent to this work towards improved water-information management, Anglo American plans to continue implementing infrastructure improvements, water treatment/water recovery technologies and managing environmental impacts, in order to address the specific water risks of each site.</p> <p>TRENDS: It is anticipated that our long-term water intensity will improve as we implement the above strategy towards achieving our 2020 BAU and 2030 stretch goal water targets. We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance</p>

				possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.
Coal	Total water withdrawals	Other, please specify Megatons produced	Higher	<p><b>CHANGE:</b> The increase in year on year comparisons of coals water withdrawal intensity is a result of decreased coal production at our managed coal operations. Although a noteworthy reduction in withdrawal was achieved in 2018 (due to the divestment of various coal mines), these results was outweighed by the substantial decrease in coal production which ultimately led to the higher water intensity metric.</p> <p><b>USE:</b> This intensity metric is used internally for tracking water performance.</p> <p><b>STRATEGY:</b> Anglo has revamped its water strategy, starting with the implementation of the Group Water Management Standard in 2016, followed by the initiatives to support the implementation of its key components in 2017. A core element of the Standard is the development of water information and management practices. Thus, in 2018 all operations started the process of completing a self-assessment and gap analysis against the standard which will be finalized in 2019. Congruent to this work towards improved water-information management, Anglo American plans to continue implementing infrastructure improvements, water treatment/water recovery technologies and managing environmental impacts, in order to address the specific water risks of each site.</p> <p><b>TRENDS:</b> It is anticipated that our long-term water intensity will improve as we implement the above strategy towards achieving our 2020 BAU and 2030 stretch goal water targets. We are continuously improving our approach and will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.</p>

## W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

## W1.4a

**(W1.4a) What proportion of suppliers do you request to report on their water use, risks and/or management information and what proportion of your procurement spend does this represent?**

### Row 1

---

**% of suppliers by number**

1-25%

**% of total procurement spend**

1-25

**Rationale for this coverage**

Anglo American's approach to procurement is guided by the Responsible Sourcing Standard for Suppliers, which details performance expectations across 5 pillars of value: labour & human rights; safety & health; business integrity & ethics; environment and social accountability. Anglo American has strengthened its risk-based approach to responsible sourcing, which supports prioritised engagement with suppliers who have a higher likelihood of sustainability related risk. These selected suppliers were requested to complete a self-assessment questionnaire, including information on water use and management.

Special clauses in Anglo American's standard supply contracts request suppliers to comply with the sustainability requirements defined in the Standard. The standard requires suppliers to monitor water usage and identify opportunities to reduce usage. No incentive is given to suppliers to report information, but a penalty of non-compliance could result in that supplier losing its contract.

**Impact of the engagement and measures of success**

The self-assessment questionnaire requests whether the supplier has had any incidents impacting water sources, and detail on whether they are measuring water use. From this, the number of suppliers measuring water usage data is tracked and will be compared on a yearly basis. From the information provided in the self-assessments, selected suppliers are requested to undertake third party on-site assessments. Where risk issues, including non-compliance with the requirements of the Responsible Sourcing Standard for Suppliers, were identified, corrective action plans are developed and agreed with suppliers.

Success is measured through the number of self-assessment questionnaires, audits and training sessions conducted with suppliers. During 2018, 152 supplier self-assessments were completed, which is approximately 23% of supplier expenditure

**Comment**

None.

## W1.4b

**(W1.4b) Provide details of any other water-related supplier engagement activity.**

---

**Type of engagement**

Innovation & collaboration

**Details of engagement**

Encourage/incentivize innovation to reduce water impacts in products and services

**% of suppliers by number**

Less than 1%

**% of total procurement spend**

Less than 1%

**Rationale for the coverage of your engagement**

Anglo American's Supply Chain Innovation team sources high water efficiency equipment and collaborates with suppliers on innovation and technology change. The team works with key global suppliers and some selected start-up suppliers to understand their innovation roadmaps and identify innovation opportunities to improve resource efficiency. These opportunities are then scrutinized to identify the opportunities with the most impact. Typically, Anglo American will target suppliers with more mature innovation concepts but will also engage with suppliers at the concept level in certain situations. The selected opportunities are actively pursued as group-wide initiatives, and Anglo American will collaborate with the supplier to drive the development and of the innovation product. Anglo American also scans the market for potential new suppliers with innovation opportunities to engage with.



### **Impact of the engagement and measures of success**

By enhancing the water efficiency of our supplier's products, we improve on our own water efficiency and protect water supply of the water catchments within which we and our suppliers operate. Two specific examples we are evaluating:

- A solution looking at replacing old pneumatic rock drills with newly developed electro-hydraulic rock drill technology in underground platinum mining, which has potential for 50% improvement in energy and 75% in water efficiency; and
- An innovative organic and bio-degradable micro-biological dust suppression solution is being investigated that has potential to reduce approximately 90% of water being currently consumed during the dust suppression process in open pit mines.

Success measurement is done through the establishment of key performance metrics for each innovation project. Metrics typically include water efficiency and usage metrics, to monitor the improvements that an innovative product will have.

### **Comment**

None.

## **W1.4c**

### **(W1.4c) What is your organization's rationale and strategy for prioritizing engagements with customers or other partners in its value chain?**

**PARTNERS:** Local municipalities, communities and bulk water users are some of the key value chain partners in Anglo American's water catchment areas that we engage with.

**STRATEGY:** In 2016, Anglo American implemented a risk-based water management approach, in line with global best practice and the ICMM reporting guidelines. A cornerstone of the standard is implementing operational and regional water balances to inform the management of regional water risks, in partnership with regional stakeholders. For example:

- Anglo American is involved in the Olifants River water forum and Lebalelo pipeline in sourcing water into the Northern and Eastern Limb platinum operations and communities. This includes collaborating with 30 organizations to provide bulk-water services to mines and communities. Used (grey) water is also sourced for Northern Limb operations through partnerships with the Polokwane and Mokopane municipalities.
- Anglo American is working with a large local brewery, ABInBev (via the Strategic Water Partners Network) to facilitate water conservation in the Limpopo region. To date, the partnership has enabled a study to install critical monitoring equipment and identify leaks in the region's water system.

**PRIORITIZATION:** Anglo American's catchment wide approach to water stewardship helps to identify important risks and opportunities in its water catchment areas. Through the risks and opportunities identified, important value chain partners are specified for engagement.



MEASUREMENT: Success is measured through the depth and extent of partnerships Anglo American has developed. This includes partnerships with municipalities and other organisations. A key indicator of success to date was the signing of a memorandum of understanding with the Global Water Development subsidiary of private infrastructure developer Blackstone in 2017. The aim is to identify and develop water-related infrastructure projects as private/public partnerships, financed and managed by Blackstone.

## W2. Business impacts

### W2.1

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

Yes

### W2.1a

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

---

**Country/Region**

Brazil

**River basin**

Rio Doce

**Type of impact driver**

Physical

**Primary impact driver**

Pollution incident

**Primary impact**

Reduced revenues from lower sales/output

### **Description of impact**

On 12 March 2018, iron ore slurry leaked from the pipeline in Santo Antônio do Grama for approximately 48 minutes before the flow was interrupted and the pipeline depressurised. 1,213 tonnes of slurry product leaked, of which 318 tonnes entered directly into the Santo Antônio stream. On 29 March 2018, a second pipeline leakage, 200 metres from the first incident, resulted in 473 tonnes of slurry being released over privately-owned land and 174 tonnes reached the Santo Antônio stream. The water supply to Santo Antônio do Grama community was temporarily interrupted.

Operations were suspended from 29 March 2018 in order to conduct a full inspection and repair of the pipeline before resuming operation in December 2018. The incident resulted in a negative impact of \$0.6 billion on the group's underlying EBITDA due to 280 days of lost production. Additionally, 8 non-compliance notices were issued totalling \$50 million.

The impact was considered substantive considering the financial impact on EBITDA and the non-compliance issues.

Operations were resumed in December 2018.

### **Primary response**

Infrastructure maintenance

### **Total financial impact**

600,000,000

### **Description of response**

During this period, Anglo American provided potable water to the community and installed an alternative water abstraction system. Remedial action was immediately taken to clear iron ore sediment on affected land and in the river. A rehabilitation programme was approved by environmental agencies and learnings from the incidents were shared across the Group. Anglo American will conclude in June this year the last steps of the remediation plan for the Santo Antônio do Grama stream. This includes the implementation of a Degraded Areas Recovery Plan (PRAD) focused on the areas directly affected by the cleaning process. The objective was to remediate the areas affected by the emergency actions of containment and removal of ore. The company is also running another PRAD, over 8 miles - beyond the area originally impacted. The objective is to deliver the watercourse and vegetation in its surroundings in better conditions than they were before the incidents. The monitoring and maintenance actions in the areas of the two PRADs will continue to be carried out until 2020.

Ultimately, the incident resulted in a negative impact of \$0.6 billion on the group's underlying EBITDA due to 280 days of lost production. This



includes other costs such as immediate risk mitigation (river clean-up, community compensation, etc.) totalled approximately \$7.5 million; the inspection and repair of the pipeline (\$20 million) and the 8 non-compliance notices (\$50 million).

## W2.2

**(W2.2) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?**

Yes, fines

## W2.2a

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

Row 1

**Total number of fines**

11

**Total value of fines**

50,000,000

**% of total facilities/operations associated**

2.6

**Number of fines compared to previous reporting year**

Much higher

**Comment**

The incidents at Minas-Rio resulted in fines being issued amounting to \$50 million, some of which are being challenged. The Environment and Sustainable Development Department (Semad) imposed fines for of \$32.4 million (BRL 125 million) for the first spill. The Semad announced further fines for the second spill, which were subsequently cancelled. Currently IBAMA fines are in the process of being contested.

## W2.2b

**(W2.2b) Provide details for all significant fines, enforcement orders, and/or penalties for water-related regulatory violations in the reporting year, and your plans for resolving them.**

---

**Type of penalty**

Fine

**Financial impact**

32,378,276

**Country/Region**

Brazil

**River basin**

Rio Doce

**Type of incident**

Spillage, leakage or discharge of potential water pollutant

**Description of penalty, incident, regulatory violation, significance, and resolution**

DESCRIPTION: On 12 March 2018, iron ore slurry leaked from the pipeline in Santo Antônio do Grama for approximately 48 minutes before the flow was interrupted and the pipeline depressurised. 1213 tonnes of slurry product leaked, of which 318 tonnes entered directly into the Santo Antônio stream, which is a source of drinking water. Water supply to Santo Antônio do Grama community was temporarily interrupted. This resulted in a fine and a regulatory stoppage for 15 production days.

REMEDIAL ACTION: Anglo American provided potable water to the community and installed an alternative abstraction system. Remedial action was immediately taken to clear iron ore sediment on affected land and in the river. Within three months, the state of the impacted area was superior to prior conditions. Residual/remobilised sediments were continuously monitored and addressed. A rehabilitation programme was approved by environmental agencies and learnings from the incidents were shared across the Group.

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**Type of penalty**

Fine

**Financial impact**

17,505,000

**Country/Region**

Brazil

**River basin**

Rio Doce

**Type of incident**

Spillage, leakage or discharge of potential water pollutant

**Description of penalty, incident, regulatory violation, significance, and resolution**

DESCRIPTION: On 29 March 2018, a second pipeline leakage, 200 metres from the first incident, resulted in 473 tonnes of slurry being released over privately-owned land and 174 tonnes reached the Santo Antônio stream. The environmental impact of this incident was assessed to be lower than the incident on 12 March. The water supply to Santo Antônio do Grama community was temporarily interrupted. This resulted in both a fine and a regulatory stoppage for 15 production days.

REMEDIAL ACTION: During this period, Anglo American provided potable water to the community and installed an alternative water abstraction system. Remedial action was immediately taken to clear iron ore sediment on affected land and in the river. Once concluded, residual/remobilised sediments were continuously monitored and addressed. A rehabilitation programme was approved by environmental agencies and learnings from the incidents were shared across the Group.

## W3. Procedures

### W-MM3.2

**(W-MM3.2) By river basin, what number of active and inactive tailings dams are within your control?**

---

**Country/Region**

Chile

**River basin**

Other, please specify  
Aconcagua River

**Number of tailings dams in operation**

2

**Number of inactive tailings dams**

4

**Comment**

None.

---

**Country/Region**

Canada

**River basin**

Attawapiskat River



**Number of tailings dams in operation**

2

**Number of inactive tailings dams**

1

**Comment**

None.

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**Country/Region**

Australia

**River basin**

Fitzroy

**Number of tailings dams in operation**

5

**Number of inactive tailings dams**

1

**Comment**

None.

---

**Country/Region**

South Africa

**River basin**

Limpopo





**Number of tailings dams in operation**

7

**Number of inactive tailings dams**

0

**Comment**

None.

---

**Country/Region**

Canada

**River basin**

Mackenzie River

**Number of tailings dams in operation**

2

**Number of inactive tailings dams**

1

**Comment**

None.

---

**Country/Region**

South Africa

**River basin**

Olifants



**Number of tailings dams in operation**

6

**Number of inactive tailings dams**

2

**Comment**

None.

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**Country/Region**

Brazil

**River basin**

Rio Doce

**Number of tailings dams in operation**

1

**Number of inactive tailings dams**

0

**Comment**

None.

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**Country/Region**

Zimbabwe

**River basin**

Save



**Number of tailings dams in operation**

2

**Number of inactive tailings dams**

0

**Comment**

None.

---

**Country/Region**

Brazil

**River basin**

Tocantins

**Number of tailings dams in operation**

4

**Number of inactive tailings dams**

0

**Comment**

None.

---

**Country/Region**

South Africa

**River basin**

Vaal



**Number of tailings dams in operation**

2

**Number of inactive tailings dams**

4

**Comment**

None.

---

**Country/Region**

Chile

**River basin**

Other, please specify

Maipo River

**Number of tailings dams in operation**

2

**Number of inactive tailings dams**

2

**Comment**

None.

**W-MM3.2a**

**(W-MM3.2a) To manage the potential impacts to human health or water ecosystems associated with the tailings dams in your control, what procedures are in place for all of your dams?**

Procedure	Detail of the procedure	Please explain
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<p>Acceptable risk levels</p>	<p>Establishment of site-level guidance and standards for acceptable risk levels for third party safety in consultation with potentially affected communities, employees and relevant government bodies</p> <p>Establishment of site-level guidance and standards for acceptable risk levels across all life stages, including post-closure</p> <p>Establishment of company-wide standards for acceptable risk levels that follow a company policy to eliminate or minimize water-related risks associated with tailings dams</p> <p>Other, please specify</p> <p>Establishment of site-level guidance and standards for acceptable risk levels for occupational health and safety.</p>	<p>Anglo American has a Group Technical Standard that defines the minimum requirements for Mineral Residue Facilities (MRFs) management, water containment, and water diversion structures management. This Standard applies to all tailings dams, water dams, and mineral waste dumps and stockpiles, either temporary or permanent; and exceeds current ICMM (International Council on Mining and Metals) and regulatory requirements in all host jurisdictions. The standard is applicable throughout the life-cycle, from site selection and early studies, through design, operation and to post-closure, and was peer-reviewed by international specialists. Tailings dams are governed centrally via a globally experienced team, with champions dedicated to each BU. The standard requires 25 key documents with sign-off by the global team. This includes guidance on monitoring, inspection, surveillance and acceptable risk levels for occupational health and safety, third party safety and post mine closure. The standard is applicable for tailings dams in all countries and is updated quarterly and assessed annually. Furthermore, each facility is required to complete quarterly or semi-annually MRF reviews. An online MRF dashboard has been implemented that provides a comprehensive inventory of, and updated risk tables for, all the containment facilities in the Group. In 2019, the MRF dashboard will include our waste dumps and stockpiles. Critical controls at facilities are audited internally via the operational risk assurance audits completed through Anglo American Business Assurance Services by our technical specialists, and each of the businesses is addressing identified priority issues. All operations with high-consequence facilities also have an assigned engineer of record and an independent panel of technical experts that review the facilities, in most cases annually. An example of the application of the standard is the fact that our Platinum division management took a decision to stop the Mototolo concentrator for three months in 2017 after identifying a potential stability risk at the Helena TSF. We took immediate remedial action by constructing a buttress wall using waste rock to raise the height of the facility, restoring acceptable levels of safety by the end of the year. Ongoing monitoring and further buttressing in 2018 have reinforced levels of safety.</p>
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<p>Operating plan</p>	<p>An operating plan that includes the operating constraints of the dam and its construction method</p> <p>An operating plan that considers the consequences of breaching the operating constraints of the dam</p> <p>An operating plan that includes periodic review of the foundations and slope materials</p> <p>Other, please specify</p> <p>An operating plan that includes application of appropriate engineering practices to the slope and foundation materials.</p>	<p>Anglo American has a Group Technical Standard that defines the minimum requirements for Mineral Residue Facilities (MRFs) management, water containment, and water diversion structures management. This Standard applies to all tailings dams, water dams, and mineral waste dumps and stockpiles, either temporary or permanent; and exceeds current ICMM (International Council on Mining and Metals) and regulatory requirements in all host jurisdictions. The standard is applicable throughout the life-cycle, from site selection and early studies, through design, operation and to post-closure, and was peer-reviewed by international specialists. Tailings dams are governed centrally via a globally experienced team, with champions dedicated to each BU. The standard requires 25 key documents with sign-off by the global team. It details minimum design requirements, minimum safety management requirements and minimum inspection and surveillance protocols, based on the consequence classification of the facility; as well as implementation, management and performance monitoring requirements.</p> <p>The standard is applicable for tailings dams in all countries and is updated quarterly and assessed annually. Furthermore, each facility is required to complete quarterly or semi-annually MRF reviews.</p>
<p>Assurance program</p>	<p>An assurance program for the operating phase of the facility that details the procedures for the inspections, audits and reviews</p> <p>An assurance program for each phase of the facilities' life that includes the frequency of the various levels of inspections, audits and reviews</p> <p>An assurance program for each phase of the facilities' life that includes the scope of the various levels of inspections, audits and reviews</p>	<p>Anglo American has a Group Technical Standard that defines the minimum requirements for Mineral Residue Facilities (MRFs) management, water containment, and water diversion structures management. This Standard applies to all tailings dams, water dams, and mineral waste dumps and stockpiles, either temporary or permanent; and exceeds current ICMM (International Council on Mining and Metals) and regulatory requirements in all host jurisdictions. The standard is applicable throughout the life-cycle, from site selection and early studies, through design, operation and to post-closure, and was peer-reviewed by international specialists. Critical controls at facilities are audited internally via the Operational Risk Assurance audits completed through Anglo American Business Assurance Services by our technical specialists, and each of the businesses is addressing identified priority issues. All operations with high-consequence facilities have a competent person (CP) in charge, with the required</p>

	<p>An assurance program that details the competence requirements for the persons undertaking the inspections, audits and reviews</p>	<p>competencies being described in the standard. Furthermore, every facility must have an assigned engineer of record and an independent panel of technical experts that review the facilities, in most cases annually. An appointed independent Technical Review Panel (TRP) consisting of senior external engineers is mandated for systematic and ongoing independent review. The standard requires 25 key documents with sign-off by the global team. This includes guidance on monitoring, inspection, surveillance, assurance and acceptable risk levels for occupational health and safety, third party safety, post mine closure. The standard is applicable for tailings dams in all countries and is updated quarterly and assessed annually. Furthermore, each facility is required to complete quarterly or semi-annually MRF reviews.</p>
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### W3.3

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

Yes, water-related risks are assessed

### W3.3a

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

**Direct operations**

---

**Coverage**

Full

**Risk assessment procedure**

Water risks are assessed as part of an enterprise risk management framework

**Frequency of assessment**

Six-monthly or more frequently

**How far into the future are risks considered?**

>6 years

**Type of tools and methods used**

Enterprise Risk Management

International methodologies

Other

**Tools and methods used**

ISO 31000 Risk Management Standard

IPCC Climate Change Projections

Internal company methods

Other, please specify

King IV, WRI Aqueduct

**Comment**

None.

**Supply chain**

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**Coverage**

Full

**Risk assessment procedure**

Water risks are assessed as part of an enterprise risk management framework

**Frequency of assessment**

Six-monthly or more frequently

**How far into the future are risks considered?**

>6 years



**Type of tools and methods used**

Enterprise Risk Management  
International methodologies  
Other

**Tools and methods used**

ISO 31000 Risk Management Standard  
IPCC Climate Change Projections  
Internal company methods  
Other, please specify  
King IV, WRI Aqueduct

**Comment**

None.

**Other stages of the value chain**

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**Coverage**

Full

**Risk assessment procedure**

Water risks are assessed as part of an enterprise risk management framework

**Frequency of assessment**

Six-monthly or more frequently

**How far into the future are risks considered?**

>6 years

**Type of tools and methods used**

Enterprise Risk Management  
International methodologies

Other

**Tools and methods used**

- ISO 31000 Risk Management Standard
- IPCC Climate Change Projections
- Internal company methods
- Other, please specify  
King IV, WRI Aqueduct

**Comment**

None.

**W3.3b**

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	70% of our sites lie within water-stressed areas. For this reason, the risk classification of water availability was increased to a principal risk in 2018 and is extremely relevant to our water-related risk assessment. Anglo American conducts extensive water availability and water quality monitoring and analysis of surface water and groundwater resources, water intensity levels and freshwater usage at all of our sites and the catchments they operate in to assess security of supply and risk. This is done in line with our new water management standard, which has a more structured approach to managing catchment-wide water risks, in partnership with regional stakeholders. The objective is to understand water deficits and surpluses before undertaking a conceptual source-water project to meet shortfalls in collaboration with other industry partners and government. Preliminary findings indicate significant supply shortfalls in 2022 and the importance of water supply and demand management at our operations, other mining operations and municipalities. In 2018, we focused our efforts in forging partnerships between government and industry to accelerate the development of bulk-water infrastructure improvements to supply the Olifants river catchment in the Limpopo region. Furthermore, all operations initiated a detailed self-assessment and gap

		<p>analysis against the water standard in 2018. As part of this assessment, each site is required to complete a site-wide water balance, providing a more accurate and detailed understanding of water withdrawals, use, efficiency, discharge, consumption, storage and conveyance, and which underpins the effective assessment and evaluation of site-specific water risks. At year end, 60% of our sites had completed (or restated) their water balance, with the remaining site assessments to be finalised in 2019. The results will provide an effective assessment and evaluation of site-specific water risks.</p>
Water quality at a basin/catchment level	Relevant, always included	<p>Off-site surface and sub-surface water quality is a principal risk for Anglo American, specifically related to high salinity, high sulphate content, acid rock drainage and metal leaching at certain operations. Operational water balances will enable us to better understand and manage water quality issues. We are increasingly using hydrogeological models to assist in identifying potential risks related to seepage from tailings dams and affected water containment facilities, and to develop solutions.</p> <p>Along with quantity or withdrawal information, Anglo American conducts extensive water availability and water quality monitoring and analysis of surface water and groundwater resources at all of our sites and the catchments they operate in to assess security of supply and risk. This is done in line with our new water management standard, which has a more structured approach to managing catchment-wide water risks, in partnership with regional stakeholders.</p> <p>At an operational level, Anglo American measures quality parameters of both surface water and ground water quality on a monthly basis to track performance. Water balances enable us to better understand and manage water quality issues. We are increasingly using hydrogeological models to assist in identifying potential risks related to seepage from tailings dams and affected water containment facilities, and to develop solutions. In addition, we are required to report these parameters to the authorities as part of our license requirements. We factor current river basin management plans into our risk assessments to ensure we understand any potential limitations or opportunities that may arise in relation to these plans. This is both in terms of quality and quantities. We use this data and our internal company knowledge to feed into the risk assessments we conduct on site regularly.</p>
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	<p>Stakeholder conflict over water resources is a significant risk for Anglo American, particularly in 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</p>

		<p>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. Via the Strategic Water Partners Network, we also engaged with the Polokwane municipality and a large local brewery to initiate a demand-side management programme within the region to ensure the supply of potable water to water users in the basin. 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. Our ongoing stakeholder engagement provides us with internal company knowledge that allows us to integrate these issues into our risk processes.</p>
<p>Implications of water on your key commodities/raw materials</p>	<p>Relevant, always included</p>	<p>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. We use the feedback from our internal engagement with our suppliers to feed into our risk management processes.</p>
<p>Water-related regulatory frameworks</p>	<p>Relevant, always included</p>	<p>Failure to comply with water-related regulatory frameworks threatens our regulatory licence to operate. 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. 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. The Anglo American Legal department, the Minerals Council South Africa forums and other working groups also inform the business risks related to future regulation. Regulatory and tariff information gathered in this manner is integrated into our on-site water risk assessment processes that are ongoing.</p>

Status of ecosystems and habitats	Relevant, always included	Biodiversity and habitats are considered as part of the integrated risk management process because it underpins the structure, function and composition of ecosystems and the services they provide to societies and economies. Water withdrawn and water outputs from our recycling processes or tailings dams are considered a potential threat to biodiversity. Water discharges and accidental spillages have the potential to disturb local ecosystems and habitats. Bio-monitoring surveys are conducted to determine any possible decline in water body integrity due to permitted discharges at certain sites. For operations that have been identified as having a moderate-to-high biodiversity risk we have developed, and are planning implementation of, biodiversity action plans. The implementation of biodiversity action plans provides a structured framework that ensures ecosystems are functioning in the vicinity of mining activities. Our on-site environmental scientists with internal company knowledge manage these issues and feed relevant information into the risk processes on site. In line with international guidance, we have developed a new biodiversity technical standard, approved in November 2018. The standard defines the minimum requirements to manage biodiversity. In 2018, we started re-assessing the biodiversity risks and opportunities at sites in high risk environments in preparation for implementing the new standard; this work will continue in 2019, supported by the design of site-specific performance indicators.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always 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.
Other contextual issues, please specify	Not considered	

### W3.3c

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

	Relevance & inclusion	Please explain
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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 broader catchment, 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. Given the nature of our business which is focussed on mining, we do not anticipate that this will change significantly in the future.
Employees	Relevant, always 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 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. 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, always included	Investor concerns related to water (and environmental issues generally) are increasingly important given the water related risks that Anglo American is exposed to. The potential risk is that investors divest from Anglo American due to environmental issues such as water that directly impact on Anglo American’s ability to generate expected returns. We also consider investors via our materiality panel. We engage with investors 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, always included	The concerns and perspectives of local communities are central to our water risk assessments and social-impact assessments as the risk of stakeholder conflict in a catchment can directly impact our operations. 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 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, always included	The concerns and perspectives of key NGOs are important considerations in our water risk assessments and social impact assessments as NGOs can create reputational risks and impacts if Anglo American is perceived as not proactively addressing water. Partnerships are the predominant method of engagement with NGO's to address this. For example, the partnership between Iron Ore Brazil's Minas-Rio operation and BioAtlântica Institute (IBio), a non-profit organisation 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 basin/catchment level	Relevant, always 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, always 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

		<p>reforms and reviewing and approving our water use licenses. Regulatory risks are critical and thus 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.</p>
River basin management authorities	Relevant, always included	<p>Anglo American understands that the management of the river basins we operate in can have direct consequences on mining operations, such as inadequate supply of water or community unrest. The river basin management can impact on water quality and quantity provided to Anglo American. Where Catchment Management Associations or regional river basin management authorities have been set up at a local level, Anglo American will engage with this stakeholder. For example, at the Union Mine at one of our Platinum operations we actively participate on a regular basis with the Thabazimbi Catchment Management Association. The Association discusses water security, water conservation and feedback by the Department of Water Affairs and Sanitation about New Water Use License Applications and legislation changes if any. For this reason, Anglo American incorporates these stakeholders into its water risk assessment process. Anglo American engages with these associations and authorities through routine meetings.</p>
Statutory special interest groups at a local level	Relevant, always included	<p>Water demand from other interest groups in the catchments we operate, can create risks such as community unrest for those operations. Thus, 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, our Anglo American Platinum operation leads the Olifants River Joint Water Forum for effective catchment water management. 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.</p>
Suppliers	Relevant, always included	<p>There is a risk of increased production prices in the case of an interruption of the supply of products and commodities.</p> <p>Accordingly, we have started to facilitate engagement with suppliers by requesting environmental and water information to gain further insight into the magnitude of this risk. Furthermore, Anglo American's Supply Chain</p>



		Innovation team sources high water efficiency equipment and collaborates with suppliers on innovation and technology change. The team works with key global suppliers and some selected start-up suppliers to understand their innovation roadmaps and identify innovation opportunities to improve resource efficiency. These opportunities are then scrutinized to identify the opportunities with the most impact. This engagement usually takes place throughout the year in the form of regular face-to-face meetings. This process is considered in ongoing water risk and opportunity assessments.
Water utilities at a local level	Relevant, always included	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 provider. Sedibeng treats the water and supplies it to the local communities. We constantly engage with the water supply companies through face-to-face meetings on a regular basis throughout the year.
Other stakeholder, please specify	Not considered	

### W3.3d

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

Anglo American uses internal water specialists supported by external consultants and other relevant stakeholders to assess water risks at each operation. This approach allows Anglo American to provide specific details of water related risks in the areas in which they operate. Key risks are identified following a bottom up approach and reflected within a structured framework such that they are systematically managed. This risk management process is aligned with the ISO 31000 international risk management standards and the King Code of Corporate Governance for South Africa (King IV). Anglo American is also using IPPC future climate projections as a tool to understand future water risks. In 2018, Anglo American newly designated water security as a principal risk in that it has the potential to threaten the business model, future performance, solvency or liquidity of Anglo American. The tools used in the risk management process evaluate risk at both a company and facility level. Our water management standard ensures coverage of risks at all levels of the value chain as the standard adopts a catchment-wide approach to managing water risks. This ensures both upstream and

downstream users and suppliers are catered for when assessing and managing water risks. The use of future climate projections and modelled climate data also ensures that a long-term view (30 to 40 years ahead) is accounted for in assessing water risks.

The risk-response decision making process for strategic, operational and project-related risks, including those from water, follows four well-defined processes: 1. Identifying risks; 2 analysing risks and controls to manage identified risks; 3 determining management actions required; and 4. reporting and monitoring.

The tools used in the risk process cover different timescales. IPPC future climate projections are used to understand water risks in the long-term (30 to 40 years ahead) whereas the other tools are used for short and medium-term operational risks, which can be 5 years in the future.

## W4. Risks and opportunities

### W4.1

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

Yes, both in direct operations and the rest of our value chain

### W4.1a

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

‘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 its 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. Considering this definition and to

quantify substantive change, Anglo American uses its risk assessment methodology and in particular the financial consequence rating within the risk methodology to identify and measure a substantive financial or strategic impact to our business.

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

### W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	13	76-99	For the purposes of CDP water reporting Anglo American considers all of its operating mines to be exposed to water risks with a potential to have a substantive financial impact. Offices, exploration and divested mines are not included.

### W4.1c

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

**Country/Region**

South Africa

**River basin**

Limpopo

**Number of facilities exposed to water risk**

1



**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

25,823,482

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 16 individual sites in the Limpopo WMA - these have been grouped into a single facility.

---

**Country/Region**

South Africa

**River basin**

Olifants

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

35,839,392

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 17 individual sites in the Olifants WMA – these have been grouped into a single facility.

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**Country/Region**

South Africa

**River basin**

Vaal

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

92,884,627

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 5 individual sites in the Vaal WMA - these have been grouped into a single facility.

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**Country/Region**

Zimbabwe

**River basin**

Save

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

1,924,688

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 5 individual sites in the Save Basin - these have been grouped into a single facility.

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**Country/Region**

Brazil

**River basin**

Rio Doce

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

7,936,407

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

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 Tocantins Basin - these have been grouped into a single facility.

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**Country/Region**

Brazil



**River basin**

Tocantins

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

2,838,927

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

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.

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**Country/Region**

Chile

**River basin**

Other, please specify  
Aconcagua River

**Number of facilities exposed to water risk**



1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

8,150,164

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin. 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 Aconcagua River basin - these have been grouped into a single facility.

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**Country/Region**

Peru

**River basin**

Other, please specify

Asana River

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

0

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. Note that there are no production values or revenue data for this river basin, as it includes only one project, which is not yet operational.

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**Country/Region**

Canada

**River basin**

Attawapiskat River

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

2,935,519

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change.

**Country/Region**

Canada

**River basin**

Mackenzie River

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

3,216,585

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There are 2 sites in the Mackenzie River Basin - these have been grouped into a single facility.

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**Country/Region**

Australia

**River basin**

Fitzroy River

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

28,667,835

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

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 Fitzroy Basin – these have been grouped into a single facility.

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**Country/Region**

South Africa

**River basin**

Other, please specify

South Atlantic Coast

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**



1-25

**Production value for the metals & mining activities associated with these facilities**

0

**% company's total global revenue that could be affected**

Less than 1%

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin.

Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There is 1 individual site towards the South Atlantic Coast of Namibia.

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**Country/Region**

Chile

**River basin**

Other, please specify

Maipo River

**Number of facilities exposed to water risk**

1

**% company-wide facilities this represents**

1-25

**Production value for the metals & mining activities associated with these facilities**

50,582,838

**% company's total global revenue that could be affected**

1-25

**Comment**

The production value that is deemed most appropriate for Anglo American operations is 'tonnes milled/processed', hence this is used for the river basin. Anglo American regards all of our operating mines to be exposed to water risks that could have a substantive change. There is 1 individual site in the Maipo River basin.

## W4.2

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

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**Country/Region**

Chile

**River basin**

Other, please specify

Aconcagua

**Type of risk**

Physical

**Primary risk driver**

Increased water scarcity

**Primary potential impact**

Reduced revenues from lower sales/output

**Company-specific description**

Water scarcity and stress is considered one of Anglo American's most significant water risks considering 50% 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 as the mine is located in a semi-arid area with little to no surface and groundwater. The water constraints have resulted in production constraints as water is an element needed in the processing plant leading to reduced revenue from lower output. 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.

**Timeframe**

Current up to 1 year

**Magnitude of potential impact**

High

**Likelihood**

Likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

90,500,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

There was no impact on production in the reporting year. However, water restrictions had a net negative impact on production at Los Bronces of approximately 18,000 tonnes in 2015 which translates into a \$90.5 million impact.

### **Primary response to risk**

Increase investment in new technology

### **Description of response**

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 water-recycling system. The water recycling system at the Los Bronces operation was a significant investment and allows the site to recycle more than 78% of available water. In 2018 we developed a tailings water recovery scheme whereby horizontal wells will be drilled into the bottom of the dam to facilitate drainage of tailings water for re-use in the site's plant. This project is estimated to reduce water consumption by 10 to 20%, with the first trial well scheduled for early 2021.

Solar conductive evaporation covers have been developed to reduce water loss from tailings dams. These were piloted in 2018 and preliminary results show that the covers can reduce evaporation by up to 85%. This will facilitate the recovery of several million m<sup>3</sup> of water annually, while generating 0.5MW of solar energy at Los Bronces. Other initiatives include improving tailings deposition through the use of thickeners and investigating other technology to recover water from tailings dams. The operation is expanding its engagement with regional stakeholders and potential water partners. In 2018, we partnered with the new Metropolitan Region Water Fund, which contributes to the region's water security. New water sources are also being explored.

### **Cost of response**

20,000,000

### **Explanation of cost of response**

Recent water project expenditure at Los Bronces was US\$20 million which excludes the operational costs of purchasing water. These are once off costs and derived from quotations and invoices.

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### **Country/Region**

South Africa

### **River basin**



Olifants

**Type of risk**

Physical

**Primary risk driver**

Increased water scarcity

**Primary potential impact**

Increased compliance costs

**Company-specific description**

Anglo American 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 associated with this saline rich water is possible water quality non-compliance when discharging to the environment. For example, in the previous 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. 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 cost increases to operations.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

High

**Likelihood**

Likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

1,500,000,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

The potential financial impact relates to the total establishment capex cost of the eMalahleni water-reclamation plant which was incurred historically.

**Primary response to risk**

Increase investment in new technology

**Description of response**

At Coal South Africa, long term integrated water management plans are being developed for sites to mitigate non-compliance risk and post closure water management liability. These will be based on hydrogeological models, which provide high confidence water and salt balances and improve prediction and quantification of risks at the receptor. Coal South Africa uses water-treatment plants to treat mine-affected water. The flagship eMalahleni water-reclamation plant treats up to 50 million litres of mine-affected water every day and supplies water to the eMalahleni Municipality. Coal South Africa is piloting passive water-treatment technologies at three sites, as they do not require active human intervention in the long term, or power. The treated effluent is suitable for irrigation of crops in local communities. This will reduce our potential closure liability estimate. Mafube mine was selected by the Department of Water and Sanitation as the first trial site to demonstrate aspects of mine-water irrigation for crop production. The irrigation project will be part of our Green Engine project. The Green Engine project's purpose is to create a self-sustaining, integrated agro-industrial hub, using mine-impacted land and mine water at a coal mine that is due for closure - sustainable mine water re-use and rehabilitated land utilisation on a regional scale helps to create secondary economies with community involvement, ensuring a positive legacy is created for life after mining.

**Cost of response**

110,000

**Explanation of cost of response**

The cost of the response relates specifically to the costs Anglo American contributed to the Mafube irrigation trial project. These costs are for infrastructure and other studies and are a once off cost.

---

**Country/Region**

South Africa

**River basin**

Limpopo

**Type of risk**

Physical

**Primary risk driver**

Increased water scarcity

**Primary potential impact**

Constraint to growth

**Company-specific description**

The Mogalakwena Complex is water secure for production under current conditions. Expansion of the Mogalakwena Complex is, however, potentially hindered by regional water scarcity due to increased demand and low water assurance associated with drought conditions. This is further compounded by climate change, with modelling predicting highly variable drought and wet cycles with a potential 10% increase in high and low rainfall margins, as well as shorter and wetter rainy periods, with longer dry periods per annum. 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.

**Timeframe**

More than 6 years

**Magnitude of potential impact**

High

**Likelihood**

Likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

3,600,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

Mogalakwena's revenue for the reporting year was \$1.3billion. If the operation is stopped for a day due to water supply concerns this equates to approximately \$3.6million per day.

**Primary response to risk**

Water-related capital expenditure

**Description of response**

In order to mitigate the current risk of current water supply to Mogalakwena, we have 1. Test filtered tailings to dewater tailings; 2. Upgraded the Polokwane Sewage Works to secure an additional 6ML of treated sewage water for reuse in the operation; 3. Undertaken tailings seepage recovery; 4. Evaluated the utilisation of additional wastewater effluent from Municipal Wastewater treatment plants in Limpopo. 5. Completed groundwater studies as part of the expansion studies to determine potential water sources for the concentrator; and 6. Invested in the research and development of various water-saving technologies with some already in the pilot phase e.g. course-flotation.

In addition to this, Anglo American Platinum has initiated a project to provide access to water to 70,000 members of Mapela community, in

partnership with Mogalakwena municipality and the Mapela traditional authority. To date, over 45,000 people in Mapela have access to clean water and this project will be completed in 2019.

**Cost of response**

750,000

**Explanation of cost of response**

A once-off \$6 million investment by Anglo American Platinum will be made to support the upgrade of Polokwane's sewage works for quality improvement and to secure an additional 6 MI/d for Mogalakwena. Of the \$6 million, we have spent \$5.2 million to date, with \$0.75 million being incurred in the reporting year. The work will be completed in the next financial year.

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**Country/Region**

Brazil

**River basin**

Rio Doce

**Type of risk**

Physical

**Primary risk driver**

Increased water scarcity

**Primary potential impact**

Increased operating costs

**Company-specific description**

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 responsible 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. In the reporting year, from 24th of July to 1st of November, the operation completely shut down water abstraction from the Peixe River, due to the mandatory limits imposed by the operation's water abstraction permit in a condition of regional water scarcity. During this restriction period in 2017, water availability to support operations reached critically low levels and, while operations were sustained mainly by the contingency water volumes stored in the tailings dam, water abstraction from the tailings dam was exploited almost to complete exhaustion. Only with emergency actions taken in order to maximise the use of "water" ponds isolated within the tailings dam at the end of the dry season, it was possible to prevent an operational stoppage. In addition, the quality of water in the river is poor, due to the impact of unregulated discharge from other sources. The poor-quality water impacted the processing ability of the plants and leads to increased operational costs.

**Timeframe**

1 - 3 years

**Magnitude of potential impact**

Medium

**Likelihood**

More likely than not

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

900,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

The potential financial impact of \$0.9million represents the potential loss of revenue from a day's lost production due to water scarcity issues. This is calculated from the revenue generated by the operation in the reporting year. Although this has not happened yet at Minas Rio this has occurred at other Anglo American operations.

**Primary response to risk**

Increase investment in new technology

**Description of response**

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 installation of additional pumping capacity at the tailings dam to increase the recirculation of water from the tailings dam reservoir to the site's processing plant. This recirculation project has enabled the site to achieve an 85% water recycling rate for the reporting year. As an additional risk mitigation measure, the operation collaborated with the International Council on Mining and Metals (ICMM) on the first application of the ICMM's new water stewardship framework. The framework provides a catchment-based approach to water management 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 organisations to better understand and manage shared water risks in the San Antonio water catchment. This enabled Anglo American 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 water risks.

**Cost of response**

6,000,000

**Explanation of cost of response**

In the order of 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. The cost estimates were derived from incurred operational costs and invoices and were a once off cost.

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**Country/Region**

Canada

**River basin**

Other, please specify

Mackenzie River and Attawapsikat River

**Type of risk**

Physical

**Primary risk driver**

Leaching of pollutants to groundwater bodies

**Primary potential impact**

Increased operating costs

**Company-specific description**

The impact of water quality from our mining operations on surface and ground water sources is an issue at three of Anglo American's North American sites: 1. De Beers Snap Lake underground mine operation (currently on care and maintenance with closure planned for 2019) 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 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 (currently on care and maintenance), 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. At De Beers Victor mine (currently in closure process) the site work continues to define the nature of the source of low levels of mercury present in two creeks adjacent to Victor mine. This includes two phases of environmental site assessments to identify and delineate areas of potential environmental concern, followed by a human health and ecological risk assessment, remedial action and risk management planning. These aspects were integrated into the Victor mine closure plan in 2018.

**Timeframe**

1 - 3 years

**Magnitude of potential impact**

High



**Likelihood**

Likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

10,000,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

The potential financial impact is the potential cost Anglo American may have to pay for a water treatment facility at Trend mine should the site reopen. The timing of this is unknown.

**Primary response to risk**

Engage with regulators/policymakers

**Description of response**

1. Snap Lake mine was storing large volumes of water underground due to high concentrations of dissolved solids including naturally occurring mineral salts, which required treatment before discharge. The operation was placed under care and maintenance in 2016. Snap Lake will enter its closure phase from 2019. Monitoring and reporting in support of the various regulatory commitments around water management will continue and is included in the closure plan. A self-assessment of the operation's compliance with Anglo American's water standard GTS21 has been completed.
2. The Trend operation is under care and maintenance. A program is underway to better manage selenium (Se) export to local creeks, which includes improving the design of the demonstration treatment plant and exploring mitigation options. In November, the regulators approved the deferral of the construction of two additional Se treatment plants. It is anticipated that the treatment plants will 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 June 2018. In response to comments received from stakeholders, the detailed report provides data and analysis not included in previous annual reports, including additional information beyond regulatory requirements. A self-assessment of the operation's compliance with Anglo American's water standard GTS21 has been completed.

**Cost of response**

10,000,000

**Explanation of cost of response**

Cumulatively these three sites are spending approximately \$10 million on water management per annum as a result of the impacts associated with water quality. This is a recurring cost.

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**Country/Region**

Chile

**River basin**

Other, please specify  
Aconcagua

**Type of risk**

Physical

**Primary risk driver**

Leaching of pollutants to groundwater bodies

**Primary potential impact**

Fines, penalties or enforcement orders

**Company-specific description**

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 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. Long term sustainable and more effective solutions have been evaluated, designed and are included in the Environmental Impact Assessment (EIA) for the tailings dam expansion that was submitted in the reporting year to enable rapid implementation. There is a potential risk of fines or penalties from the authorities as well as impacts on the communities that use downstream wells if the water is polluted.

**Timeframe**

1 - 3 years

**Magnitude of potential impact**

Medium

**Likelihood**

Likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

6,000,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

The potential financial impact represents the most significant fine issued by the authorities in Chile for environmental non-compliance and represents the worst-case scenario. This impact is potentially ongoing for the life of the mine (30 to 40 years) or until such time as the issue has been resolved.

**Primary response to risk**

Engage with regulators/policymakers

**Description of response**

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 to identify solutions and technologies to mitigate sulphate in the tailings dam water are underway.

**Cost of response**

1,000,000

**Explanation of cost of response**

The installation of the underground drains to capture seepage cost approximately US\$1 million and was a once off cost.

---

**Country/Region**

Chile

**River basin**

Other, please specify  
Aconcagua

**Type of risk**

Physical

**Primary risk driver**

Leaching of pollutants to groundwater bodies

**Primary potential impact**

Increased operating costs

### **Company-specific description**

At Copper's Los Bronces operation, acidic water is generated in the inactive Donoso waste rock dump. Los Bronces is in a climatic region of considerable variability, which experienced increased precipitation rates in 2016 and 2017, following a prolonged drought that ended in 2015. Although this was below the average precipitation, snowfall on the waste dump in 2017 increased the rate of acid mine drainage during that period. This is being controlled, however, with no discharges during the year. The operation manages the discharge of acid mine drainage into the environment using 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 addition, the operation developed a Water Discharge Strategy in compliance with ICMM requirements and the local context of the Los Bronces Operations. The objectives of this strategy are to comply with regulatory changes as well as ensure early warning plans are implemented to trigger specific actions as required and ensure baseline data is available in a timely manner.

The primary potential impact is increased operating costs in developing a system to manage and treat the polluted water. Secondary impacts include fines or penalties from pollution of the groundwater.

### **Timeframe**

Current up to 1 year

### **Magnitude of potential impact**

Medium

### **Likelihood**

Likely

### **Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

### **Potential financial impact figure (currency)**

35,000,000

### **Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

\$35 million is the estimated cost of building a water treatment plant, derived from engineering quotes, and represents the worst-case scenario as the site is investigating alternatives including recycling and re-use. These costs would only be incurred between 2020 and 2022 if it is necessary to build the water treatment plant.

**Primary response to risk**

Engage with regulators/policymakers

**Description of response**

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 water through the tailings facility. The second phase involves building a water treatment plant, which would only be required between 2020 and 2022. However, the site is engaging with the authorities and investigating alternatives including recycling and re-use and have agreed together on the plan for mitigating the risk. This plan was submitted in the reporting year for approval by the authorities.

**Cost of response**

30,000,000

**Explanation of cost of response**

The installation of a sophisticated collection system to collect and recycle the acid mine water through the tailings facility cost approximately US\$30 million and is a once-off cost.

---

**Country/Region**

Canada

**River basin**

Other, please specify  
Attawapsikat River

**Type of risk**

Reputation & Markets

**Primary risk driver**

Water-related litigation

**Primary potential impact**

Litigation

**Company-specific description**

The impact of our mining operations on surface and ground water sources is of particular concern at De Beers Victor mine (which is currently undergoing closure) where mercury levels occur naturally in the local environment. The site monitors mercury in surrounding waterways and fens to comply with provincial requirements and confirm projections from the operation's environmental impact statement. In December 2016, Wildlands League publicly announced that they were initiating legal action (a private prosecution) against De Beers Canada associated with alleged issues with mercury monitoring at Victor mine. The prosecution alleges that De Beers Canada's annual reporting of its mercury monitoring programme to the Government of Ontario and Attawapiskat First Nation did not comply with the reporting requirements specified in the permit. De Beers Canada defended the prosecution and in December 2018, the judge found in favour of De Beers Canada and that the prosecution and all charges against De Beers Canada should be stayed.

**Timeframe**

1 - 3 years

**Magnitude of potential impact**

High

**Likelihood**

Very unlikely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

10,000,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

The financial impact of \$10 million is calculated based on the anticipated closure costs at Victor which includes two phases of environmental site assessments, human health and ecological risk assessments and remedial action and risk management planning to define the source and nature of the low levels of mercury present in two creeks adjacent to Victor mine. The results of this work will be integrated into the mine closure plan.

**Primary response to risk**

Engage with regulators/policymakers

**Description of response**

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 additional data and analysis not included in previous annual reports, including information over and above that required by the regulator. The site carries out continuous monitoring and review to mitigate any mercury discharges. Results of the monitoring demonstrated that mercury levels in the surrounding environment are consistently below the Canadian Water Quality Guidelines. De Beers will continue this monitoring throughout the mine's closure process.

For additional assurance, environmental site assessments and a human health and ecological risk assessment were conducted to assess the links between the mercury and the mine, and potential risks associated with the river basin's water. The conclusion of the assessment was that there is little or no risk. The outcomes of these assessments, the monitoring and remedial action and risk management planning work was integrated into the mine closure plan in 2018.

**Cost of response**

10,000,000



### **Explanation of cost of response**

The final closure cost for Victor mine in 2018 totalled to US\$10 million.

## **W4.2a**

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

---

### **Country/Region**

South Africa

### **River basin**

Limpopo

### **Stage of value chain**

Supply chain

### **Type of risk**

Physical

### **Primary risk driver**

Inadequate infrastructure

### **Primary potential impact**

Constraint to growth

### **Company-specific description**

All Anglo American Platinum operations in South Africa and Zimbabwe are in water stressed areas. Increasing water scarcity in South Africa because of rising demand, deterioration of bulk infrastructure and intermittent droughts, exacerbated by the El Nino weather effect, will continue to pose a challenge to our operations and future expansions, and is a particular risk for our operations in Limpopo. Water supply from bulk water

infrastructure typically provided by both local and national government has been and continues to be a significant concern. Expansion of the Mogalakwena Complex is potentially hindered by limited water access and on-going drought conditions. Water supply to the Rustenburg and Thabazimbi circles has been a concern for several years because of a continued increase in the demand for potable water in the area by other users. The primary impact is constrained growth and increased operational costs from sourcing alternative water supplies. In addition, there is a potential risk of community unrest should they perceive that Anglo American Platinum is using up the available water in the catchment.

**Timeframe**

>6 years

**Magnitude of potential financial impact**

High

**Likelihood**

Likely

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

3,600,000

**Potential financial impact figure - minimum (currency)**

**Potential financial impact figure - maximum (currency)**

**Explanation of financial impact**

Mogalakwena's revenue for the reporting year was \$1.3billion. If the operation is stopped for a day due to water supply concerns this equates to approximately \$3.6million per day.

**Primary response to risk**

Other, please specify

Engage with regulators/policymakers and other stakeholders

### **Description of response**

Anglo American has signed a memorandum of understanding with the Global Water Development subsidiary of private infrastructure developer Blackstone. The aim is to develop water-related infrastructure projects as private/public partnerships, financed and managed by Blackstone. As a result, Anglo American Platinum commissioned a study to restate the regional water balances of the Limpopo region which showed that the Flag Boshielo Dam would be water stretched up to 2030 because the Olifants River Development Scheme has insufficient resources to facilitate additional bulk water transfer from the De Hoop Dam. Accordingly, various regional bulk water generation projects were expedited in 2018. Anglo American engaged with the Polokwane municipality and a large local brewery to initiate a potable water, demand-side management programme within the region, under the Strategic Water Partners Network. The objectives of the partnership are to install critical monitoring equipment, identify leaks and attract more partners into the network. Anglo American has also been actively involved in partnerships (Olifants Joint Water Partnership and the Lebalelo Water Board) to source water into the Northern and Eastern Limb platinum operations and communities. This has included collaboration with 30 organisations to supply bulk water services to the area. Used (grey) water is also sourced for the Northern Limb operations through partnerships with the municipalities of Polokwane and Mokopane.

### **Cost of response**

300,000

### **Explanation of cost of response**

The cost of the response is related to our contribution to the Strategic Water Users Network project.

## **W4.3**

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

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

## **W4.3a**

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

---

**Type of opportunity**

Efficiency

**Primary water-related opportunity**

Improved water efficiency in operations

**Company-specific description & strategy to realize opportunity**

Anglo American aims to eliminate the use of fresh water from mining processes. Our work towards a waterless mine focuses on evaporation measurement and dry tailings disposal, exploring innovative approaches to dry separation, and non-aqueous processing. Mining operations store water in dams to ensure a reliable water supply and enable recycling, but evaporation accounts for 10% to 25% of water lost. We are testing a new technology developed by Australia's Commonwealth Scientific and Industrial Research Organisation (CSIRO) to more accurately measure and manage evaporation rates. Significant water losses are also incurred in tailings disposal. Fine particle slurries are particularly difficult to dewater and current dry disposal options have prohibitive capital and operating costs. In partnership with an innovation leader, we are conducting promising research, testing bespoke polymers to separate water from fine slurries. This lower-cost dewatering technology creates dry, stackable tailings. To minimise the amount of water sent to tailings in the first place, we are also exploring innovative methods for more targeted comminution (crushing and grinding ore to the required particle size), dewatering waste far earlier in the process. Early estimates indicate the potential for a 30% to 40% reduction in water used per unit of mineral production. We are confident these dry processing techniques will allow us to re-use 80% of process water, moving us closer towards the waterless mine.

**Estimated timeframe for realization**

>6 years

**Magnitude of potential financial impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

15,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact**

An example is provided for the Los Bronces operation. The operation loses 25% of its water to evaporation on a yearly basis. The site uses approximately 30 million m<sup>3</sup> per year of new fresh water at approximately \$2/m<sup>3</sup>. The installation of evaporation covers will eliminate this evaporation loss and can result in cost savings of approximately \$15million.

---

**Type of opportunity**

Products and services

**Primary water-related opportunity**

New R&D opportunities

**Company-specific description & strategy to realize opportunity**

One of the great challenges facing the mining industry is how to extract more metal with less waste, while minimising costs and our environmental footprint.

Our Concentrate the Mine™ concept integrates different enabling technologies to deliver a large increase in output, with a significant reduction in energy and water use.

Coarse particle recovery (CPR) allows us to float particles at sizes two to three times larger than normal, consuming less energy and increasing production. It enables us to easily extract water from the process, leaving a waste stream that is dry and stackable. CPR will allow us to re-use 80% of process water and can be applied to most Anglo American assets. It represents an important change because water sent to tailings disposal often represents the biggest water loss at a mine.

We are achieving outstanding results at the pilot plant at Los Bronces copper mine in Chile and exceeding performance targets for productivity, and water and energy consumption, offset by a minor recovery loss. We are now preparing to extend the pilot from Copper to our Platinum

business and give more momentum to precision processing.

**Estimated timeframe for realization**

>6 years

**Magnitude of potential financial impact**

High

**Are you able to provide a potential financial impact figure?**

Yes, a single figure estimate

**Potential financial impact figure (currency)**

18,000,000

**Potential financial impact figure – minimum (currency)**

**Potential financial impact figure – maximum (currency)**

**Explanation of financial impact**

An example is provided for the Los Bronces operation. The operation uses 30million m3 per year of new fresh water at approximately \$2/m3. The use of CPR technology can result in savings of up to 30%, translating into a cost saving of approximately \$18million.

## **W5. Facility-level water accounting**

### **W5.1**

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

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**Facility reference number**

Facility 1

**Facility name (optional)**

**Country/Region**

Australia

**River basin**

Fitzroy

**Latitude**

-24.631

**Longitude**

150.061

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

23,438

**Comparison of withdrawals with previous reporting year**

Much higher

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

2,795

**Comparison of discharges with previous reporting year**

Much higher

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

20,642

**Comparison of consumption with previous reporting year**

Much higher

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The substantial increase across all categories is directly attributable to our Capcoal and Dawson operations where production increased significantly.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

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**Facility reference number**

Facility 2

**Facility name (optional)**

**Country/Region**

South Africa

**River basin**

Olifants





**Latitude**

-26.155

**Longitude**

28.836

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

27,619

**Comparison of withdrawals with previous reporting year**

About the same

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

10,206

**Comparison of discharges with previous reporting year**

Higher

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

17,412

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The increase in discharge water is a result of the increase in production at our Greenside Colliery. This also led to increased withdrawal and consumption overall, however the divestment of the Kriel operation in February 2018 offset these affects by reducing the overall withdrawal and consumption to values equivalent to 2017.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the



preceding financial years' data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years' data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years' data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years' data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

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**Facility reference number**

Facility 3

**Facility name (optional)**

**Country/Region**

South Africa

**River basin**

Vaal

**Latitude**

-27.737

**Longitude**

22.997

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

35,127

**Comparison of withdrawals with previous reporting year**

Much lower

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

19,031

**Comparison of discharges with previous reporting year**

Much lower

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

16,095

**Comparison of consumption with previous reporting year**

Much lower

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The decreases across the categories is attributed to the divestment of our New Vaal and New Denmark operations in February 2018.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

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**Facility reference number**

Facility 4

**Facility name (optional)**

**Country/Region**

South Africa

**River basin**

Limpopo

**Latitude**

-24.007

**Longitude**

28.928

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

25,535

**Comparison of withdrawals with previous reporting year**

About the same

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

1,091

**Comparison of discharges with previous reporting year**

Lower

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

24,443

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The reduction in discharge is attributed to our Mogalakwena operation where an operational efficiency strategy was implemented in 2018.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

---

**Facility reference number**

Facility 5

**Facility name (optional)**

**Country/Region**

Brazil

**River basin**

Rio Doce

**Latitude**

-18.881

**Longitude**

-43.429

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

28,328

**Comparison of withdrawals with previous reporting year**

About the same

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

11,260

**Comparison of discharges with previous reporting year**

Lower

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

17,068

**Comparison of consumption with previous reporting year**

Higher

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The reduction in discharge is attributed to the suspension of operation for 280 days due two environmental incidents in March.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.



It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

---

**Facility reference number**

Facility 6

**Facility name (optional)**

**Country/Region**

Brazil

**River basin**

Tocantins

**Latitude**

-15.073

**Longitude**

-48.967

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

8,029

**Comparison of withdrawals with previous reporting year**

About the same

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

0.6

**Comparison of discharges with previous reporting year**

Much lower

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

8,029

**Comparison of consumption with previous reporting year**

About the same

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge. The decreases in water discharge is due to lower production levels at the Barro Alto and Codemin operations.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

---

**Facility reference number**

Facility 7

**Facility name (optional)**

**Country/Region**



Chile

**River basin**

Other, please specify  
Aconcagua River

**Latitude**

-32.65

**Longitude**

-71.16

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

4,590

**Comparison of withdrawals with previous reporting year**

About the same

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

422

**Comparison of discharges with previous reporting year**

Much higher

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

4,168

**Comparison of consumption with previous reporting year**

Lower

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The significant increase in discharge is attributed to our El Soldado site which increased its production by 30% in the reporting year. Water withdrawal at this site remained consistent

with FY2017 (regardless of the production increase) as a result of the implementation of operational water efficiency initiatives and reduced evaporation losses at tailings dams due to lower storage volumes.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

---

**Facility reference number**

Facility 8

**Facility name (optional)**

**Country/Region**

Chile

**River basin**

Other, please specify

Maipo River

**Latitude**

-33.148

**Longitude**

-70.286

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

24,879

**Comparison of withdrawals with previous reporting year**

Lower

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

873

**Comparison of discharges with previous reporting year**

Lower

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

24,005

**Comparison of consumption with previous reporting year**

Lower

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge and storage variations). The reduction in withdrawal is attributed to our Los Bronces site which implemented an operational efficiency strategy and short-term contingency plans to overcome its water security risks in 2018 and also use of storage.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.



It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

---

**Facility reference number**

Facility 9

**Facility name (optional)**

**Country/Region**

Peru

**River basin**

Other, please specify  
Asana River

**Latitude**

-17.149

**Longitude**

-70.616

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

856

**Comparison of withdrawals with previous reporting year**

Lower

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

22

**Comparison of discharges with previous reporting year**

Much lower

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

834

**Comparison of consumption with previous reporting year**

Lower

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge).

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

---

**Facility reference number**

Facility 10

**Facility name (optional)**

**Country/Region**

Zimbabwe

**River basin**

Save

**Latitude**

-19.623

**Longitude**

30.094

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

1,248

**Comparison of withdrawals with previous reporting year**

About the same

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

9

**Comparison of discharges with previous reporting year**

Much lower

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

1,239

**Comparison of consumption with previous reporting year**

Higher

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The significant decrease in discharge is due to the unusually large rainfall levels experienced in January and February 2017. This inflated discharge figures for 2017. The site operates a closed-loop system and thus water is typically only discharged when there is excessive rainfall, hence the substantial reduction in discharged

water in the year 2018.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

---

**Facility reference number**

Facility 11

**Facility name (optional)**

**Country/Region**

South Africa

**River basin**

Other, please specify  
South Atlantic Coast

**Latitude**

-26.67

**Longitude**

17.06

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

330

**Comparison of withdrawals with previous reporting year**

Much lower

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

0

**Comparison of discharges with previous reporting year**

Much lower

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

330

**Comparison of consumption with previous reporting year**

Much lower

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The substantial decrease across all categories can be attributed to the exclusion of Namdeb in the 2018 reporting scope as it is strictly defined as non-managed JV from henceforth.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.



---

**Facility reference number**

Facility 12

**Facility name (optional)**

**Country/Region**

Canada

**River basin**

Attawapiskat River

**Latitude**

52.822

**Longitude**

-83.887

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

35,239

**Comparison of withdrawals with previous reporting year**

About the same

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

31,581

**Comparison of discharges with previous reporting year**

Much higher

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

3,658

**Comparison of consumption with previous reporting year**

Much lower

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). Discharges at our Victor operation increased significantly. The decrease in consumption can be attributed to the significant increase in discharges at our Victor operation.

Thresholds for comparison: • “Much lower” pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years’ data. • “Lower” pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the preceding financial years’ data. • “About the same” pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years’ data. • “Higher” pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years’ data. • “Much higher” pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years’ data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

---

**Facility reference number**

Facility 13

**Facility name (optional)**

**Country/Region**

Canada

**River basin**

Mackenzie River

**Latitude**

63.435

**Longitude**

-109.201

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

2,070

**Comparison of withdrawals with previous reporting year**

Much lower

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

515

**Comparison of discharges with previous reporting year**

Much lower

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

1,554

**Comparison of consumption with previous reporting year**

Much lower

**Please explain**

Water withdrawals are directly measured. Consumption data is estimated (withdrawal minus discharge). The decrease in consumption can be attributed to the ongoing closure of Snap Lake which is currently on care and maintenance. Gahcho Kue recorded significantly less tonnes mines in 2018, relative to 2017, and thus withdrawal and discharges decreased in 2017.

Thresholds for comparison: • "Much lower" pertains to data of decreasing trend which has a difference in 30% or more from the preceding financial years' data. • "Lower" pertains to data of decreasing trend which has a difference of more than 10% and less than 30% from the

preceding financial years' data. • "About the same" pertains to data which has less than 10% difference (greater or lesser) from the preceding financial years' data. • "Higher" pertains to data of increasing trend which has a difference of more than 5% and less than 30% from the preceding financial years' data. • "Much higher" pertains to data of increasing trend which has a difference in 30% or more from the preceding financial years' data.

It is important to note that this analysis is based on the water data provided by the operations which has not been verified or validated against the water balance.

## W5.1a

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

---

**Facility reference number**

Facility 1

**Facility name**

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

9,024

**Brackish surface water/seawater**

0

**Groundwater - renewable**

6,696

**Groundwater - non-renewable**

0

**Produced/Entrained water**

968

**Third party sources**

6,750

**Comment**

None.

---

**Facility reference number**

Facility 2

**Facility name**

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

169

**Brackish surface water/seawater**

0

**Groundwater - renewable**

21,692

**Groundwater - non-renewable**

0

**Produced/Entrained water**

317

**Third party sources**

5,442

**Comment**

None.

---

**Facility reference number**

Facility 3

**Facility name**

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

1,989

**Brackish surface water/seawater**

0

**Groundwater - renewable**

31,192

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

1,946

**Comment**

None.

---

**Facility reference number**

Facility 4

**Facility name**

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

0

**Brackish surface water/seawater**

0

**Groundwater - renewable**

14,872

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

10,663

**Comment**

---

**Facility reference number**

Facility 5

**Facility name**

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

26,469

**Brackish surface water/seawater**

0

**Groundwater - renewable**

1,474

**Groundwater - non-renewable**

0

**Produced/Entrained water**

370

**Third party sources**

15

**Comment**

None.

---

**Facility reference number**

Facility 6

**Facility name**

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



5,511

**Brackish surface water/seawater**

0

**Groundwater - renewable**

95

**Groundwater - non-renewable**

0

**Produced/Entrained water**

2,423

**Third party sources**

0

**Comment**

None.

---

**Facility reference number**

Facility 7

**Facility name**

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

791

**Brackish surface water/seawater**

0

**Groundwater - renewable**

3,571

**Groundwater - non-renewable**

0

**Produced/Entrained water**

228

**Third party sources**

0

**Comment**

None.

---

**Facility reference number**

Facility 8

**Facility name**

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

17,272

**Brackish surface water/seawater**

0

**Groundwater - renewable**

4,985

**Groundwater - non-renewable**

0

**Produced/Entrained water**

1,517

**Third party sources**

1,105

**Comment**

None.

---

**Facility reference number**

Facility 9

**Facility name**

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

811

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0



**Third party sources**

46

**Comment**

None.

---

**Facility reference number**

Facility 10

**Facility name**

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

1,249

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

0

**Comment**

None.

---

**Facility reference number**

Facility 11

**Facility name**

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

330

**Brackish surface water/seawater**

0

**Groundwater - renewable**

0

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

0

**Comment**

None.

---



**Facility reference number**

Facility 12

**Facility name**

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

7,238

**Brackish surface water/seawater**

0

**Groundwater - renewable**

27,643

**Groundwater - non-renewable**

0

**Produced/Entrained water**

359

**Third party sources**

0

**Comment**

None.

---

**Facility reference number**

Facility 13

**Facility name**

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

1,374

**Brackish surface water/seawater**

0

**Groundwater - renewable**

697

**Groundwater - non-renewable**

0

**Produced/Entrained water**

0

**Third party sources**

0

**Comment**

None.

## **W5.1b**

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

---

**Facility reference number**

Facility 1

**Facility name**



**Fresh surface water**

51

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

2,745

**Comment**

None.

---

**Facility reference number**

Facility 2

**Facility name**

**Fresh surface water**

2,580

**Brackish surface water/Seawater**

0

**Groundwater**

31



**Third party destinations**

7,596

**Comment**

None.

---

**Facility reference number**

Facility 3

**Facility name**

**Fresh surface water**

558

**Brackish surface water/Seawater**

0

**Groundwater**

16

**Third party destinations**

18,458

**Comment**

None.

---

**Facility reference number**

Facility 4

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

1,048

**Third party destinations**

44

**Comment**

None.

---

**Facility reference number**

Facility 5

**Facility name**

**Fresh surface water**

6,948

**Brackish surface water/Seawater**

4,298

**Groundwater**

3

**Third party destinations**

11

**Comment**

None.

---

**Facility reference number**

Facility 6

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

1

**Comment**

None.



**Facility reference number**

Facility 7

**Facility name**

**Fresh surface water**

165

**Brackish surface water/Seawater**

0

**Groundwater**

257

**Third party destinations**

0

**Comment**

None.

---

**Facility reference number**

Facility 8

**Facility name**

**Fresh surface water**

0

**Brackish surface water/Seawater**

0

**Groundwater**

227

**Third party destinations**

647

**Comment**

None.

---

**Facility reference number**

Facility 9

**Facility name**

**Fresh surface water**

23

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

0

**Comment**

None.



---

**Facility reference number**

Facility 10

**Facility name**

**Fresh surface water**

9

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

0

**Comment**

None.

---

**Facility reference number**

Facility 11

**Facility name**

**Fresh surface water**

0



**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

0

**Comment**

None.

---

**Facility reference number**

Facility 12

**Facility name**

**Fresh surface water**

31,582

**Brackish surface water/Seawater**

0

**Groundwater**

0

**Third party destinations**

0

**Comment**

None.

---

**Facility reference number**

Facility 13

**Facility name**

**Fresh surface water**

371

**Brackish surface water/Seawater**

0

**Groundwater**

145

**Third party destinations**

0

**Comment**

None.

**W5.1c**

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

---

**Facility reference number**



**Facility name**

**% recycled or reused**

51-75%

**Comparison with previous reporting year**

About the same

**Please explain**

Recycled / reused water is defined as the total volume of worked water flows to tasks as a % of total volume of water flows to tasks in line with the Water Accounting Framework (WAF). In 2017, Anglo American started to report in line with the ICMM guidelines. Following the roll out, it was noted that not all sites have detailed water balances or hydrological models. As a result, we do not have completely accurate data for all operations in 2018 and hence this is not reported per facility. At year end, 60% of our sites had completed (or restated) their water balance.

## W5.1d

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

**Water withdrawals – total volumes**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

**Water withdrawals – volume by source**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

**Water withdrawals – quality**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

**Water discharges – total volumes**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

**Water discharges – volume by destination**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

### **Water discharges – volume by treatment method**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

### **Water discharge quality – quality by standard effluent parameters**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

### **Water discharge quality – temperature**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

### **Water consumption – total volume**

---

**% verified**

Not verified

**What standard and methodology was used?**

N/A

**Water recycled/reused**

**% verified**

Not verified

**What standard and methodology was used?**

N/A

## W6. Governance

### W6.1

**(W6.1) Does your organization have a water policy?**

Yes, we have a documented water policy that is publicly available

### W6.1a

**(W6.1a) Select the options that best describe the scope and content of your water policy.**

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water	The policy applies to all our operations, our staff, contractors and relevant business partners on a global level, unless any aspect of it is not permitted by local law or regulation. The policy recognises that water is a fundamental requirement of our operations and future development. It distinguishes Anglo American's role and responsibility in water and its aim to be a responsible water steward by maximising the value from water resources while seeking to achieve no long-term net harm to the

	<p>Description of water-related performance standards for direct operations</p> <p>Description of water-related standards for procurement</p> <p>Reference to international standards and widely-recognized water initiatives</p> <p>Company water targets and goals</p> <p>Commitment to align with public policy initiatives, such as the SDGs</p> <p>Commitments beyond regulatory compliance</p> <p>Commitment to water-related innovation</p> <p>Commitment to stakeholder awareness and education</p> <p>Commitment to water stewardship and/or collective action</p> <p>Acknowledgement of the human right to water and sanitation</p> <p>Recognition of environmental linkages, for example, due to climate change</p>	<p>areas in which we operate. The policy recognises that Anglo American operations are a member of the larger community. Where possible, we strive to go beyond regulatory requirements to improve water access to our communities and lead sustainable water management within our regions. Stakeholders are one of five fundamental principles that underpin the policy. As such, it is recognised that water is an environmental and human right that requires the identification, development and implementation of collaborative solutions with our stakeholders. The policy specifies responsibilities to be implemented so that Anglo American can achieve its strategic water ambition. These responsibilities include:</p> <ul style="list-style-type: none"> <li>- Buffering operations against external water demand, costs and potential climate change</li> <li>- Developing and investing in technology and innovation to further water management performance</li> <li>- Proactively engaging with all stakeholders to build capacity for effective water partnerships by sharing knowledge, building capacity and establishing common outcomes</li> </ul> <p>The policy references standards including the UN SDG's, ICMM's water management and reporting standards, ISO 14046, GRI 303.</p> <p>The Sustainable Mining plan states our water stretch targets: by 2020 we will reduce the abstraction of fresh water in water-scarce regions by 20%, increase water recycling levels to 75% and have no Level 3 or greater water incidents.</p> <p>By 2030, we will reduce the abstraction of freshwater in water-scarce regions by 50%.</p>
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## W6.2

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

Yes

### W6.2a

**(W6.2a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for water-related issues.**

Position of individual	Please explain
Board-level committee	<p>The Sustainability Committee of the Board has ultimate responsibility for water and has the highest decision-making authority within the company. The Committee oversees, on behalf of the Board, material policies, processes, and strategies designed to manage sustainability risks and opportunities. The Committee meets quarterly and comprises the chairman; chief executive; Group technical director and non-executive directors. Matters relating to water are included in each quarterly report to the Committee, and as stand-alone items on the agenda. The Chair of the Sustainability Committee provides a summary of the Committee's discussions at the Board, which addresses the most material issues raised by the Committee</p> <p>As the highest-ranking executive, tasked with making major corporate and managerial decisions, water issues form part of the CEO's responsibility of ensuring strong operational performance and the sustainability of Anglo American's business. Key Performance Indicators related to the achievement of Anglo American's water targets are embedded into the CEO's Performance contract which reaffirms the significant role water plays in our business.</p>

### W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	<ul style="list-style-type: none"> <li>Monitoring implementation and performance</li> <li>Overseeing acquisitions and divestiture</li> <li>Overseeing major capital expenditures</li> <li>Providing employee incentives</li> <li>Reviewing and guiding annual budgets</li> <li>Reviewing and guiding business plans</li> <li>Reviewing and guiding major plans of action</li> <li>Reviewing and guiding risk management policies</li> <li>Reviewing and guiding strategy</li> <li>Reviewing and guiding corporate responsibility strategy</li> <li>Reviewing innovation/R&amp;D priorities</li> </ul>	<p>Matters relating to water are included in each quarterly report to the Sustainability Committee of the Board, and also feature periodically as stand-alone items on the agenda. The Group technical director will brief the Sustainability Committee of the Board, depending on the issue at hand. In addition to the discussions at the Sustainability Committee, the Audit Committee reviews the company's material risks, including water, twice a year. The Remuneration Committee takes into account financial as well as sustainability indicators in its decision-making process.</p> <p>The governance mechanisms in place at Anglo American ensure that the most senior leaders within the business are regularly and accurately informed of the most important water related risks and opportunities. The responsibility for water management is delegated down into the organisation. For example, as part of the new water management standard being implemented within Anglo American, every site is appointing a water manager to co-ordinate multi-disciplinary implementation of the water standard and water-management plan in alignment with the Anglo American strategy. Anglo American also has regional water-management co-ordinators. This assists in driving proactive water management throughout the business.</p>

		Setting performance objectives	
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### W6.3

**(W6.3) Provide the highest management-level position(s) or committee(s) with responsibility for water-related issues (do not include the names of individuals).**

**Name of the position(s) and/or committee(s)**

Chief Operating Officer (COO)

**Responsibility**

Both assessing and managing water-related risks and opportunities

**Frequency of reporting to the board on water-related issues**

More frequently than quarterly

**Please explain**

Water is the management responsibility of the Group’s technical director (equivalent to the COO), who is a member of the Board and the Group Management Committee (GMC). The GMC is comprised of the chief executive, business unit CEOs, Group directors of corporate functions and the Group general counsel. The Group technical director is supported by the Group head of safety and sustainable development and the head of environment. The GMC is supported by corporate, operational and investment sub-committees. The Group Technical Director is responsible for assessing water risks, water security, opportunities, policy implementation to mitigate risks and related opportunities for the Group and provides the Sustainability Committee of the Board with a quarterly report on water management and an annual detailed review. Material operational water issues or incidents are reported to the executive and Board on a risk basis and can occur more frequently than quarterly.



## W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4

**(W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?**

Yes

## W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a

**(W-FB6.4a/W-CH6.4a/W-EU6.4a/W-OG6.4a/W-MM6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?**

	Who is entitled to benefit from these incentives?	Indicator for incentivized performance	Please explain
Monetary reward	Chief Executive Officer (CEO) Other, please specify Water Managers	Reduction of water withdrawals	The CEO scorecard is compiled every two months and is the basis for the CEO's performance reporting to the Board. Each business unit CEO has a scorecard that is aligned with what is in the Group CEO scorecard and include water targets. The Anglo American chief executive and business unit CEO's scorecards include performance on water. In 2017, the Board approved the inclusion of our 2020 and 2030 water targets within the executive. These targets are focussed around ensuring water security for our operations and ultimately driving towards our goal of a waterless mine. Our short-term target is to reduce absolute freshwater intake by 20% by 2020 using 2015 as the baseline year. The indicators for incentivised performance are thus directly linked to these long-term water targets. A scaled weighting is applied to the achievement of these indicators which influences the quantum of the monetary reward that each individual receives during that year. SHE related targets, including water withdrawal reduction, make up 10% of the CEO's performance weighting, which directly informs the CEO's annual bonus and long-term incentive plan bonus. Water managers on site are also subject to a scaled weighting which is applied to the achievement of water reduction indicators

			which influences the quantum of the monetary reward that each individual receives during that year.
Recognition (non-monetary)	Other, please specify Operational staff	Reduction of water withdrawals Behavior change related indicator Water-related community project	Anglo American's Platinum Division have an Environmental Champion of the Quarter Award. A Water Awareness Quarter was created as part of this award to create awareness of the importance of conserving, specifically from pollution, our water resources. Our ultimate goal is to develop a culture of environmental protection among employees. As part of the Water Awareness Quarter we developed an annual water guideline document that was distributed to all employees. Each operation was then required to submit their response towards the criteria in the guideline. The Environmental Champion competition was launched to acknowledge and recognise the outstanding contributions made by the operations in helping to conserve water. Not only does the competition provide a platform to showcase innovative solutions for the efficient use of natural resources, it promotes an understanding of the need to preserve these resources for future generations. The winner was chosen based on criteria such as the site's water management procedures, infrastructures and system; extensive employee and community engagement and education on water conservation; and innovation and creative thinking regarding water preservation. The winner of the competition receives a non-monetary award consisting of a floating trophy and a framed certificate. This incentive is linked to the extent of new water-sector related activities and data implemented by operation, over the period of a year.
Other non-monetary reward	No one is entitled to these incentives		N/A

## W6.5

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

Yes, direct engagement with policy makers

## W6.5a

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

In 2017, Anglo American started implementing and embedding a new water-management standard and associated reporting requirements. The standard guides a risk-based, regional approach to water management, in line with global best practice and ICMM water guidelines. The standard also ensures that all activities, including public policy engagement, is done consistently. At Anglo American Platinum, the water management standard is championed by the Safety & Sustainable Development Committee, whose role is to ensure the company operates in a sustainable manner. This Committee also oversees all direct and indirect activities that aim to influence water-related policy. This ensures that there is consistency and alignment between external and internal water-related activities.

As an integral part of Anglo American's strategy, the new 2020 targets will support enhanced business performance through cost reduction and aligns with the environmental value pillar objectives of water management. Should any inconsistency in policy engagement be observed by Anglo American Platinum this will be raised at the Safety & Sustainable Development Committee. Appropriate actions will be recommended and implemented depending on the level of inconsistency.

The Sustainable Mining Plan was developed with extensive internal and external engagements across a broad range of stakeholders.

## W6.6

**(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?**

Yes (you may attach the report - this is optional)

🗨 Page 30 of our Annual Integrated Report.

## W7. Business strategy

### W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	> 30	Anglo American aspires to be a global leader in sustainable mining and have subsequently developed a Sustainable Mining Plan to inform their business strategy. The strategy is guided by our FutureSmart Mining™ program (Anglo American's innovation-led approach to sustainable mining) and is upheld by three pillars. Water is identified within the Healthy Environment pillar with the specific objective being to: "operate waterless mines in water-scare catchments". The strategy is being implemented through the development of 5-year, tailored site plans that are flexible and integrate group, business unit and local priorities. Specific issues and key focus areas that are integrated into Anglo American's long-term business objectives include: reduction of new water usage; reuse and recycling; water use efficiency; partnership to address local community water needs; mine dewatering and stormwater management and discharge management. 2020 BAU targets and 2030 stretch goal targets have been set to ensure the integration of these objectives into the business strategy. For example, by 2020 we aim to 1) reduce abstraction of fresh water by 20% 2) Increase water recycling levels to 75% and 3) have no Level 3 or greater water incidents. By 2030, the goal is to reduce the abstraction of freshwater in water-scarce regions by 50%.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	> 30	To achieve our long-term objectives, a water management strategy has been developed. We are well on our way to finalising the implementation of new reporting guidelines and delivery of all water balances (a record of the flow of water in and out of a system) from all our sites. This will help us understand site specific issues and take the actions required to meet their needs. We are improving operational water performance through infrastructure improvements, water treatment and recovery technologies, and managing environmental impacts. Progress in implementing our water strategy is

			<p>driven by our water management programme, which is supported by a mandatory group water standard and delivered via operational water action plans. Key objectives include: minimising use of higher grade water and finding lower grade sources, maximising water reuse; ensuring no spillage of contaminated storm and process water; ensuring no spillage of groundwater and promoting its beneficial use.</p> <p>To ensure that these water issues are integrated into the long-term business objectives, we have started investing in technology to reduce water consumption with the aim of operating a waterless mine. Our work towards a waterless mine includes evaporation measurement and dry tailings disposal, exploring innovative approaches to dry separation, and non-aqueous processing. A long-term time horizon of more than 30 years has been chosen as this aligns with the life of mine plans and long-term nature of mining.</p>
Financial planning	Yes, water-related issues are integrated	> 30	<p>Future financial plans cater for the needs of water infrastructure which considers the needs and availability of water at each facility to inform our growth strategy. Our water strategy is embedded in our business plan and considers predicted water demand by all other users and potential supply. We are involved in partnerships with stakeholders in various infrastructure and development projects to improve water security for their operations and to help supply the needs of communities. We financially assist the projects throughout their life cycles. As an example, our Los Bronces site is currently developing a water-recovery scheme to recycle tailings water via horizontally drilled wells which has the potential to reduce water consumption by 20%. The overall project cost is estimated at \$30-\$75 million, with the first trial wells scheduled for the first quarter of 2020. A long-term time financial planning horizon of more than 30 years is used as this aligns with the life of mine plans and long-term nature of mining. The 2020 budgets and beyond will reflect the detailed water priorities and financial commitments to reaching long-term water targets and will be based on the outcome of climatic water balances and prioritized on a site by site basis. Water security risk was newly classified as a principal risk in 2018, therefore it is anticipated that water-related capital expenditure will increase as we work towards mitigating our water security risks.</p>

## W7.2

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

Row 1

**Water-related CAPEX (+/- % change)**

-50

**Anticipated forward trend for CAPEX (+/- % change)**

50

**Water-related OPEX (+/- % change)**

-50

**Anticipated forward trend for OPEX (+/- % change)**

10

**Please explain**

Water OPEX is estimated as Anglo American does not have completely accurate data for all its operations. The anticipated forward trend is set to increase as Anglo American continues with additional preventative water-related maintenance.

Like OPEX, water related CAPEX is also estimated there is no clear definition for water-related CAPEX. CAPEX is also anticipated to increase as Anglo American ensures there is sufficient supply of water for all its operations.

## W7.3

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

Use of climate-related scenario analysis	Comment
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Row 1	Yes	None.
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### W7.3a

**(W7.3a) Has your organization identified any water-related outcomes from your climate-related scenario analysis?**

Yes

### W7.3b

**(W7.3b) What water-related outcomes were identified from the use of climate-related scenario analysis, and what was your organization's response?**

	Climate-related scenario(s)	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	RCP 2.6	To understand, assess and mitigate the physical risks of climate change and extreme weather events we have worked with global leaders in climate modelling including the UK Met Office and the South African Council for Scientific and Industrial Research (CSIR) to understand the vulnerability of our operations and our host communities. These assessments assumed unabated anthropogenic GHG emissions through to the end of the century, with associated warming of more than 3.5°C. The impact of the expected warming on water security in our areas of operation was assessed as part of the climate related scenario analysis.	Our catchment-based approach to water management is crucial to allowing us to define opportunities to contribute to regional water conservation and adapt to the expected impacts of climate change. The resulting climate scenario data from the in-depth CSIR analysis will be used in regional water-catchment models, and in mine water-balance simulations to inform water supply security and storm drainage design parameters.

### W7.4

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

**Row 1**

**Does your company use an internal price on water?**

No, but we are currently exploring water valuation practices

**Please explain**

Anglo American is currently working with Columbia University to develop a methodology for determine the financial risks related to water and subsequently, quantify that risk. In the reporting year, we expanded this project to include certain ICMM member companies.

## W8. Targets

### W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Business level specific targets and/or goals Site/facility specific targets and/or goals	Targets are monitored at the corporate level Goals are monitored at the corporate level	Previously Anglo American set operational water targets through the implementation of a water efficiency target tool (WETT). The tool forecasted the projected business-as-usual (BAU) water demand of individual operations and established a register of water-saving projects, linking the two to deliver future performance targets. With the implementation of Anglo American’s Water Management Technical Standard, the reporting program has been rendered inconsistent with the ICMM reporting methodologies, Anglo American’s goals and the Standard itself. Accordingly, 2018 was considered the transitional year as Anglo American initiated the process of replacing the previous WETT targets with more robust and consistent water targets. In the reporting year sites started developing detailed, dynamic operational water balances, supported by regional water balances that are linked to regional climatic data. These site-wide water balances will enable the simulation of water management alternatives, options and trade-offs. By the end of 2019 all sites should have completed operational water balances which will enable the identification of water opportunities, risks and projects. The long-term water targets can then be formulated based on the finalised capital projects and long-term water security positions of each site. To date, we have set Business Unit level targets



			<p>towards achieving the 2020 and 2030 Company Level targets, while site-specific targets have been set for those operations which have completed their operational water balances.</p> <p>We will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.</p>
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## W8.1a

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

**Target reference number**

Target 1

**Category of target**

Water recycling/reuse

**Level**

Company-wide

**Primary motivation**

Water stewardship

**Description of target**

Our water targets are focused around ensuring water security for our operations and ultimately driving towards our goal of a waterless mine. Our short-term target is for 75% of our total operational water requirements to be met by recycling/re-using water by 2020, using 2015 as the baseline year.

**Quantitative metric**

% increase in water recycling/reuse



**Baseline year**

2015

**Start year**

2016

**Target year**

2020

**% achieved**

93

**Please explain**

Anglo American has already achieved a 70% recycling/re-using rate versus its target of 75%. This represents a 93% achievement.

---

**Target reference number**

Target 2

**Category of target**

Water withdrawals

**Level**

Company-wide

**Primary motivation**

Water stewardship

**Description of target**

Our water targets are focused around ensuring water security for our operations and ultimately driving towards our goal of a waterless mine. Our short-term target is to reduce absolute freshwater intake by 20% by 2020 using 2015 as the baseline year.

**Quantitative metric**

Absolute reduction in total water withdrawals

**Baseline year**

2015

**Start year**

2016

**Target year**

2020

**% achieved**

65

**Please explain**

Anglo American has already achieved a 13% reduction in absolute freshwater intake versus its target of 20%. This represents a 65% achievement.

## W8.1b

**(W8.1b) Provide details of your water goal(s) that are monitored at the corporate level and the progress made.**

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**Goal**

Other, please specify  
Water withdrawals

**Level**

Company-wide

**Motivation**

Water stewardship

**Description of goal**

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 goal, therefore, is a 50% reduction in abstraction of freshwater from water-scarce regions by 2030. This will assist us in reaching our ultimate goal of achieving a waterless mine which is part of our overarching sustainability strategy.

The goal will be achieved through the implementation of our Group Water Management Standard which utilises a catchment-based approach to water management. The first step in the implementation process requires all operations to complete a self-assessment and gap analysis against the standard. The was completed at several sites in 2018 and will be finalised in 2019. The development of new technologies also forms part of group water policy with specific R&D projects including evaporation measurement and dry tailings disposal, exploring innovative approaches to dry separation, and non-aqueous processing.

**Baseline year**

2015

**Start year**

2016

**End year**

2030

**Progress**

The indicator used to measure this is the absolute volume reduction in freshwater withdrawals.

Anglo American has already achieved a 13% reduction in absolute freshwater intake versus its target of 50% by 2030. This represents a 26% achievement and is considered an acceptable threshold for success.

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**Goal**

Other, please specify

Record no Level 3 (or above) incidents

**Level**

Company-wide

**Motivation**

Risk mitigation

**Description of goal**

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. In 2018, our operations started using an updated classification criterion for environmental incidents.

**Baseline year**

2015

**Start year**

2016

**End year**

2020

**Progress**

The indicator is measured based on the number of reported level 3 – 5 environmental incidents.

In 2018, the stricter classification process has contributed to a slight increase in Level 3 incidents reported compared with previous years. In 2018, we recorded one Level 4 (major) and five Level 3 (moderate impact) environmental incidents. This compares with zero Level 4 and two

Level 3 incidents reported in 2017. Our progress towards this goal declined in the reporting year due to the increase in reported level 3 - 5 incidents in 2018.

## W9. Linkages and trade-offs

### W9.1

**(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?**

Yes

### W9.1a

**(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.**

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**Linkage or tradeoff**

Tradeoff

**Type of linkage/tradeoff**

Increased dust generation

**Description of linkage/tradeoff**

Fugitive dust emissions from mining pose environmental/health concerns to employees and communities as well as legislative issues to the operations. Dust emissions are primarily caused by large vehicles on dirt roads and on tailings dams that are not appropriately vegetated or managed. Understanding and controlling the dust we release at our operations is essential to prevent adverse impacts on host communities and meet current and future legislative requirements. The trade-off to addressing dust is increased water consumption for dust suppression on areas such as roads within the mines. This in turn increases the amount of diesel consumed as dust suppression is done using bowsers and vehicles. We have three real-time ambient monitoring networks in Rustenburg, Polokwane and near the town of Northam to monitor and manage the

emission of dust and particulates from TSF's and smelters in and around our operations.

### **Policy or action**

We promote ongoing operational improvements in managing air quality risks by implementing the Anglo American group air quality and emissions technical standard (2018). The standard guides our approach to effectively identifying risks and improving the management of air quality controls for dust (excluding emissions managed for occupational health impacts) that may pose a risk to humans, fauna and flora. In doing so, we reduce adverse impacts on communities, the risk of non-compliances, and strengthen our ability to meet evolving regulatory requirements. A self-assessment against the standard was completed at Mogalakwena complex in 2018 and will be done at all other operations in 2019. These will inform the development of site-specific plans to address identified gaps and implement multi-year incremental air quality improvements. One way in which Anglo American Platinum is managing this trade-off is by using dust suppressants (i.e. at the Mogalakwena Complex) which forms a durable surface on the soil/ground, binding smaller dust particles to form larger particles that are less prone to become airborne. This reduces the amount of water required for dust suppression. Although the cost of dust suppressants is higher than the cost of applying water on the roads, the use of dust suppressants is more effective. This reduces potential legal liabilities and ensures better relations with the communities.

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### **Linkage or tradeoff**

Linkage

### **Type of linkage/tradeoff**

Increased biodiversity

### **Description of linkage/tradeoff**

During the open-cast coal mining process at Anglo American's 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 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 be dewatered in future operations. This can be achieved by undertaking concurrent rehabilitation of the site.

Anglo American measures this impact monthly through the amount of rehabilitated land (area km<sup>2</sup>), specifically the areas reshaped and re-seeded.

### **Policy or action**

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.

To ensure this happens, our coal operations have included concurrent rehabilitation targets in the performance contracts of the General Managers which demonstrates how this aspect is integrated into the strategy of the business.

There has been a measured improvement in the areas reshaped and re-seeded over the last 3 years within the Anglo American's Coal operations.

## **W10. Verification**

### **W10.1**

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

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

## **W11. Sign off**

### **W-FI**

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





The data in this submission corresponds to the data reported in 2018 and in line with the Sustainable Mining Plan. Because of its holistic nature we are constantly improving our approach. We will review the water targets of the Sustainable Mining Plan in the next reporting year to ensure we balance possible increases in production against water withdrawals, ensuring we improve efficiency and ultimately decrease our water intensity.

## W11.1

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

	Job title	Corresponding job category
Row 1	Director: Technical & Sustainability	Chief Operating Officer (COO)

## W11.2

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

No

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

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



**Please confirm below**

I have read and accept the applicable Terms