AngloGold Ashanti - Water 2018

W0. Introduction

W0.1

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

AngloGold Ashanti is a multinational global gold mining company with a geographically diverse, world-class portfolio of operations and projects. Headquartered in Johannesburg, South Africa, AngloGold Ashanti is the third largest gold mining company in the world, measured by production. AngloGold Ashanti produced 3.8 million ounces of gold in 2017 - an estimated 3.5% of global production - making it the third largest gold producer in the world. AngloGold Ashanti operates 17 gold-producing operations located in 8 countries on three continents, and a group of greenfield projects in Colombia is supported by a focused exploration programme. These comprise mid to long-life, relatively low-cost assets with differing ore body types located in key gold-producing regions. AngloGold Ashanti currently operates in South Africa, Argentina, Australia, Brazil, Ghana, the Republic of Guinea, Mali and Tanzania. Several of these assets are strongly leveraged to energy costs and currencies. In addition, AngloGold Ashanti holds a material interest in 2 non-managed mines which are operated by Randgold Resources. We work across the full spectrum of the mining value chain and are concerned with the impact of our activities on the varied and many communities and environments in which we operate. Our goal is to create sustainable value for our shareholders, employees, and social partners through safe and responsible mining practices and capital discipline. Headquartered in Johannesburg, South Africa, AngloGold Ashanti's primary listing is on the Johannesburg Stock Exchange (ANG). It is also listed on the following securities exchanges: New York (AU), Australia (AGG) and Ghana (AGA).

W-MM0.1a

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

Activity	Details of activity
Mining	Gold
Processing metals	Gold

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 2017	December 31 2017

W0.3

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

Argentina
Australia
Brazil
Ghana
Guinea
Mali
South Africa
Other, please specify (Tanzania)

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?

No

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	Neutral	Not very important	DIRECT USE: There are only a few production processes in operating mines that require good quality freshwater. These include air cooling and ventilation systems in underground mines, the gold elution circuits in gold extraction plants and WASH services for employees. The bulk of the water requirements can be met with poorer quality water. Often however, where there are limited poorer quality sources available, freshwater must be imported into the organisation to sustain operations, either in untreated form directly from rivers, lakes or potable quality freshwater is imported from utility water suppliers. INDIRECT USE: There are immaterial volumes of water contained in purchased products, being limited to liquid reagents that are purchased and where water is a used as a carrier (e.g. acids, peroxide, liquid cyanide, etc.).
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Not important at all	DIRECT USE: The bulk of operational water needs at our operations are met by recycled water (up to 70%) within closed systems. Most operational processes can use very poor quality water and as a result, water losses incurred due to evaporation, phreatic water entrainment in tailings and seepage are preferentially made up by brackish and/or saline groundwater water sources. Where insufficient poor quality water is available to counter losses, fresh water must be imported. INDIRECT USE: There are immaterial volumes of water contained in purchased products, being limited to liquid reagents that are purchased and where water is a used as a carrier (e.g. acids, peroxide, liquid cyanide, etc.).

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%	All company facilities report water withdrawal in accordance with GRI G4-EN8 on a monthly basis. The data is reported externally on an annual basis. Measuring withdrawals volumes is critical in identifying sudden and unexpected changes in the site water balance. In many jurisdictions, water withdrawals into the organisation are also closely tracked and require reporting to regulators.
Water withdrawals – volumes from water stressed areas	100%	All company facilities report water withdrawal in accordance with GRI G4-EN8 on a monthly basis, regardless of the water stress status of the catchment they are located in. The data is reported externally on an annual basis. Measuring withdrawals volumes is critical in identifying sudden and unexpected changes in the site water balance. In many jurisdictions, water withdrawals into the organisation are also closely tracked and require reporting to regulators.
Water withdrawals – volumes by source	100%	All company facilities report withdrawal by source in accordance with GRI G4-EN8 on a monthly basis. Rainwater is excluded from internal definitions of withdrawal and accounted for elsewhere. The data is reported externally on an annual basis. Measuring withdrawal volumes by source, or by water type is critical in identifying sudden and unexpected changes in the site water balance. Targets are often set to reduce importation from fresher, constrained or more expensive water sources, In many jurisdictions, water withdrawals into the organisation are also closely tracked and require reporting to regulators.
Produced water associated with your metals & mining sector activities - total volumes	Not relevant	Not applicable to hard rock ores.
Produced water associated with your oil & gas sector activities - total volumes	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	A core set of water quality parameters are monitored.
Water discharges – total volumes	100%	All company facilities that discharge water account for discharged water volumes in accordance with GRI G4-EN22, on a monthly basis. The data is collated and reported externally on an annual basis. Volumes of water discharged, e.g. through a water treatment plant are required to maintain the operational site water balance and closely manage costs of water treatment. In addition, discharges are regulated and require reporting to regulators.
Water discharges – volumes by destination	100%	Water discharge permits or licenses issued by regulators typically indicate the permissible location of discharge, which has been determined through a process of scientific study and stakeholder consultation. For example, our Sunrise Dam operation discharges hypersaline water onto a salt lake. Typically these destinations remain fixed and confirmation of water discharge at the permitted points is provided in reports to regulators along with other pertinent discharge information.
Water discharges – volumes by treatment method	100%	Water discharge permits or licenses issued by regulators typically indicate the type of treatment to be applied and or water quality objectives that have to be met.
Water discharge quality – by standard effluent parameters	100%	Water discharge permits or licenses issued by regulators indicate the permissible thresholds of various standard effluent parameters e.g. pH, conductivity and parameters of potential concern such as dissolved metals. Monitoring of these parameters is typically obligatory, as is provision of this information to regulators.
Water discharge quality – temperature	51-75	Water discharge permits or licenses issued by regulators indicate the permissible thresholds of various standard effluent parameters e.g. pH, conductivity and parameters of potential concern such as dissolved metals. Monitoring of these parameters is typically obligatory, as is provision of this information to regulators. It is not however common to require temperature readings, hence this is not globally applied. The percentage reported is an estimate.
Water consumption – total volume	100%	We do not currently calculate water consumption as per some external definitions e.g. the Ceres' definition for water consumption. During 2018, we are in the process of implementing the ICMM Water reporting framework definition for water consumption. However, it should be noted that water losses (consumption) due to evaporation, seepage and/or water permanently entrained in constructed tailings facilities are quantified in the internal operational water balances on a monthly basis. This is done to aid balance the water accounting system and is not reported externally.
Water recycled/reused	100%	All active operational facilities account for recycled water volumes in accordance with the ICMM methodology (based on MCA accounting framework). The data is collated and reported externally on an annual basis.
The provision of fully-functioning, safely managed WASH services to all workers	100%	We believe that these are fundamental human rights and are committed to complying with the Universal Declaration on Human Rights, International Bill of Human Rights and the International Labour Organisation (ILO) standards.

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	52219	Higher	This was in part due to reduced annual rainfall in some operational areas., requiring additional abstraction volumes.
Total discharges	19806	Higher	(Serra Grande was a large contributor of the increase in discharged water for the company).
Total consumption	0	About the same	We do not calculate water consumption as per the Ceres' definition for water consumption, however water losses due to evaporation, seepage and/or water permanently entrained in constructed tailings facilities are quantified in the internal operational water balances on a monthly basis. This is done to balance the water accounting system across a mine site. This specific data is however not collated for external reports.

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	42	Lower	WBCSD Global Water Tool	Six of our operations are located in areas designated as being under water stress. In reality, three of these operations have a significant proportion of extraneous fissure water draining into the operations at their disposal, reducing the need to import water from surface sources and water supply utilities. The remaining 3 sites are located in remote areas and use saline to hypersaline groundwater resources.

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	20415	Higher	
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	Not an applicable source.
Groundwater – renewable	Relevant	18651	About the same	
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	Not an applicable source.
Produced water	Not relevant	<Not Applicable>	<Not Applicable>	Not an applicable source.
Third party sources	Relevant	13153	Lower	

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	14909	Lower	
Brackish surface water/seawater	Relevant	4898	Lower	
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable.
Third-party destinations	Not relevant	<Not Applicable>	<Not Applicable>	Not applicable.

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	For 2017, the water recycling percentage was 75% (marginally down from 76% in 2016). We use the ICMM water accounting guide's approach to calculate water recycling data (which is based on the MCA Water Accounting Framework).

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	259554	51-75	For 2017, the water recycling percentage was 75% (marginally down from 76% in 2016). We use the ICMM water accounting guide's approach to calculate water recycling data (which is based on the MCA Water Accounting Framework).

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
Gold	Total water use	Ton of ore processed	About the same	The tonnes of ore treated for 2017 was very similar to that of 2016. The water usage increased by a relatively small margin. Although rainfall and evaporation rates are tracked at the individual site level and modelled estimates form part of the site water balance, accurately quantifying the actual volume of rainfall captured onto facilities over very large areas is challenging. Moreover, since evaporation losses typically exceed the volume of rainwater captured at the majority of our operations, the net rainfall/evaporation volumes are negative. We have therefore resolved not to report rainfall as an 'abstracted water' source within AGA.

W2. Business impacts

W2.1

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

Yes

W2.1a

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

Country/Region

South Africa

River basin

Orange

Type of impact driver

Physical

Primary impact driver

Flooding

Primary impact

Increased operating costs

Description of impact

The company was forced to step in and pump underground mine water that would have drained into one of its underground mine workings from 3 shallower neighbouring (upstream) mines that went into liquidation, including some poor quality (acidic) water. The neighbouring mines had not made provision for post-closure pumping and regulators had not forced it to do so. If AngloGold Ashanti did not pump the additional water, our operations may be flooded, making continued mining challenging.

Primary response

Develop flood emergency plans

Total financial impact

8500000

Description of response

A wholly owned subsidiary was set up to maintain and operate the infrastructure required to continue pumping the volumes of mine water at source (at the liquidated neighbouring mines). Pumping is continuing under a directive from the national water resources regulator. An average of US$ 8.5m per annum is required to sustain pumping and infrastructure (at August 2018 exchange rates).

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, enforcement orders or other penalties

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

Other penalty type, please specify (Compliance order - no financial impact.)

Financial impact

0

Country/Region

Other, please specify (Tanzania)

River basin

Other, please specify (It did not impact/affect a river basin.)

Type of incident

Abstraction without a permit or abstraction that exceeded permit

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

A compliance order was received in Tanzania for operating a borehole without a valid permit. There was no fine attached to this.

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

Argentina

River basin

Other, please specify (GHAAS Basin 974)

Number of tailings dams in operation

1

Number of inactive tailings dams

0

Comment

Country/Region

Australia

River basin

Other, please specify (GHAAS Basin 174)

Number of tailings dams in operation

2

Number of inactive tailings dams
1

Comment

Country/Region
Other, please specify (Brazil - AGA Mineracao)

River basin
Sao Francisco

Number of tailings dams in operation
3

Number of inactive tailings dams
0

Comment

Country/Region
Other, please specify (Brazil - Serra Grande)

River basin
Tocantins

Number of tailings dams in operation
1

Number of inactive tailings dams
0

Comment

Country/Region
Other, please specify (Ghana - Obuasi)

River basin
Pra

Number of tailings dams in operation
1

Number of inactive tailings dams
1

Comment

Country/Region
Other, please specify (Ghana - Iduapriem)

River basin
Other, please specify (GHAAS Basin 1184)

Number of tailings dams in operation
1

Number of inactive tailings dams
1

Comment

Country/Region
Guinea

River basin
Niger

Number of tailings dams in operation

1

Number of inactive tailings dams
0

Comment

Country/Region
Mali

River basin
Senegal

Number of tailings dams in operation
1

Number of inactive tailings dams
0

Comment

Country/Region
South Africa

River basin
Orange

Number of tailings dams in operation
5

Number of inactive tailings dams
6

Comment

Country/Region
Other, please specify (Tanzania)

River basin
Other, please specify (Zaire)

Number of tailings dams in operation
1

Number of inactive tailings dams
0

Comment

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
Life of facility plan	A life of facility plan that considers the operating and closure phases A life of facility plan that considers design and construction phases A life of facility plan that considers closure and decommissioning phases A life of facility plan that considers post-closure	AGA has developed a Tailings Management Framework which provides guidance and standards for the different phases of development of Tailings facilities.
Acceptable risk levels	Establishment of site-level guidance and standards for acceptable risk levels for occupational health and safety Establishment of site-level guidance and standards for acceptable risk levels for third party safety Establishment of site-level guidance and standards for acceptable risk levels after mine closure Establishment of company-wide standards for acceptable risk levels	AGA has developed a comprehensive tailings management system to ensure that all of our tailings storage facilities meet company-wide criteria. The system is fleshed out in AGA's Tailings Management Framework which provides guidance and standards for the different phases of development of Tailings facilities.
Operating plan	An operating plan that includes the operating constraints of the dam and its construction method An operating plan that includes the consequences of breaching its operating constraints An operating plan that includes application of appropriate engineering practices to the slope materials An operating plan that includes application of appropriate engineering practices to the foundation materials An operating plan that includes periodic review of the foundations and slope materials	AGA has developed a Tailings Management Framework which provides guidance and standards for the different phases of development of Tailings facilities.
Assurance program	An assurance program for the operating phase of the facility that details the procedures for the inspections, audits and reviews An assurance program for each phase of the facilities´ life that includes the frequency of the various levels of inspections, audits and reviews An assurance program for each phase of the facilities´ life that includes the scope of the various levels of inspections, audits and reviews An assurance program that details the competence requirements for the persons undertaking the inspections, audits and reviews	Only professional geotechnical consultants are used for expert inspections, audits and reviews of AGA's tailings facilities.
Change management process	Inclusion of a formal change management process for the construction phase of the facility Inclusion of a formal change management process for the operating phase of the facility Inclusion of a formal change management process for the closure and decommissioning phase of the facility Inclusion of change management process in the assurance program	Each phase of Tailings facility development is documented to provide direction for design, construction, operation, decommissioning, closure and post closure.
Approval	Other, please specify (Regional & Corporate Tailings Engineers) *The EHS and C-suite managers are not required to approve the operating plan, the life of facility plan, the assurance programme and the change management process. The operating plan and the life of facility plan are approved by the Regional and Corporate Tailings Engineers. The results of the assurance programme and change management process are presented to the Executives and C-suite managers annually.*	The EHS and C-suite managers are not required to approve the operating plan, the life of facility plan, the assurance programme and the change management process. The operating plan and the life of facility plan are approved by the Regional and Corporate Tailings Engineers. The results of the assurance programme and change management process are presented to the Executives and C-suite managers annually.
Other management procedure	Other, please specify	AGA has developed a Tailings Management Framework which provides guidance and standards for the different phases of development of Tailings facilities. The AGA Tailings Management process incorporates four levels of review. At the most basic level, Tailings facility managers at each operation are responsible for day to day operations and adherence to the operating plan. Tailings management experts at Regional level are responsible for providing geotechnical advice to the operations. Each tailings facility is reviewed on a two to five year basis by an independent third party geotechnical consultant. The operational and regional tailings facility management is audited by the corporate tailings engineer to check compliance against the AGA Tailings management framework.

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
Other, please specify (Internal risk management standard)

Frequency of assessment
Six-monthly or more frequently

How far into the future are risks considered?
2 to 5 years

Type of tools and methods used
Enterprise Risk Management

Tools and methods used
ISO 31000 Risk Management Standard

Comment

Supply chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment
Suppliers are evaluated in regard to sustainability issues, but this does not currently include their water consumption. Our focus is on human rights, safety and environmental management systems.

Other stages of the value chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment

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	Current water availability is always included in current and forward looking risk.
Water quality at a basin/catchment level	Relevant, always included	Current availability and quality of water resources are important to operations and stakeholders.
Stakeholder conflicts concerning water resources at a basin/catchment level	Relevant, always included	In mining, and at virtually all company operations, we compete as a stakeholder for limited water resources. Therefore risk assessment includes local stakeholder impacts and perspectives.
Implications of water on your key commodities/raw materials	Relevant, always included	Water is a critical requirement for conducting mining and refining operations. Mining of ores is directly related to water availability.
Water-related regulatory frameworks	Relevant, always included	The regulatory environment is critical at all facilities, and has been shown in the past to have a significant economic impact on operations. Loss of an operation's permit due to water issues would be unacceptable. Water tariffs, where applicable, can be a significant component of costs and so are monitored closely.
Status of ecosystems and habitats	Relevant, always included	Our mining operations are part of the local ecosystem. Mining operations, and related water management, affects the local ecosystem and habitat. As such, these are always part of risk assessments.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Most employees work shifts of 8 hours or more outside of an office environment so require potable water for drinking and water for sanitation. Water for these purposes and for cooking are provided in all company-supplied residential quarters. Access to WASH services by all employees is a human right and we are committed to complying with the Universal Declaration on Human Rights, International Bill of Human Rights and the International Labour Organisation (ILO) standards.
Other contextual issues, please specify	Relevant, always included	Our mining operations are part of the local ecosystem. Mining operations, and related water management, potentially affects the local ecosystem and habitat. As such, these are always part of risk assessments.

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Not relevant, explanation provided	Gold is an internationally traded commodity, the price of which is set internationally and over which AngloGold Ashanti has no control. The impact of water is to the cost of production, which is not related to the price paid by customers. Also, there are no quality issues from water with regard to our product. Therefore, customers are not typically considered.
Employees	Relevant, always included	Employee experience is correlated to water risks to a limited extent. WASH issues are clearly important but water requirements for operations are orders of magnitude greater than employee requirements so supplying sufficient water for employees is readily achieved.
Investors	Relevant, always included	Investors rate the sustainability value of their investments as a critical criterion in selection of their investment. As such, it's critical that we manage operations responsibly, including ensuring a sustainable water supply while demonstrating responsible water stewardship.
Local communities	Relevant, always included	Water is a key consideration of the communities surrounding our mining operations. We share water resources with communities, as well as potentially impacting the water quality of the local environment.
NGOs	Relevant, always included	NGOs are proactive in interfacing with governments and communities. As such, they are important to maintaining both strong government and community relationships. Water is typically one of their top issues. We have seen it growing in importance in recent years, both at the international and local levels.
Other water users at a basin/catchment level	Relevant, always included	Water consumers in a catchment are potentially affected by our operations and are therefore considered in risk assessments.
Regulators	Relevant, always included	Regulators set regulatory and permit conditions so they are the most critical stakeholders of all. We are generally required by law to consult with them.
River basin management authorities	Relevant, always included	As relatively large water users, our mines are usually key participants in catchment/basin management forums and it is therefore important that we participate in such forums and consult their management authorities in all risk assessments.
Statutory special interest groups at a local level	Relevant, always included	Mining and processing licences and permits are predicated upon having strong positive relationships with all government and quasi-government organisations and these must be included in risk and impact assessments.
Suppliers	Relevant, not included	Suppliers are evaluated in regard to sustainability issues, but this does not currently include their water consumption. Our focus is on human rights, safety and environmental management systems.
Water utilities at a local level	Relevant, always included	Local utilities may compete with our company for water sources and quality. In most cases we are the customer of local water utilities. As such, they are always considered in risk assessments.
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.

The company incorporates water management risk within the company's Enterprise Risk management system (AuRisk). Internal company knowledge gained over many years, comprising site knowledge and understanding and the experience and knowledge of internal, regional and corporate staff, are utilised in the AuRisk assessments. Water risks include environmental, operational, stakeholder (where applicable) and regulatory perspectives. All are evaluated per site, with risk information being captured and updated in AuRisk, with related risk mitigation actions being captured and tracked. Additionally, the company utilises the BowTie Risk assessment methodology and appropriate management systems e.g. ISO14001 to aid in the understanding and management of specific risks (e.g. of water pollution).

Supply chain risks from water have been assessed as low, so suppliers are not covered in the detailed risk assessment process. Government databases, at the local, regional and national levels, are usually very useful and are drawn upon to the extent that we can, considering that many of our operations are in remote parts of underdeveloped countries.

W4. Risks and opportunities

W4.1

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

Yes, only within our direct operations

W4.1a

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

The company's risk matrix defines 6 levels of potential consequence and 6 levels of potential likelihood. There are also 6 types of risk category including financial. Potential threats with a risk index of 25 and higher are considered significant. In financial terms, this translates as a threat with a consequence of between $1m and $10m and a Likelihood of 66% or greater (Very Likely or Almost Certain). Water is required to sustain gold recovery operations at the company's gold plants which process ore from mining operations. If water supply becomes constrained, gold production volumes could be affected in roughly equal proportions. The water risks considered are those with a potential risk index of 25 or greater, principally with a potential financial impact of between $1m and $10m.

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	1	1-25	This risk currently applies to one mining operation in South Africa.

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
Orange

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
282000000

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

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

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

Comment
The above production value estimate is based on the affected mine's 2017 production and 2017 average gold price per ounce .

W4.2

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

Country/Region
South Africa

River basin
Orange

Type of risk
Physical

Primary risk driver
Flooding

Primary potential impact
Impact on company assets

Company-specific description
Some of AngloGold Ashanti's mining operations are located adjacent to mining operations of other mining companies. The closure of an underground mining operation may have an impact upon the continued operations at adjacent mines if appropriate preventative steps are not taken, including the ingress of extraneous underground water when pumping operations at the closed mine are suspended. This happened in 2013 when a mining company adjacent to one of our operations went into liquidation and threatened to suspend pumping of underground water because it had not made provision for post-closure pumping and had not been forced to do so by regulators. If unaddressed, it there is risk that the highly contaminated extraneous underground water will drain downwards and potentially flood deeper-lying operations.

Timeframe
Current up to 1 year

Magnitude of potential impact
High

Likelihood
Virtually certain

Potential financial impact
0

Explanation of financial impact
It is not possible to assign a reasonable estimate of the potential financial impact if the risk were to be realised and the company's efforts have gone into mitigating the risk at source. The worst case scenario is that mining operations would be suspended in a Force Majeure event or until capital equipment is installed to deal with the volumes of extraneous water.

Primary response to risk
Other, please specify (Take over pumping infrastructure)

Description of response
AngloGold Ashanti secured a court order for access rights to the liquidated mining company's infrastructure to keep pumping going. AngloGold Ashanti also incorporated Covalent Water Company, which purchased rights of access and electricity to the 4 and 6 shafts as well as the relevant infrastructure, to continue pumping underground water. This has reduced the risk of flooding at the company's West Wits Operations, but flooding in the future could pose an unpredicted "Force Majeure" type event, which could have an adverse impact on its results of operations and financial condition. Additional infrastructure is being installed at Covalent Water Company 4 Shaft in the B2 decline to mitigate risk and allow pumping closer to source.

Cost of response
8500000

Explanation of cost of response
The cost of response is an estimate of the cost to maintain infrastructure and pumping per annum (at August 2018 US$ to ZAR exchange rates).

W4.2c

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

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	There are immaterial volumes of water contained in purchased products, being limited to liquid reagents that are purchased and where water is used as a carrier (e.g. acids, peroxide, liquid cyanide, etc.).

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

Cost savings

Company-specific description & strategy to realize opportunity

In South Africa, as the Gauteng province's water supplies are forecast to be insufficient to meet demand in the coming years, purifying impacted water for industrial use and/or human consumption will become increasingly important and financially desirable. Use of polluted water from liquidated neighbouring operations presents an opportunity to reduce our use of municipal water intake. We are currently undertaking a prefeasibility study to determine whether the opportunity is economically viable, and if so which is the best technology option.

Estimated timeframe for realization

1 to 3 years

Magnitude of potential financial impact

Unknown

Potential financial impact

0

Explanation of financial impact

The financial opportunity will only be known once the project has been put out to tender and the tenders evaluated.

W5. Facility-level water accounting

W5.1

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

Facility reference number
Please select

Facility name (optional)
West Wits

Country/Region
South Africa

River basin
Orange

Latitude
-26.4384

Longitude
27.4019

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

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
3688

Comparison of withdrawals with previous reporting year
Much lower

Total water discharges at this facility (megaliters/year)
531

Comparison of discharges with previous reporting year
Lower

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

Comparison of consumption with previous reporting year
About the same

Please explain
We do not currently calculate water consumption as per some external definitions e.g. the Ceres' definition for water consumption. However, it should be noted that water losses (consumption) due to evaporation, seepage and/or water permanently entrained in constructed tailings facilities are quantified in the internal operational water balances on a monthly basis. This is done to balance the water accounting system. This specific data is not reported externally.

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 water-related performance standards for direct operations Commitment to water stewardship and/or collective action Other, please specify (Incorporated within group EHS policy) *The policy is Company wide and publicly available. It is incorporated within the group Environmental, Sustainabiilty or EHS policy.*	We make all our company policies and standards available on our website as a result of our commitment to transparency and so that stakeholders can keep us accountable to our commitments. Our policies and performance standards apply across the entire company because people are the same everywhere. They incorporate scope for more stringent local requirements, but set a minimum standard across the entire organisation. We have an overarching integrated company environmental and community policy that includes water, and then a water management standard that sets out specific requirements regarding water management.

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Other, please specify (Board Social, Ethics and Sustainability)	The Board Social, Ethics and Sustainability Committee has this responsibility. It has an overview of sustainability policy and strategy, including water. The committee is one of five committees that assist the Board in discharging its responsibilities. The functioning of the committees is guided by their terms of reference which are approved by the Board and reviewed annually or as required. During 2017, all Board committees were chaired by independent non-executive directors.

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	Monitoring implementation and performance Setting performance objectives	Water use and intensity performance data and surface & groundwater quality risks for the company, its operating regions and important developments in the sphere of water (such as legislation changes) are standard content in the reports tabled before the Board Social, Ethics and Sustainability Committee. The reports outline the rationale for observed trends in performance data and discuss any developments in the water management that may impact on the company, including management's planned response. The Committee may in its review of the information presented and its deliberations, direct the company along a course of action.

W6.3

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

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

Responsibility
Both assessing and managing water-related risks and opportunities

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

Please explain
The company's Executive Committee is the top tier of management and are accountable to the Board of Directors. Executive Committee members include the CEO, the CFO and the Executives Vice Presidents (EVPs) responsible for Operations (COOs), Sustainability, Technical matters, Human Resources, Strategy & Business Development and Legal & Governance. Some EVPs have more direct accountability for tracking and/or managing water-related issues such implementing projects and/or tracking legislation or other developments and shaping the company strategies to mitigate water management risk(s).

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?

	Who is entitled to benefit from these incentives?	Indicator for incentivized performance	Please explain
Monetary reward	Chief Executive Officer (CEO) Chief Financial Officer (CFO) Chief Operating Officer (COO) Chief Sustainability Officer (CSO)	Other, please specify (Water-related spills and incidents.)	The annual Bonus and Deferred Share Plan scheme for C-Suite and senior managers across the company incorporates a zero target for significant environmental incidents, which include water-related incidents (spills).
Recognition (non-monetary)	No one is entitled to these incentives	<Not Applicable>	
Other non-monetary reward	No one is entitled to these incentives	<Not Applicable>	

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?
No

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	5-10	Assessing risks and opportunities related to water are a critical part of feasibility studies for greenfield mine development(s) and brownfields site expansion projects. This typically spans over aspects of licensing, hydrogeology, water balance changes (shortages or excesses) and the potential need to either import additional water or to treat and release excess water.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	In achieving the company's long term business objectives, it is crucial that the company demonstrates it is a responsible steward of water resources, in particular to social and regulatory stakeholders.
Financial planning	No, water-related issues were reviewed but not considered as strategically relevant/significant	Please select	

W7.2

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

	Water-related CAPEX (+/- % change)	Anticipated forward trend for CAPEX (+/- % change)	Water-related OPEX (+/- % change)	Anticipated forward trend for OPEX (+/- % change)	Please explain
Row 1	0	0	0	0	There were no major water projects completed during 2017. Routine Opex costs are directly related to water treatment activities which were not materially changed in 2017 from 2016. It is not possible to cleanly extract "water-related expenditure" from our accounting systems since water management is integral to many business activities. We are unable to meaningfully forecast changes in water-related Capex expenditure as these are subject to approval(s) of feasibility studies. Opex expenditure is estimated to be materially unchanged.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	No, but we anticipate doing so within the next two years	The company was recently been made aware of the TCFD recommendations and has been evaluating the rationale for undertaking a climate-related scenario analysis, given where it is in the current business cycle and the context of the assets it currently holds namely; gold bullion producing mines.

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, and we do not anticipate doing so within the next two years

Please explain

The relevance of an internal water price has not been assessed, principally because water is recognized as being an environmental and social good that is strongly governed by the basin, regulatory and social context. As such, the 'value' of water is unique to each location (and context) and does not lend itself to being valued with a common 'price ' across the organisation.

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 Site/facility specific targets and/or goals	Targets are monitored at the corporate level	All operations are required to account for their water use to a maximum inaccuracy of 10%. Accounting system accuracy outside of that range requires investigation and correction. Annually, the company has a target of Zero environmental incidents categorised as 'Reportable' namely; High, Major or Extreme severity, as defined by the company's environmental incident classification system. This includes incidents of non-compliance to host country discharge water quality limits.

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 pollution reduction

Level
Company-wide

Primary motivation
Water stewardship

Description of target
Annually, the company has a target of Zero environmental incidents categorised as 'Reportable' namely; High, Major or Extreme severity, as defined by the company's environmental incident classification system. This includes incidents of water-related spills and non-compliance to host country discharge water quality limits.

Quantitative metric
Other, please specify (Zero significant water-related incidents)

Baseline year
2017

Start year
2017

Target year
2017

% achieved
0

Please explain
Unfortunately 3 Reportable water-related spills occurred during 2017.

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.

Linkage or tradeoff
Tradeoff

Type of linkage/tradeoff
Increased energy use

Description of linkage/tradeoff
Indirect (Scope 2) Carbon emissions from mine water pumping.

Policy or action
Indirect (Scope 2) Carbon emissions from mine water pumping: In South Africa, pumping water from deep underground mines which ingresses to the workings via cracks and fissures from higher aquifers requires considerable electrical energy. Pumping is critically important to prevent flooding of underground operations, including safeguarding the safety of those working there. More than 90% of South Africa's grid electricity is generated from coal and the country has one of the world's highest emissions factors. For several years, the South African operations have had in place a load shifting management process to phase evacuation pumping, as far as practicable, outside of peak electricity demand periods. In addition, where technically feasible, grouting of the major inflow pathways of aquifer water ingress into underground workings is undertaken. In recent years, the indirect emissions generated by pumping of extraneous water from abandoned neighbouring mines has increased substantially.

W10. Verification

W10.1

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

W10.1a

(W10.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1. Current state	Water withdrawals	ISAE3000	Limited assurance is provided by an external assurer annually, testing alternate sites over a period of time.

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.

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	Vice President: Environment, Group Sustainability.	Other, please specify (Group Vice President/Head of Discipline)

W11.2

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

Yes

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