GLENCORE

Water Report 2019

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We welcome feedback on this report or on any other aspect of sustainability at Glencore. Comments can be sent to **info@glencore.com**

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Introduction

Life is not possible without water. Water is a crucial resource for the natural environment, human beings and business activities. At Glencore, we recognise access to water as a fundamental human right and strive to support equitable access to water, as well as implement leading sustainable water management systems throughout our global operations.

Ivan Glasenberg,
CEO

"We recognise access to water as a fundamental human right. It is essential to our operating processes and we support equitable access to water through working with all our regional water users."

Glencore is one of the world's largest natural resource companies and we recognise that water is a fundamental requirement for our operations and future development, as well as for the communities in which we operate.

We manage a number of water-related challenges across our diverse assets, including water stress and excess water. Some of our assets are located in regions with high to extremely high water baseline stress as defined by the World Resource Institute's (WRI) Aqueduct Water Risk Atlas. Water scarcity may result in competition between industrial operations and local communities. We recognise our role in working with stakeholders to support adequate access to water for users.

Excessive water can also significantly affect our activities through the costs associated with dewatering our assets and treating water ahead of its discharge. We often treat the excess water and make it available for local community use as drinking water, for sanitation purposes or in agricultural activities.

Other challenges can include extended periods of severe drought or flooding that longer-term impacts arising from climate change may further intensify. To address these challenges, we identify water-saving and water-sharing opportunities to help conserve water, reduce water dependency and mitigate environmental and local community impacts.

This is our second annual report dedicated to water. We have chosen to focus on water in response to stakeholder interest on our approach to responsible water management.

Our 2019 Water Report explains our interactions with water, shared resource users and the regional context of our activities. It also outlines our approach to water stewardship, our water-related performance, challenges and opportunities, as well as our associated asset-level targets (where applicable), goals and objectives. The report provides information about our external engagement and the next steps on our journey to implement our strategic water management framework. The appendices show detailed breakdowns of our water performance on river basin and country levels.

Business model

Glencore is present at multiple stages of the commodity supply chain and uniquely diversified by geography, product and activity, maximising the value we create for our business and our stakeholders.

Inputs and resources on which our business model depends

Assets and natural resources

- Our resources and reserves feature many long-life and high quality assets
- We are a disciplined producer, seeking to align supply with demand and value over volume
- Our established marketing operations have global reach and deep understanding of their respective markets

Our people and partners

- We have established long-term relationships with a broad range of suppliers and customers across diverse industries and geographies
- c.160,000 employees and contractors spread across over 35 countries in both established and emerging regions for natural resources

Financial discipline

- We seek to deploy capital in a disciplined manner, seeking to create value for all our stakeholders
- Our hedging strategies protect us against price risks and ensure that our marketing profitability is primarily determined by volume-driven activities and value-added services rather than absolute price

Unique market knowledge

- As an integrated commodity producer and marketer, we are uniquely positioned to generate value at every stage of the commodity chain

Our industrial business

Our industrial business spans the metals and energy markets, producing more than 60 commodities from 150 sites

Exploration, acquisition and development

Our focus on brownfield sites and exploration close to existing assets lowers our risk profile and lets us use existing infrastructure, realise synergies and control costs.

Extraction and production

We mine and beneficiate minerals across a range of commodities, mining techniques and countries, for processing or refining at our own facilities, or for sale.

Processing and refining

Our expertise and technological advancement in processing and refining mean we can optimise our end products to suit a wider customer base and provide security of supply as well as valuable market knowledge.

Our values reflect our purpose, our priorities and the beliefs by which we seek to conduct ourselves and carry out our business activities. They define what it means to work at Glencore, regardless of location or role.

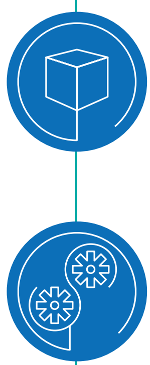
- **Safety**
- **Openness**
- **Integrity**
- **Simplicity**
- **Responsibility**
- **Entrepreneurialism**

Logistics and delivery

Our logistics assets allow us to handle large volumes of commodities, both to fulfil our obligations and to take advantage of demand and supply imbalances. These value added services make us a preferred counterparty for customers without such capabilities.

Blending and optimisation

Our ability to blend and optimise allows us to offer a wide range of product specifications, resulting in a high-quality service and an ability to meet our customer specific requirements.



We have around 150 mining and metallurgical sites and oil production assets in over 35 countries with a workforce of about 160,000 employees and contractors. We recognise that our business activities make a significant contribution to the national and local economies in which we operate. We believe that our presence can deliver long-term sustainable benefits to our host countries and regions.

How we use water

Our activities involve the use and management of water of different qualities and quantities and require environmental approvals and regulatory permits

How we use water:

Mining operations

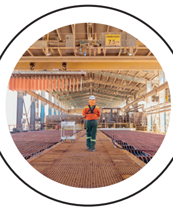
The most water intensive activity in our mining operations is the removal of water from mines (dewatering), needed to safely access our deposits. Depending on site conditions, this may include both active dewatering, as well as passive seepage collection. Our water management activities may also involve diverting surface water bodies, under environmental approvals.

Metal concentrators

Our mineral concentrators use water in the processing of ore to facilitate separating minerals from waste material to produce higher-grade ore concentrates.

Leaching and hydrometallurgical processing

Our leaching and hydrometallurgical processing use water in processes to extract metals from metal-bearing material for further recovery.



Coal operations

Our coal operations use water to beneficiate their products by removing waste material from the coal to meet customers' product specifications.

Oil exploration and production

Our oil exploration and production activities use water in oil processing and reservoir management processes (ie water injection).

Emission abatement and dust mitigation

Wet air cleaning techniques, like scrubbers or electrostatic precipitators, are used to remove particles and gaseous substances (eg sulphur dioxide). Throughout our operational processes, we also use sprinklers and water carts to reduce dust levels that may result from mining, transport and stockpiling activities.

Water treatment

We collect and treat water to meet the requirements for potable water for our sites or for third parties such as communities, as well as for process water usage. We treat water prior to discharge in compliance with regulatory approvals, permits and licenses.

Cooling activities

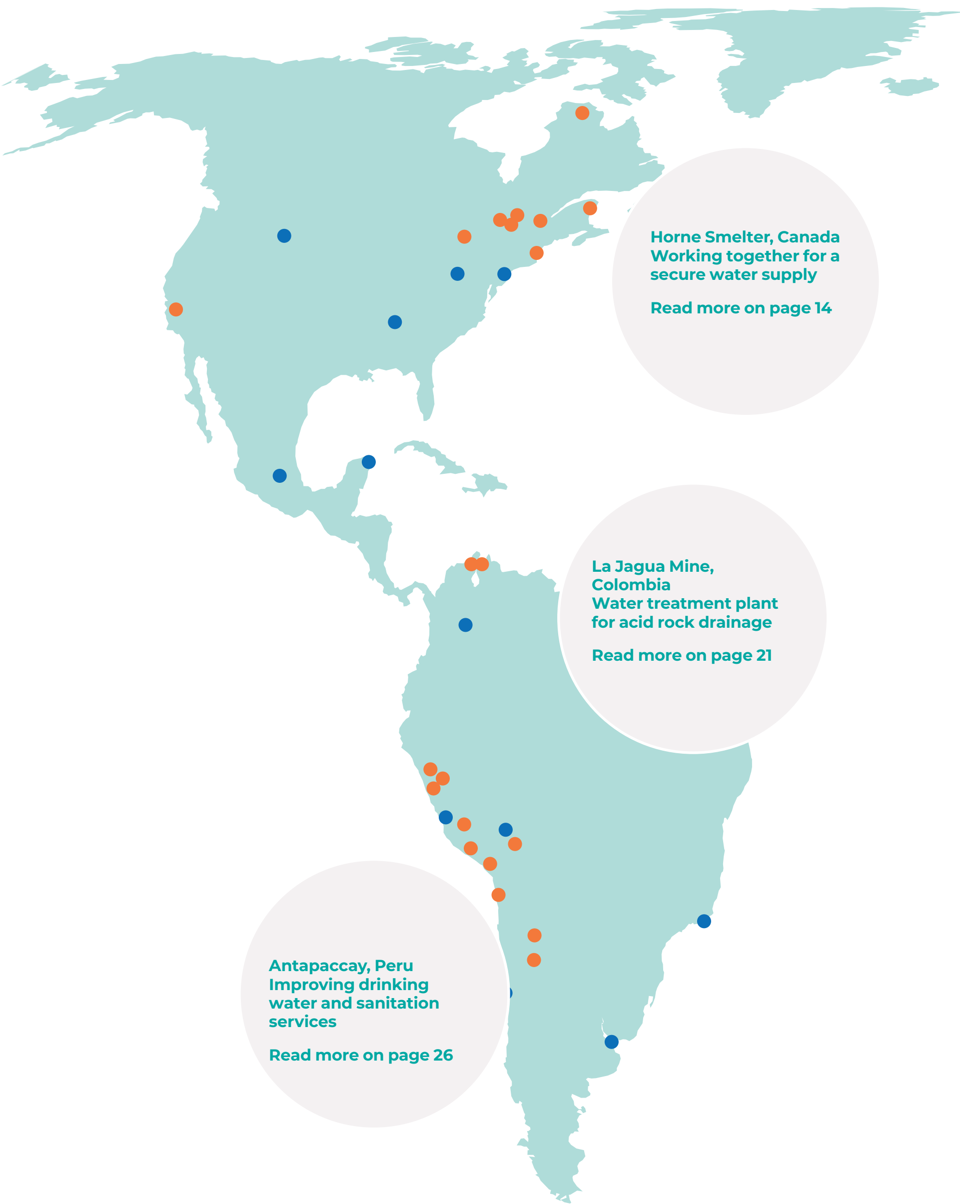
Many of our activities use water for cooling purposes, predominately for non-contact cooling activities whereby no deterioration of the water quality takes place.

Local water infrastructure

A number of our assets support local governments by supplying water to surrounding communities for a variety of uses including drinking water and agriculture.

Shipping activities

We ship our products over maritime and inland waterways and abide by environmental protection guidance, such as the International Maritime Solid Bulk Cargoes (IMSBC) Code and the Convention for Prevention of Marine Pollution (MARPOL), to protect these water systems.



Regional context

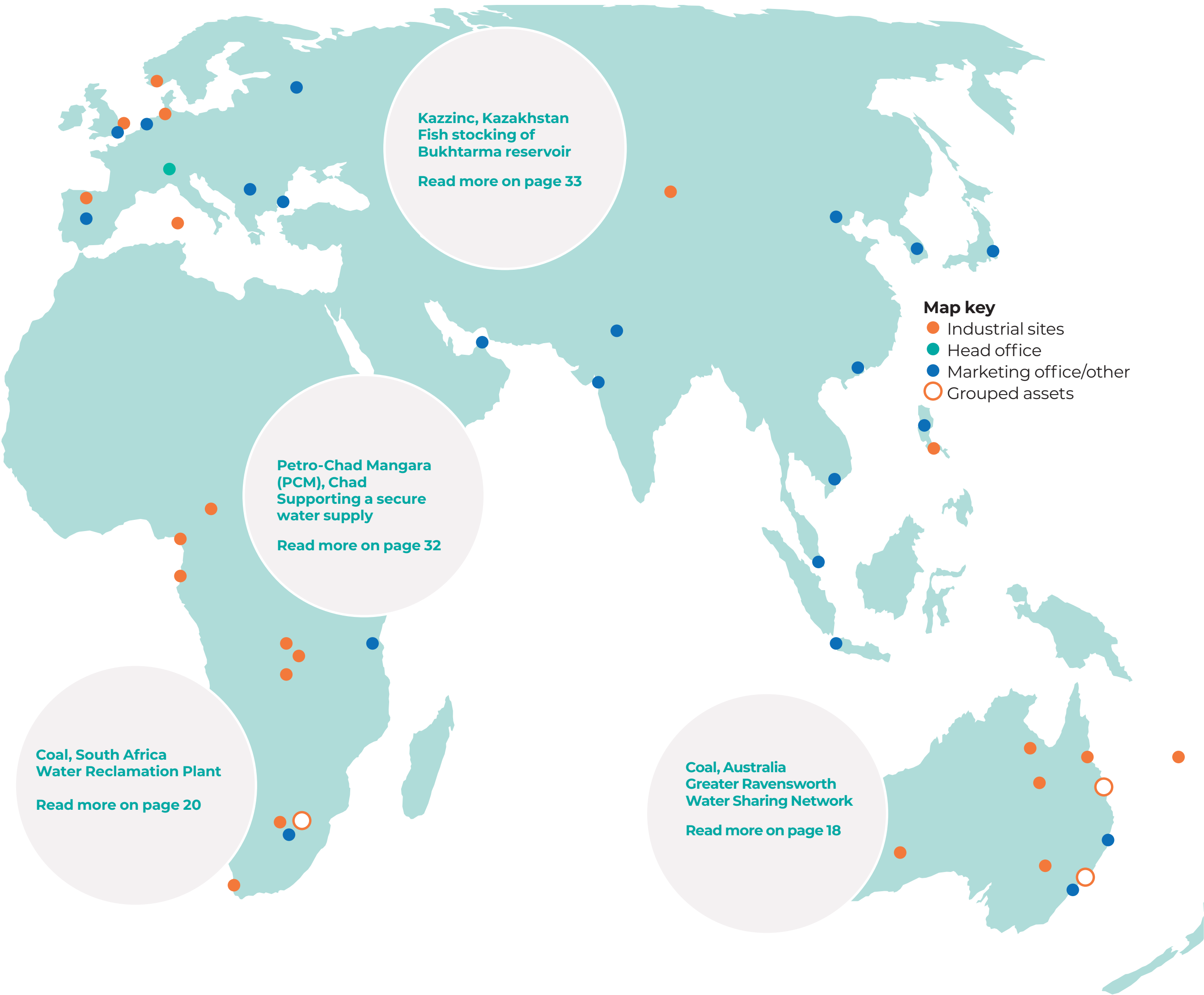
We have a global footprint. Our operations are in climatically differing locations that range from deserts to areas with highly distinctive wet and dry seasons, or those with high precipitation and/or frequent major storm events. Our operations also range from being located in very remote locations, with sparse or nomadic populations, to areas characterised by more densely-populated cities or towns.

Sometimes we share a river basin or catchment with other mining, municipal or industrial organisations. Irrespective of our operations' location, or size of surrounding population or presence of industries, the availability of water and the quality of discharged water can affect shared water bodies. In some cases, baseline water stress[1] can arise from multiple regional users accessing limited freshwater sources which is expected to aggravate due to climate change.

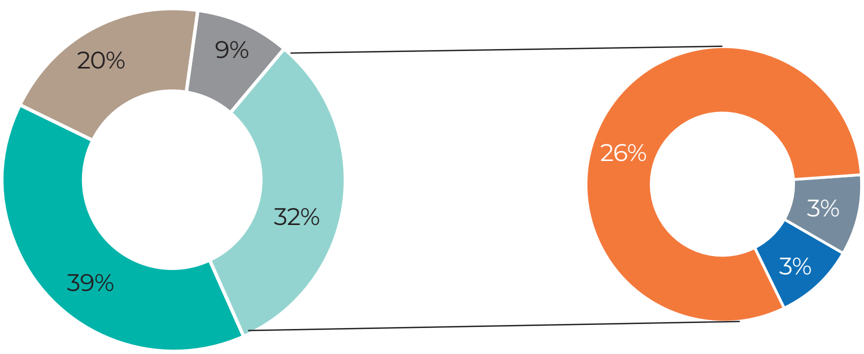
We are committed to acting responsibly in our use of water, through engaging with other regional users to support maintaining water quality and equitable access to the resource.

Based on the WRI's Aqueduct Water Risk Atlas, 32% of our operations are located in regions of "high" or "extremely high" water stress or that are classified as "arid & low water use". We have disclosed the WRI water risk level for our sites by river basin and country in the appendix.

1 Baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. For further information refer to Glossary



Share of industrial operations by level of baseline water stress



Baseline water stress levels

- Low
- Low to medium
- Medium to high
- High, extremely high and arid & low water use
- High
- Extremely high
- Arid & low water use

Our approach to water stewardship

Our strategic water management framework, integrated into our business planning, drives our approach to water stewardship, and is supported by our overall HSEC governance

Strategic water management framework

Strategic water management framework

In 2016, we rolled out our strategic water management framework with five primary objectives:

1. Understand our water catchment areas, baseline water conditions, and ecosystems
2. Assess our potential impacts on water resources, and identify risks and opportunities
3. Develop and implement water management plans to responsibly manage this important resource and reduce our water footprint
4. Improve our water management performance by monitoring compliance, setting targets, and continuously improving
5. Engage with involved stakeholders, report on our progress, and identify partnerships to progress water-related programmes

Since introducing the strategic water management framework in 2016, we have undertaken a number of actions to meet its objectives:

- Established an internal, cross-departmental water working group with water experts from different regions across the globe
- Aligned our water-related reporting indicators with the Minerals Council of Australia's (MCA) Water Accounting Framework (WAF), a framework that was developed specifically for water accounting in the mining and metals industry. The indicators allow us to run high level water balances for each operation
- Analysed and identified potential high risk sites and potential medium risk sites with identified reputational issues and evaluated their actual exposure / contribution to water risks and impacts and introduced or are introducing corrective actions, respectively, where needed
- Developed our Water Management Guideline and completed its implementation at the majority of our assets
- Participated in the water working group of the International Council on Mining & Metals (ICMM) to support the further development of water stewardship initiatives in the mining industry
- Represented the mining industry in the Global Reporting Initiative's (GRI) water working group for the revision of its Standard 303: Water and Effluents 2018
- Continued our participation in projects to analyse and mitigate shared risks in Australia, South Africa and Colombia in collaboration with mining peers and other stakeholders
- Developed a water microsite for the information and data previously submitted to CDP Water Security. This is available at: **glencore.com/sustainability/water**

Based on self-assessment, the majority of our assets have fully implemented our Water Management Guideline, which aligns with ICMM's position statement on water[2] and its water management framework[3]. Implementation is ongoing at those sites that were recently acquired or that have gone through substantial operational changes. The Water Management Guideline applies a risk-based approach and covers the minimum requirements for water governance, the identification and evaluation of water-related risks and opportunities, the mitigation of identified risks and impacts, the management of water in terms of quality and quantity and engagement with relevant stakeholders.

Governance

We align our approach to water stewardship with our strategic priority to integrate sustainability throughout our business; it reflects our commitment to operate in a responsible and transparent manner (further information on our sustainability framework is available in our Sustainability Report 2019). We recognise that we will only deliver shareholder value through robust financial performance underpinned by a positive contribution to society.

Our water stewardship programme is overseen by our Board Health, Safety, Environment and Community and Human Rights (HSEC) Committee, on which both our Chief Executive Officer and Chairman sit. The HSEC Committee meets five times a year when it receives and reviews updates on our water performance.

The HSEC Committee's main responsibilities, which include water-related elements, are:

- Review and approve the HSEC strategy
- Ensure that appropriate Group policies are developed in line with our Values and Code of Conduct for the identification and management of current and emerging HSEC risks
- Encourage the effective communication of these policies throughout the Company and the development of processes and procedures at an operational level, as well as evaluating their effectiveness through:
  - assessments of operational performance
  - reviews of updated internal and external reports
  - independent audits and reviews of performance with regard to HSEC matters, and action plans developed by management in response to issues raised
- Ongoing review of the Group's progress on its catastrophic hazard management, including water and tailing storage facilities management
- Consider reports on key performance indicators in relation to material issues and complaints from host communities
- Consider engagement with communities and NGOs on sustainability matters

Our assets are responsible for the day-to-day management of their water footprint and compliance with our policies.

Business planning

We seek to integrate water opportunities, challenges and risks, such as water-related partnerships, scarcity, stress, environmental sensitivities and operational requirements into our long-term business objectives to support the continued supply of water for operational processes, while acting as a responsible water user. Where we identify potential and actual water-related challenges and risks, including those relating to climate change or access by local communities, we require our assets to establish appropriate mitigation, adaptation and management measures.

2 https://www.icmm.com/water-ps
3 https://www.icmm.com/water-stewardship-framework

Performance

Our performance

In 2019, we withdrew 1,050 GL of water compared to 1,020 GL in 2018. The modest increase in water withdrawal was due to improved reporting by some assets, and significantly increased precipitation at certain operations. During the year, we used 541 GL of the withdrawn water in our production processes (530 GL in 2018).

Glencore's overall water balance 2019 (GL)[1]

Water input (by source)	1,067
Surface water – withdrawn	214
Sea water – withdrawn	147
Groundwater – withdrawn	391
Rainwater – withdrawn	181
Potable (drinking) water imported or withdrawn	22
Other (drinking) water imported from a third party	94
Total water withdrawn	1,050
Water entrained in ore that is processed	17

Water used, reused/recycled onsite	1,068
Water used in a task or process	541
Water recycled	133
Water reused	394
Recycling and reuse efficiency rate[2]	49%
Change in water in storage	66

Water output (by source)	1,000
Water discharged to surface water	471
Water discharged to sea water/ocean	153
Water discharged to groundwater	7
Water discharge to offsite treatment or disposal locations	12
Water exported to a third party	54
Water lost to evaporation and other losses	254
Water entrained in waste material and final product	49

Diversions and water transferred to others	90
Surface water diversions	26
Aquifer interception diverted	40
Water supplied to others	23

Total water input by quality[3]	1,067
Category 1 – Water withdrawn	280
Category 2 – Water withdrawn	429
Category 3 – Water withdrawn	358

Total water output by quality[3]	1,000
Category 1 – Water discharged	409
Category 2 – Water discharged	448
Category 3 – Water discharged	144

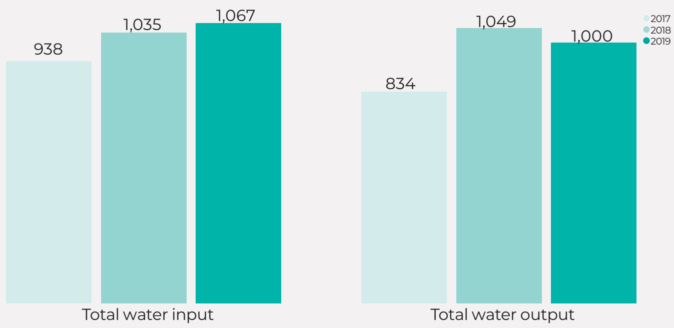
Water input ■ Water use ■ Water output ■ Water diversion / transferred to others

[1] Total water withdrawal and total water discharged are externally assured. For further information refer to About this report.

[2] Water efficiency is the total volume of both untreated and treated water used in tasks / processes which has already been worked (used) by the site (ie previously used and recovered) as a percentage (%) of the total volume of all water used in tasks /processes, A practical guide to consistent water reporting, ICMM, 2017.

[3] Water quality categories reflect the effort required to treat water to achieve drinking water quality. Category 1 is minor through to Category 3 for significant efforts.

Water input and output 2017-2019 (GL)

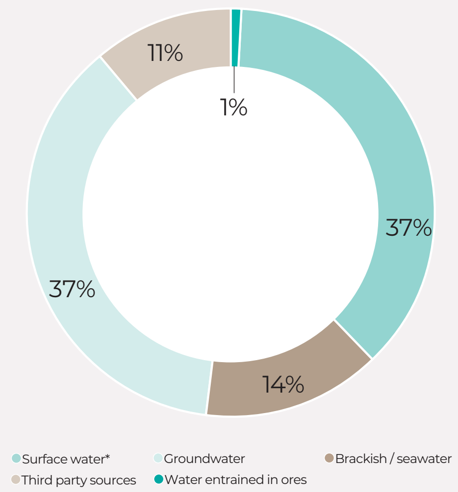


Water input, output and consumption

The majority of our water is sourced from groundwater, primarily from the dewatering of our mines. The second largest input is from surface and rainwater. Brackish / seawater, is the third largest amount of water we withdraw and is predominately used for non-contact cooling purposes, during which no deterioration of the water quality takes place. Third parties such as industrial sites, water treatment plants or municipal utilities also supply around a tenth of our water needs, of which a minor part (less than 2% of the total water input) is potable water mainly used for human consumption. The majority of the water supplied by third parties is of lower quality and primarily used for processing purposes. Often, the third-party supplier has previously used this water prior to its reuse by our operational processes. Finally, a small amount of residual water is retained as moisture in our mined ores.

A detailed breakdown of our water withdrawal, discharge and use by country and river basin is in appendices 1 to 3.

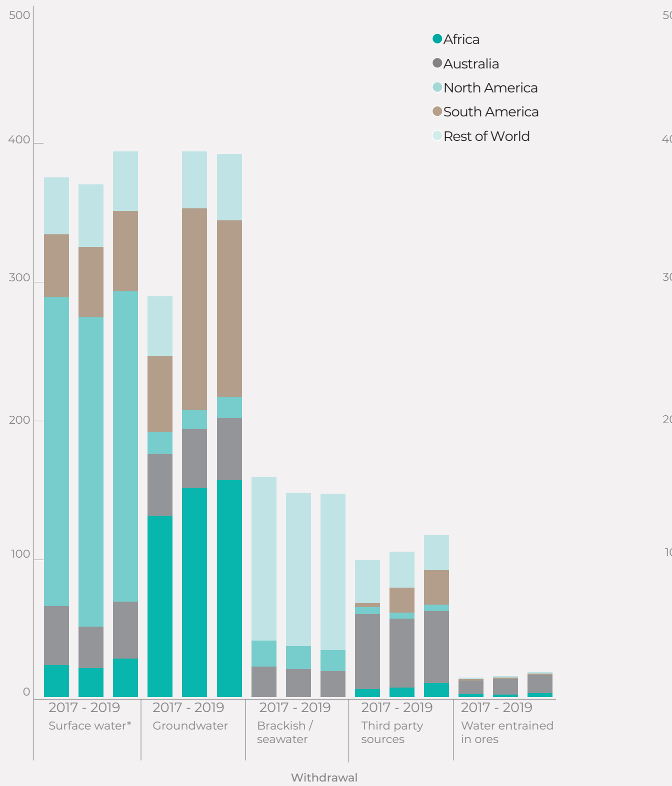
Share of sources of water input in 2019 (percent)

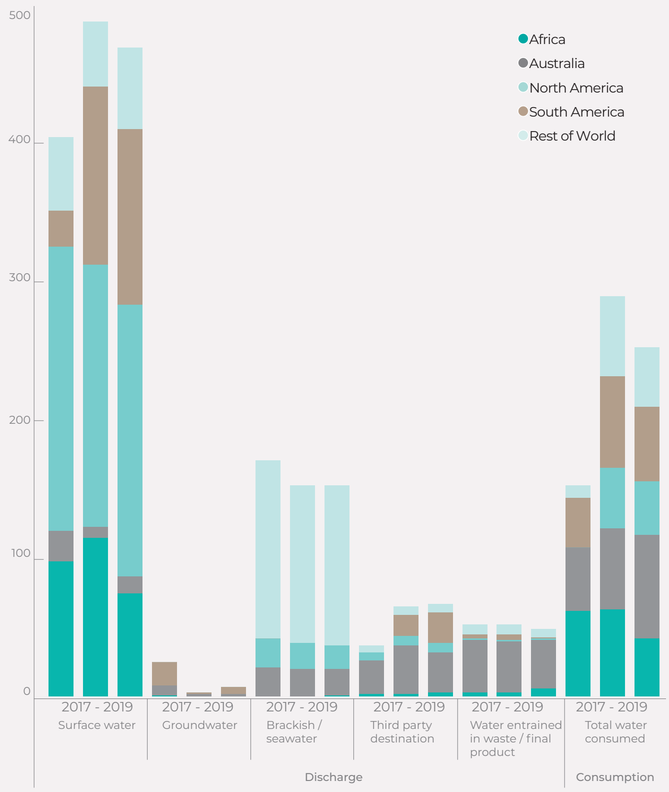


* including rainwater

Water input, output and consumption by region (2017-2019)[1]

[1] Variations in some regions reflect changes to our asset portfolio and improvements over time to the reporting process.





At times, some of our assets do not use all the water they withdraw, such as water resulting from mine dewatering activities. In these cases, we typically divert the excess water to surface or groundwater bodies, or supply it to external parties, in accordance with applicable permit conditions, regulatory approvals, and water quality requirements.

Our water withdrawal sources depend on local circumstances and result in regional differences. For example, in North America and Colombia, the majority of our water is sourced from rainwater (included in the surface water shown in the graph to the left) due to comparatively high precipitation rates from rain and/or snow melt. In contrast, in Africa and South America, we withdraw the majority of our water from groundwater for both water usage and dewatering of our mines. Our coastal-located assets use seawater wherever possible, usually for cooling purposes. The majority of the water used by our Australian operations is non-potable water from internal and external water-sharing networks.

In compliance with applicable regulations, we discharge excess water into surface water bodies, such as rivers and oceans, or aquifers. We also supply excess water to third parties, for further use or treatment, under permit approvals. Finally, small amounts of water are retained in waste rock materials, as well as in our final products and their by-products, or lost through evaporation.

Working together for a secure water supply, Horne smelter, Copper Canada

In Canada, our Horne copper smelter uses the same water source, Dufault Lake, and pumping distribution system as the Rouyn-Noranda city, with a population of around 40,000 people. The shared water resource was a key factor for selecting Horne Smelter to run a pilot study on implementing a catchment-based water management approach. Through this initiative, Rouyn-Noranda council and Horne Smelter are collaborating on a risk analysis of Dufault Lake's watershed, to identify potential risks that could cause deterioration in water quality or available volumes. While the core part of the study has yet to start, Horne Smelter has already initiated several actions to improve its identification and understanding of the water risks related to its operations. Through working together, Rouyn-Noranda council and Horne Smelter hope to ensure a secure water supply for the local population and the smelter.

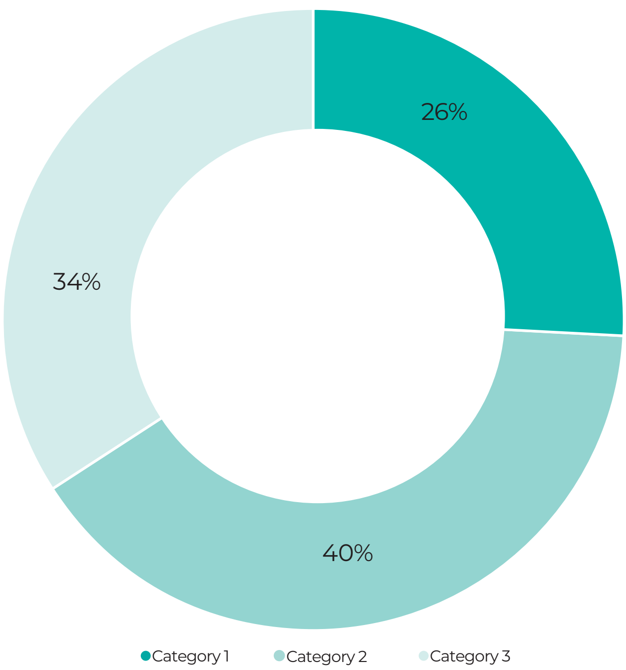
Water quality*

In accordance with the WAF of the Minerals Council of Australia, we differentiate the quality of our water into three categories:

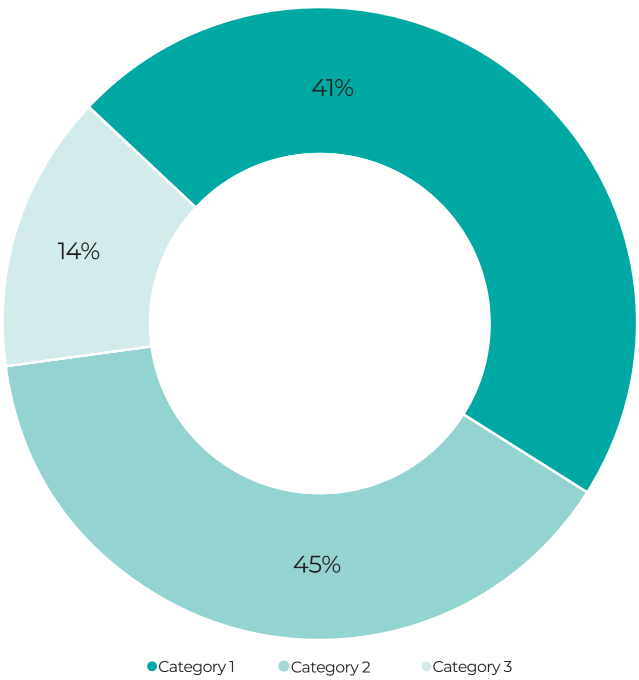
Category 1	Water that is of a high quality and requires minimal and inexpensive treatment (eg disinfection and pond settlement of solids) to raise the quality to appropriate drinking water standards (comparable to potable).
Category 2	Water that is of a medium quality with individual constituents encompassing a wide range of values. It requires a moderate level of treatment such as disinfection, neutralisation, removal of solids and chemicals to meet appropriate drinking water standards (eg agricultural use).
Category 3	Water that is of a low quality with individual constituents encompassing high values of total dissolved solids, elevated levels of dissolved metals or extreme levels of pH (high or low). It requires significant treatment to remove dissolved solids and metals, neutralise and disinfect to meet appropriate drinking water standards (eg industrial and waste water).

* The water quality categories are aligned with the Minerals Council of Australia's WAF; the sum of categories 1 and 2 aligns with the ICMM's water category 'high quality' and category 3 with 'low quality'

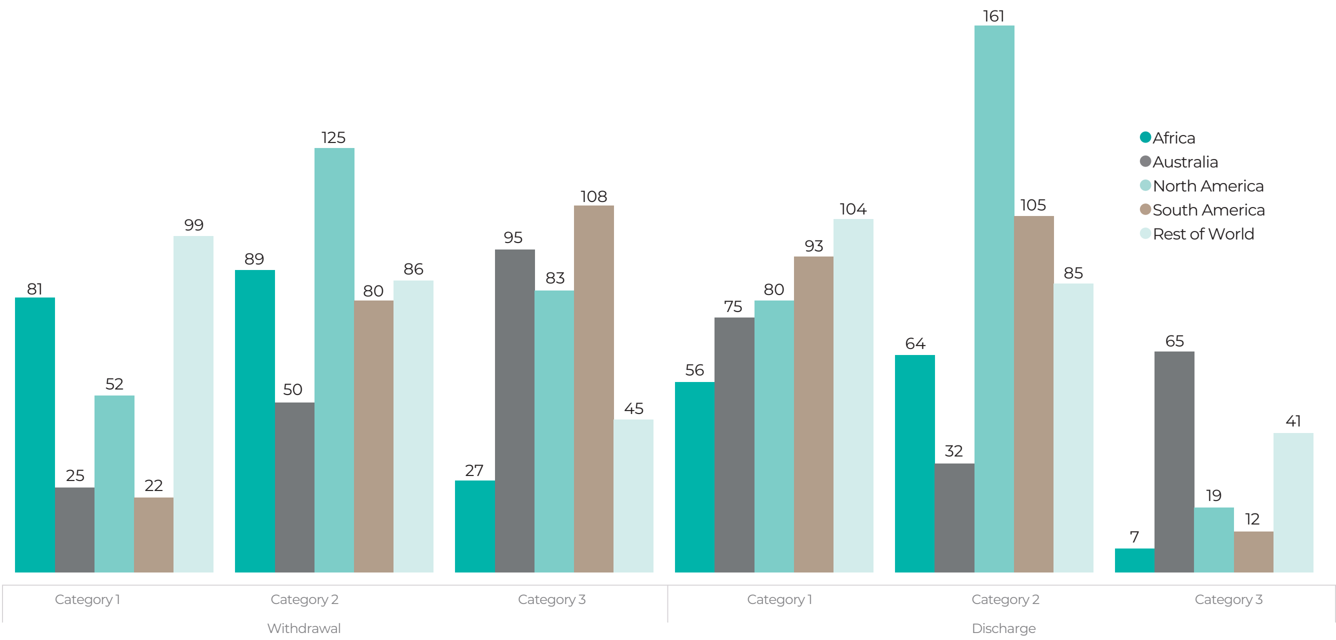
Water input by quality in 2019 (percent)



Water output by quality in 2019 (percent)



Water withdrawal and discharge by quality and region in 2019 (GL)



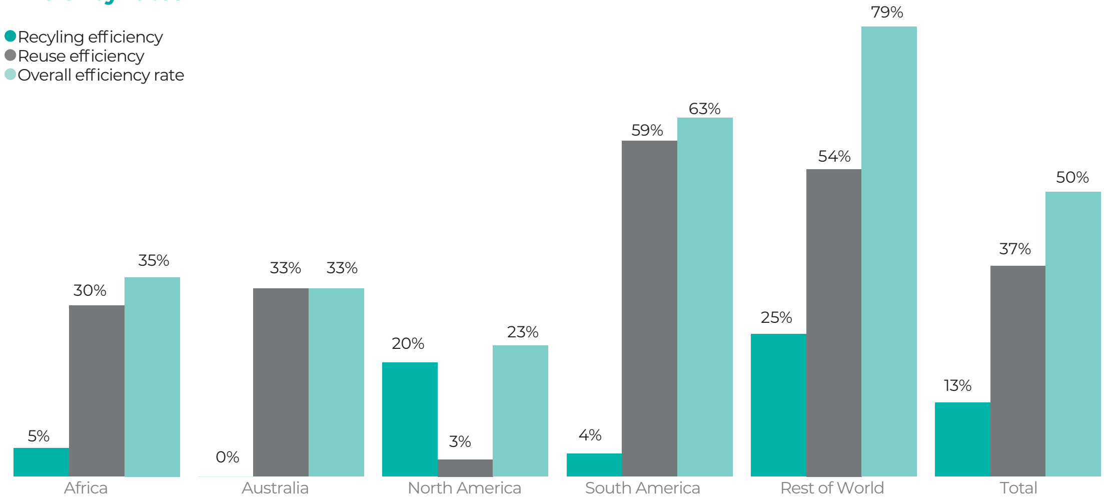
Most of our water withdrawals represent the water quality Category 2 followed by Category 3 and Category 1. Wherever possible we use the water category that is economically and ecologically the most appropriate option (ie use the lowest available quality for the required purpose) while taking other water users' needs into consideration.

The majority of discharged Category 3 is water contained in ore or water sent to third parties for further use or treatment. When required, we treat wastewater in line with applicable discharge requirements and regulatory approvals.

Water reuse and recycling efficiency

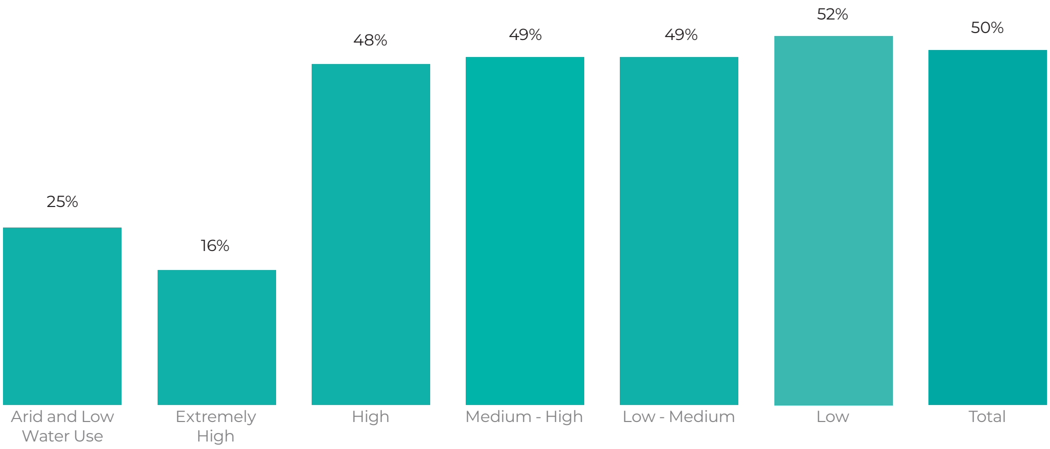
In 2019, our assets showed an overall reuse and recycling efficiency[4] of 50%. The graph, below, shows the breakdown by the different regions.

Efficiency rates



Water efficiency in the different regions correlates mostly with the availability of water; in other words, water efficiency rates are usually higher in water-scarce regions than in regions with an excess of water.

Recycling/reuse efficiency by baseline water stress level in 2019 (GL)



[4] Water efficiency is the total volume of both untreated and treated water used in tasks / processes which has already been worked (used) by the site (ie previously used and recovered) as a percentage (%) of the total volume of all water used in tasks /processes, A practical guide to consistent water reporting, ICMM, 2017

A number of our Australian and South African assets have established infrastructure to share water between operations (see case study on page 18.

Water, sanitation and hygiene (WASH)

Some of our assets are located in remote locations that rely on drinking water from either on-site treatment facilities or delivered by trucks. At these assets, access to water, sanitation and hygiene (WASH) facilities may be intermittently available.

During 2019, we reviewed our assets' provision of WASH services. While all our sites provide these services, we identified an inconsistent performance across the Group. To address this, we are installing additional sanitation and hygiene facilities at sites where mining activities had moved away from existing facilities (including underground), reviewing and improving signage to differentiate between drinking and non-drinking water and increasing communications on good hygiene practices. We expect this project to complete by the end of 2020 (refer also to our standalone, annual Human Rights Report where we provide details on how we are addressing associated issues).

In remote locations, some of our assets support access to water for local communities by providing drinking water and sanitation facilities. Access to these services is by various means that best respond to the local context and can include treated water, drilling boreholes, upgrading or building treatment plants and building water-related infrastructure such as pipelines.

Greater Ravensworth Water Sharing Network, Coal, Australia

In the Hunter Valley, Australia, we have implemented a water sharing strategy to minimise the risk of water scarcity and flooding through the development of the Greater Ravensworth Water Sharing Network. The Network links our Liddell, Mount Owen, Integra and Ravensworth coal complexes to allow the transfer of excess water between these operations. We have completed a number of projects over the years, including duplicating and upgrading pipelines and installing differential flow meters. The Network has enabled these operations to mitigate risks from periods of water scarcity and flooding and supported the feasibility of expansion projects. The Network has also reduced operating costs through sharing water between operations and reducing the amount of water withdrawn and discharged.

We have commenced work to link our tailings management across these operations, creating further opportunities for recycling and increasing water efficiency. In addition we have extended the Network to an adjacent non-Glencore operation that has a water surplus further increasing the use of recycled water in the Network.

Our Greater Ravensworth Water Sharing Network is substantially reducing the amount of water our operations withdraw from the Hunter River.

Water impacts, risks and opportunities

Our challenges and opportunities

While our assets are exposed to various water-related challenges, there are also opportunities that may benefit our operations and local communities. Our water risk assessment supports the identification and mitigation of potential risks and to evaluate the feasibility of opportunities.

Water-related impacts

We monitor and record our water-related impacts, incidents, complaints and fines. During 2019, we had one 'moderate' water-related environmental incident. This is an improvement over 2018, when we reported three moderate incidents. According to the Glencore Corporate Risk Management Framework, we classify the severity of all sustainability-related incidents against a five-point scale from negligible, to minor, moderate, major and catastrophic. We publicly commit to no major or catastrophic incidents.

The 2019 'moderate' incident was at our Mopani asset in Zambia and related to the detection of low pH levels in two community drains following a release of diluted sulphuric acid. Mopani took immediate action to neutralise and remediate both drains. The spill did not cause any damage to public infrastructure or any injuries to community members.

During the year, we also received 16 water-related community complaints, a 30% reduction to the 23 received in 2018. We investigate all complaints and, where appropriate, work with local authorities to address any operational impacts on water sources.

In 2019, we received 18 water-related fines totalling around US$841,000 (2018: 24 fines totalling US$1.5 million); however, the majority of fines, around US$752,000, were for incidents at the Volcan zinc assets in Peru that occurred prior to our control. Following the incidents, Volcan undertook corrective action to prevent future occurrences.

Water reclamtion plant, Glencore Coal, South Africa

Glencore Coal South Africa (GCSA) constructed a reverse-osmosis, water reclamation plant to treat mine-affected water from its Tweefontein, Goedgevonden and iMpunzi coal complexes. The plant's capacity aligns with GCSA's long-term water treatment strategy requirements, which support current mining operations, as well as having a long-term objective of managing and treating water to prevent mine-affected water entering into a fresh water resources, in accordance with GCSA' water-use license conditions following eventual mine closure.

The construction project included associated infrastructure such as boreholes (abstraction points in old underground workings), pumps, reservoirs, pipelines, storage ponds and a potable water treatment facility.

The three coal complexes use mined-out underground workings to store mine-affected water. The plant extracts water from these storage sites and uses the reverse osmosis treatment to achieve drinking water quality. This water is then disinfected and stabilised, to be supplied to users.

The plant was commissioned in January 2016 and currently produces around 9ML per day of potable water, some of which is distributed via a 16km pipeline to the Phola Township. The plant also meets the potable water requirements for the Tweefontein operations and, in the longer term, will also provide potable water to the Goedgevonden and iMpunzi operations. This approach will reduce GCSA's water usage footprint through decreasing its withdrawals from external sources such as dams and rivers.

The first water was supplied to the Phola Township in October 2018 via the Emalahleni Local Municipality infrastructure. The infrastructure required for the potable water treatment was provided by Glencore, but the connecting pipeline was provided by the municipality.

Going forward, GCSA will upgrade the plant to increase its throughput to 17.6Ml/day, which is in line with the medium to long-term water balance requirements, and the prevention of decanting of mine-affected water.

Case study:

Water treatment plant for acid rock drainage, La Jagua mine, Colombia

At La Jagua, one of Prodeco's mines, water, from both rainfall and groundwater, enters its two pits and requires constant dewatering activities.

In late 2018, La Jagua recorded an increase in the acidity of the water discharged into the Santa Cruz Creek, triggering La Jagua's emergency response plan, which immediately suspended dewatering activities. This resulted in a temporary impact on the aquatic ecosystem of this natural water stream and La Jagua established a process to evaluate and remediate these impacts.

Its actions included sampling and monitoring the Santa Cruz Creek's water quality, as well as that in other downstream water bodies. La Jagua engaged with the communities living in the impacted area advising that they should not use water during the short-term remediation period. The environment team rescued and rehabilitated fish and aquatic fauna.

During the remediation period, national and regional environmental authorities visited La Jagua to review the incident and Prodeco's response. Following the visit, the National Authority of Environmental Licences (ANLA) established a preventative measure that suspended Prodeco's environmental permit for discharging water into the Santa Cruz Creek until Prodeco completed the corrective actions.

Prodeco brought in external consultants to understand why the incident had happened. Acid rock drainage (ARD), caused by rocks (pyrite) exposed to the atmosphere, was identified as the root cause. This was the first time a significant ARD issue was identified at the La Jagua mine and in the mining industry in Colombia as a whole. The high volume of acid water building up in the pit became a significant challenge.

Prodeco recognised that any water treatment system needs to ensure the water quality meets environmental standards and does not have any additional environmental impacts on the area. La Jagua considered two possible solutions – one treating the acidic water with lime and one with caustic soda, eventually settling on the second option due to better overall benefits such as a lower demands on water and energy.

Prodeco successfully designed, installed and tested the water treatment plant in the third quarter of 2019 and ultimately started the treatment and discharge of the water after the ANLA lifted the environmental permit suspension.

Local, regional and national government representatives were involved throughout the process, evaluating progress and the results. ANLA recognized Prodeco's rapid and professional response to the challenging situation created by the ARD issue.

Water-related risks

Our water-related risks are assessed based on the following two approaches:

- In 2017, we started to assess our sites with a high-risk of water-related risks. This was subsequently extended to include sites identified as medium-risk with additional water-related reputational risks.
- Our annual water-risk survey covers all our assets and provides an update on asset-level water risks, opportunities and targets.

Risk assessment of high risk sites / medium risk sites with identified reputational issues

We have identified the assets that we consider to have potentially high water-related risks by applying WRI's Aqueduct Water Risk Atlas' baseline water stress levels, with consideration for the assets' quantity of freshwater withdrawal, using the following approach:

Baseline water stress	
Rating	**Water stress level***
1	Low
2	Low to medium
3	Medium to high
4	High
5	Extremely high

x

Water withdrawal categories	
Rating	**Annual water withdrawal (ML)**
1	0 < 250
2	>250 < 500
3	>500 < 1,000
4	>1,000 < 5,000
5	> 5,000

=

Combined rating & Risk rating	
Combined rating	**Risk rating**
1-5	1 - very low risk
6-10	2 - low risk
11-15	3 - medium risk
16-20	4 - high risk
21-25	5 - very high risk

* According to WRI's Aqueduct Water Risk Atlas

We also require each asset to assess its exposure to risks related to water quality. If identified, the asset adds these risks to the combined rating to produce a final rating.

We have assessed the ultimate risk exposure of assets allocated a risk rating of 4 and 5, as well as those with a risk rating of 3 and identified reputational issues. The assessment includes considering actual operational water-related risks and their mitigation and management measures, as well as overall water availability and quality, stakeholder engagement and regulatory requirements.

Our initial assessment identified nine operations with risk ratings of 4 and 5, six sites (2.6% of assets) and three sites (1.3%) respectively. While we generally consider the identified risk to be well managed and mitigated, our analysis identified that higher levels of efforts are required at two assets:

- Groundwater-related risks were identified at a South African ferroalloys site. To avoid further impacts, the site has implemented extensive measures to prevent contaminated groundwater from migrating offsite. The local government approved the measures and the site continues to closely monitor its groundwater. A reverse-osmosis plant treats water taken from eleven boreholes. This water is reused on-site to optimise water conservation measures through reducing the clean water consumed by the site.
- A zinc site in Kazakhstan identified water scarcity-related risks. The site is constructing a new plant for recycling water from its tailings dam and mine dewatering system. Regulators have approved the design of the plant and construction is in progress.

At the seven remaining sites, further investigation showed that the originally identified potential risks were either not actual or had been successfully mitigated by the assets' existing water management plan.

We identified seven sites with a risk rating of 3 and with reputational issues – with actual and potential risks ranging from very low to high. All of these sites have implemented, or are in the process of implementing, measures to manage and mitigate the risks.

Annual risks survey

In addition to the high-risk site assessment, we identify, assess and monitor our water-related risks through an annual internal survey.

The survey defines a substantive financial or strategic business impact as an operational change resulting from a water risk that causes a material financial impact due to physical impacts including environmental impacts and social unrest. Financial impact may arise from:

- Increased operating costs
- Negative reputational impact that leads to a loss of operating licence
- Regulatory restrictions placed on production processes, and/or
- Materially reduced or disrupted production

For classifying material business risks, we use a risk matrix, which is part of Glencore's risk management framework, with defined thresholds to assess the combinations of potential consequence and likelihood.

The risk matrix is used for environmental, physical, regulatory, technological, reputational and community risks linked to water and we apply it to both our direct operations and our value chain.

We assess all risks irrespective of their risk classification and put in place appropriate preventive and mitigating controls.

This approach has identified the following risks as having the potential to cause a material impact on our business:

Table: Identified material water-related risks, number of sites exposed to those risks and measures taken to address them

Type of risk	Description of risk	Number of sites who have identified risks as material	Measures taken
Severe weather events	Some of our sites, as well as parts of our supply chain, may be exposed to drought, flooding or other severe weather events.	4	This requires some of our sites to install additional water management infrastructure. For example, we have invested in water transfer infrastructure (eg levees, dams, pipes and pumps, etc.) to help high-risk assets improve their resilience to droughts and flooding. Recognising that extreme weather can have significant impacts on our host communities, we make these investments in consultation with local stakeholders to take into account their needs.
Acid mine drainage (AMD), acid rock drainage (ARD) and/or leaching to groundwater	Mining involves the disposal of residues from mining and ore processing into tailings storage facilities (TSF) and waste rock piles. Depending on the ore's chemical properties the material, if exposed to oxygen and water, could generate acidic water. Mine dewatering can also generate AMD/ARD, depending on the geochemistry of the deposit.	10	AMD, ARD and leaching risks mainly arise from legacy issues in operations that have operated for many years. It is important to manage rock with the potential to cause AMD, ARD and leaching. When legacy or new AMD, ARD and leaching issues arise we capture and store the affected water. It is then treated until it reaches a useable standard for either reuse in our operations or discharge. If required, we upgrade existing or construct new water treatment plants for this purpose.
Changing regulations	Our operating jurisdictions may implement increasingly stringent water regulations. These can impact the requirements for the quality of water we discharge or the total volume of water we are able to withdraw. This could require sites to upgrade or construct water treatment systems to meet new quality parameters for discharge or to increase the amount of water for reuse. In other cases, sites may need to seek alternative water suppliers.	6	We engage with governments and regulators (including water utilities, catchment management authorities, etc.) on a regular basis and work with them to meet regulatory requirements. Where new regulatory requirements are set, we either upgrade existing or construct new water treatment plants, as needed. We also review our existing and explore options for new water suppliers.
Potential adverse impact on water availability (volume or quality impact)	Our operations' and other local users' water withdrawal may affect water availability for local communities and other parties. This could require sites to implement water replenishment systems.	3	Across our operations, we aim to minimise the amount of water we withdraw while maximising the water we reuse and recycle. We avoid discharging water that others can use (eg providing water to communities for agricultural or drinking purposes). Where required, we either upgrade existing or construct new water treatment plants for this purpose.

Sites exposed to one or more of these material risks implement preventive or mitigating controls to control risks at as low a level as reasonably practicable.

Further risks generally associated with our tailings storage facilities are available in Glencore's Sustainability Report 2019 and on our website at: **glencore.com/sustainability/Tailings.**

Water-related risks in our supply chains

In 2019, we developed a high-level materiality-based method to assess the risks associated with our supply chain. Our work showed that water-related risks from our supply chain was low relative to the risks within our production profile. As such, we will continue our work on resource-use efficiency at our own assets.

Water-related opportunities

Our water reporting is harmonised with the WAF of the Minerals Council of Australia. This approach has improved our data reporting through more robust indicator definitions. It has also resulted in the identification of opportunities to improve water efficiencies and reduce operating costs.

We have identified and implemented various water-sharing and saving opportunities to help conserve water, reduce water dependency and mitigate environmental and local community impacts. Some of these initiatives are:

- In Australia, our Oaky Creek coal operation has constructed a reverse-osmosis water treatment plant to manage processed water. This has reduced the amount of freshwater it withdraws by 1,200 million litres in 2019, similar to the amount in the previous years. This has allowed the operation to transfer some of its original allocation to the local township of Capella, demonstrating how operational improvements can deliver benefits to our neighbouring communities.
- In Australia, our coal business upgraded its operational water balance models with predictive tools to improve its water management. These predictive tools use the water balance model, current water inventories and local rainfall forecasts to predict site water inventories. The models are updated each month to determine the likely range of operating conditions for the coming year, such as floods, normal conditions, conservation and drought. Operating conditions are adjusted to align with the predicted water management requirements. Due to the ongoing drought conditions in New South Wales and Queensland, a water security assessment was completed at all our sites and actions identified to maximise mine water reuse and reduce demand.
- Our Australian coal assets plan to significantly reduce their water footprint through rehabilitation and closure works. All coal assets have an annual rehabilitation target. When land has been rehabilitated successfully it is allowed to discharge to local creeks and waterways rather than being captured in the sites mine water system. In the past 12 months 1,343 ha were rehabilitated.
- In Australia, our CSA mine has upgraded its onsite water metering and is currently upgrading its operational water balance models to implement predictive tools that will improve its water management. The site is also undertaking projects to access alternative water resources, eg groundwater bores, increased dam and tank storage capacity and water harvesting.
- At our Mount Isa Mines (MIM) operations in Australia, on a weekly basis during the wet season, we run a stochastic water balance model (using GoldSim[5]) to forecast potential water discharges based on the current volumes of each water storage. This helps MIM identify where to focus resources to minimise the risk of off-site releases. This model is also used as a key design tool for managing changes across the operations and supports efficient water use.
- In Chile, our Lomas Bayas plant, through replacing its sprinklers with drip irrigation, the site has minimised its overall evaporation rate and improved the distribution of the used leach solution. Other efforts to reduce evaporation, like installing floating covers at its ponds and the replacement of trenches with pipes, have been implemented. In 2019, the use of the currently implemented measures avoided evaporation losses of about 5.8 million m^3 compared to the use of sprinklers.
- Our Sinchi Wayra/Illapa zinc operations located in the high Andes of Bolivia face ongoing impacts from extreme weather events such as droughts and flooding, accentuated by “El Niño” and “La Niña” phenomena. Sinchi Wayra/Illapa focuses on water conservation and its lead concentrator plants recirculate water from the mining process. As a result, in 2019, only 3% of the water its concentration processes consumed was freshwater. Through its water treatment process, it supplies water to local agriculture, small mining operations and rural dwellers, as well as providing drinking water for the mine.
- In Peru, our Antapaccay mine is located in an area with mean annual precipitation of 750 mm and a mean annual evaporation of 1,300 mm and, to access the ore, the site needs to dewater the mine. Antapaccay treats the captured rainwater and water from dewatering prior to discharging it into the Cañipia River. Water from the river is used for agricultural purposes such as irrigation and livestock rearing.

- In South Africa, our ferroalloys business has implemented operational water balances for their assets. These water balances support reducing the amount of water a site withdraws and identifying opportunities for further reductions. The water balances also provide information for management decisions on further optimisation of water use.
- Our Katanga operation in the DRC is developing an operational water balance model to improve its water management of current and future activities.
- In Kazakhstan, our Kazzinc Polymetals Project is planning to build a water efficient concentrator that will primarily use mine water and water returned from the tailings storage facility. The site is located in a dry region with the main water source coming from the post-winter snow melt. Designing the operation to work in this harsh environment is critical to the success of the project. The design has now been approved by the regulator and construction is in progress.
- In Canada, our Kidd Operations have commenced a clean water diversion project to decrease the amount of water currently treated by approximately 330,000m^3. The project will complete in 2020.

Improving drinking water and sanitation services, Antapaccay, Peru

Antapaccay implemented a comprehensive water management system to record and assess water quality trends and establish a water balance. Antapaccay sources 77% of its operational water requirements from recycled/reused water, reducing withdrawals from local sources. Antapaccay also undertakes routine participatory water monitoring with local community representatives at approximately 68 government-approved locations, and developed external training programmes, including community school science programmes, with a focus on responsible water management. It has advanced progressive reclamation efforts of the land and drainage systems in operational areas where mining has finished.

Antapaccay is committed to effectively managing shared water resources and collaborates with local government and nearby communities on several large-scale community water infrastructure projects, including:

- Installing an irrigation system for managing water for agricultural purposes and constructing a reservoir to collect and distribute rainwater for 10 communities. Antapaccay is engaging with the Provincial Municipality of Espinar, the Ministry of Agriculture and Irrigation, local authorities and the affected communities over the course of the project.
- Responding to the local population's need for improved drinking water and sanitation services, which are currently available for many residents for just two to four hours per day. For this, feasibility studies are underway to improve an existing dam and potable water treatment plant and expand water catchment structures by constructing four reservoirs and optimising two existing ones. The project will ensure the adequate collection and disposal of waste water and sewage through the renewal of pipework and expanding connections to residential properties. Antapaccay plans to begin construction in 2021 and complete it in 2023. The project will improve access to water and sanitation for over 57,000 inhabitants.

* GoldSim is a tool to visualise and dynamically simulate complex systems, such as water balances.

Targets, goals and external engagement

Our response

We have established group-wide goals and targets for specific assets to improve our overall water performance, encouraging a catchment context-based approach. We use multiple engagement strategies to engage with our stakeholders and several of our assets participate in collective action projects.

Targets and goals

Our water management framework specifies our overall water-related objectives (see pages 9 and 10).

We also define targets for specific asset, basins, countries and/or departments as a means to prioritise areas for improvement and corrective action that deliver the largest returns and create shared benefits for multiple stakeholders. We consider this approach to be the most effective way of target setting compared to setting a group-wide target.

Description of target	Current status
Our Australian coal operations targeted a 28% reduction in freshwater intensity by the end of 2019, against a baseline year of 2015. We are one of the largest coal producers in Australia, with operations in the Hunter, Burdekin and Fitzroy basins and, as such, we have identified water as one of our most material environmental impacts for this region.	The Coal operations did not meet their intensity target in 2019 due to drought conditions in both the Hunter Valley and Central QLD. Freshwater intensity increased to the 2015 level as operations used raw water allocations for dust suppression and to process coal, which had previously used mine water. However, the water efficiencies previously achieved meant freshwater consumption did not increase beyond the baseline year and was met by water allocations held by operations.
In Australia, our Ernest Henry Mine's water comes from Lake Julius. The site targets a reduction of 250ML/year (a 11% reduction against a baseline year 2018) and plans to maintain this level until the end of its withdrawal contract in 2025.	Ernest Henry Mine has already reduced the amount of water withdrawn by 38% (1,250ML) between 2015 and 2018 and is now maintaining this level until the end of its withdrawal contract in 2025.
In Chile, our Altonorte smelter uses over 75% of reused water of low quality (water quality category 3) supplied from the wastewater treatment plant in Antofagasta. Altonorte is also a zero discharge plant, as it does not release effluents into the environment. Their strategy focuses on improving the water balance and efficiency of use. Capital projects concentrate on water recycling or reduction of usage. Two projects currently under development are a Thickened Tailings Disposal (TTD) and slag pot cooling. Through the TTD project, the site is targeting at 2.3% reduction in freshwater / tonne smelted by the end of 2019, against a 2016 baseline. The implementation of the cooling in slag-pots project is targeting a 27.1% reduction by the end of 2022, against a 2016 baseline.	In 2018, Altonorte improved its water balance by installing 11 new flowmeters to reduce estimated flows. Altonorte implemented the TTD project during 2019 and it is now commissioning. Altonorte is testing the slag-cooling project and the anticipated reductions are being seen. Full implementation will complete by December 2022.

Description of target	Current status
In Peru, Yauliyacu is targeting a 15% reduction annually of freshwater used in mine accommodation and the concentrator plant by the end of 2021, against a 2018 baseline.	Yauliyacu is currently on track to achieve this target with a range of initiatives implemented in 2019 . There has been relevant progress in areas such as water use at the concentrator plant where freshwater use has been replaced by recirculated water from a number of mining processes. Currently freshwater reduction levels are around 10%, with higher projected reductions in 2020 due to COVID-19.
In South Africa, our Ferroalloys assets aim to update their water and salt balances annually. Based on the updated balances each site must develop, implement and monitor site-specific water conservation and demand management plans to conserve water and optimise water reuse onsite.	These sites are annually updating their balances and introducing various initiatives, including utilising more water-efficient technologies on an operational level and increasing the recycling of water.
In Spain, our Asturiana zinc operation is targeting a 1% reduction in water consumption per production unit during 2015-2020, against a 2015 baseline.	Asturiana achieved the target during 2016 and is sustaining year-on-year.
Also in Spain, our San Juan de Nieva operation is targeting a 1% water consumption reduction per production unit in the period 2015 to 2020. The baseline for this reduction is the water consumption in 2015.	In 2019, San Juan de Nieva achieved a reduction of 11.2% against the 2015 baseline. San Juan de Neiva aims to maintain this consumption intensity year-on-year.
In Germany, Nordenham zinc operation's target was a 5% reduction of freshwater consumption in the leaching plant by the end of 2018, against a 2017 baseline, and the asset is now targeting to maintain this reduced water volume year-on-year.	Nordenham exceeded the target, achieving a 51% reduction by: • Increasing the reuse of water collected in settling dams • Reusing water used to clean belt filters • Reviewing and upgrading existing systems to enable quick changes for distributing water in the leaching plant in response to operating conditions The asset is now targeting maintaining this reduced water volume year-on-year.

Description of target	Current status
In the UK, Britannia Refined Metals (BRM) is targeting a 5% reduction in freshwater consumption intensity (per tonne of metal produced) by the end of 2020, against a 2015 baseline.	At the end of 2018, BRM had achieved 50% of the target by installing water meters fitted with telemetry. These meters feed-back data to a central system allowing both real time and tracking of historic data for individual areas and processes of the asset. BRM reviews the data each month to identify trends and enable improvements to be made.
In Kazakhstan, our Malevevsky mine is targeting a 26% reduction of effluent discharge per year by 2020, against a 2015 baseline.	Malevevsky has already achieved a 50% reduction due to the installation of an advanced water treatment plant. It should achieve further reductions from continuing to reuse treated water.
In Kazakhstan, our Ridder Metallurgical complex is targeting a reduction of water withdrawal of 23% by 2022 against 2018 baseline.	Ridder Metallurgical is constructing a water recycling system with purified recycled water for processing purposes. This reduces the amount water that needs to be withdrawn. The project is expected to complete by the end of 2021.
In the Philippines, Pasar smelter has set two targets: • An 80% increase in water recycling and reuse by the end of 2020, against a 2016 baseline • A 90% reduction in effluent discharge by the end of 2020, against a 2016 baseline The targets will also reduce the amount of water withdrawn.	Pasar has set two phases to achieve its targets. The first phase required the construction of storm water and process drain control facilities. This was completed in 2017. The second phase is a zero wastewater discharge project, which will enable water to be reused for slag cooling. This project requires collaboration between different departments to reduce wastewater discharge by recycling process water. The refinery and slag flotation plant have already started recycling water.
In Canada, Horne smelter is targeting a 25% reduction in water withdrawals by the end of 2026, against a 2016 baseline.	Horne is preparing an operational water consumption balance and will prepare a plan for a decrease in water consumption by the end of 2021. In addition to this target, Horne has implemented various measures to improve the quality of its water discharges and is investigating further initiatives to mitigate any potential issues.

External engagement

We recognise that access to water is a fundamental human right. We are committed to upholding respect for human rights in accordance with the Universal Declaration of Human Rights, the United Nation's (UN) Guiding Principles, the UN Global Compact and International Labour Organization's core conventions as articulated in our Code of Conduct and Group Human Rights Policy.

We are committed to transparent and constructive dialogue with all relevant stakeholders. Our stakeholders include our workforce, shareholders, suppliers and partners, customers, governments and regulators (including water utilities, catchment management authorities, etc.), non-governmental organisations, labour unions, civil society, media and other water users at a catchment level. We use multiple engagement strategies to engage with our stakeholders.

We have developed and provide regional training on our community leadership programme, targeting general managers and community practitioners. The training includes improving knowledge on water-related topics, as well as providing attendees with tools for stakeholder engagement and community development.

In line with our community and stakeholder engagement policy, we are continuing the enhancement of our collaboration with our local communities.

We participate in collective action projects in Australia, South Africa and Colombia in collaboration with mining peers and other interested stakeholders to analyse and mitigate shared risks.

Additional examples of our community engagement initiatives are presented in the case studies that are shown throughout this report.

In 2019, we again participated in the annual CDP Water assessment; our score of A- (2018: B) reflects our approach to improving how we responsibly manage our water-related risks. However, to improve public access to the details of our water reporting, we have ceased our participation in the CDP assessment process and, instead will provide our water reporting directly on our Glencore website.

Supporting a secure water supply, Petro-Chad Mangara (PCM), Oil, Chad

PCM has supported the drilling, construction and maintenance of water wells and towers that benefit the communities living close to its activities. Over time, the water infrastructure requires maintenance to support an efficient delivery of drinking water.

PCM identified that the poor maintenance of the water infrastructure was partly due to communities lacking the funds to pay for skilled technicians and spare parts. The technicians are based in the larger urban areas, which resulted in both a delay and a 'call-out' cost.

PCM provided a six-day training course for 24 members of the community management committees in 12 cantons. The training included studying all types of pumps and hands-on training on two broken water wells. Through training local community members to maintain and service the water wells, the local communities would achieve a considerable cost saving and ensure a less disrupted water supply.

In addition to continuing the supply of drinking water, the management took on voluntary responsibility and ownership for their communities' water infrastructure, which has led to improved maintenance and servicing.

As a result of PCM's investment in water infrastructure and the training programme, over 220,000 people in 24 cantons have access to drinking water.

Fish stocking of Bukhtarma reservoir, Kazzinc, Kazakhstan

Our Kazzinc operation receives much of its power from the Bukhtarma Hydroelectric Power Plant. The Bukhtarma Hydroelectric Power Plant created the Bukhtarma water reservoir on the Irtysh River. It is the largest water reservoir in Kazakhstan and one of the five largest manmade water reservoirs in the world.

In 2019, Kazzinc entered into a partnership with Kazakhstan's Research Center of Fishery to research the region's fish resources. The research investigates the impacts on fish resources from the Bukhtarma Hydroelectric Power Plant through looking at the biodiversity of the reservoir and the actions needed to restore natural resources and support flora and fauna to flourish. The research will make recommendations on compensations potentially required for this section of the Irtysh River.

The research showed a need to regularly replenish fish stocks, while investigating means to protect fish from the processes of the hydroelectric power plant. Kazzinc signed an agreement with the Bukhtarma Fish Hatchery Ltd for fry raising.

During 2019, Kazzinc released a huge number of juvenile common carp into the Bukhtarma reservoir.

Mikhail Ivanov, HSEC Engineer at Bukhtarma Hydro, said: "We chose the location and timing of the fish restocking on the recommendations provided by the Research Center of Fishery. We have released more than 890,000 of juvenile common carp at a cost of around 19.6 million tenge".

Next steps

The next steps on our journey to implement our strategic water management framework include the following:

Next step	Link to strategic water management framework objective (refer to page 9-10):
Continue the pilot study on implementing ICMM's catchment-based approach	1 - Understand our water catchment areas, baseline water conditions, and ecosystems
Continue knowledge sharing and training on water issues	4 - Improve our water management performance by monitoring compliance, setting targets, and continuously improving
Investigate options and confirm optimal approach to establish a group-wide water target	4 - Improve our water management performance by monitoring compliance, setting targets, and continuously improving

About this report

Further information about our general approach and position on various sustainability issues is available at glencore.com/sustainability

This report includes information and data from our industrial activities where we have operational control, excluding the following parts of the business as their water-related contribution is immaterial, or where we do not have operational control:

- Minor storage units (ie silos, warehouses, terminals, etc.) and non-coal port facilities
- Offices not associated with operations
- Joint Ventures where we have no operational control (eg Glencore Agriculture, Cerrejón, Collahuasi, Antamina)
- Sites that were not in operation or did not report any water data in the reporting period.

The report contains data for the full year 2019.

Acquisitions are only included if they were integrated before 1 July 2019. Data from divestments is included until the month before disposal.

Due to the completion of the sale of 50% of the agricultural products business at the end of 2016, the data from this business is excluded from the numbers presented in this report.

Closed sites (or sites in the care and maintenance phase of their lifecycles) report on a limited indicator set, reflecting their reduced activities and workforce.

The key performance indicators "Total water withdrawal" and "Total water discharge" were subject to limited assurance by our external assurance provider in accordance with the International Standard on Assurance Engagements (ISAE) 3000.

Some of the totals shown may reflect the rounding up or down of subtotals.

This report provides information regarding our contribution to the following United Nations' Sustainable Development Goals:

Glossary

Baseline water stress
Baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. Water withdrawals include domestic, industrial, irrigation and livestock consumptive and non-consumptive uses. Available renewable water supplies include surface and groundwater supplies and considers the impact of upstream consumptive water users and large dams on downstream water availability. Higher values indicate more competition among users (Source: Aqueduct 3.0: Updated decision-relevant Global water risk indicators, WRI, July 2019).

Consumption
Consumption = withdrawal - discharge - change in storage (Source: A practical guide to consistent water reporting, International Council on Mining & Metals (ICMM), 2017).

Freshwater
Freshwater = Surface water (ie rivers, lakes etc. but excluding seawater / brackish water) + groundwater + rainwater + potable water.

GL
GL = 1 billion litres = 1,000 ML = 1 million m^3

Recycling efficiency
The total volume of treated water used in tasks / processes which has already been worked (used) by the site (ie previously recovered) as a percentage (%) of the total volume of all water used in tasks / processes (Source: A practical guide to consistent water reporting, ICMM, 2017).

Recycling
Recycled water is water that has been through a task, undergone water treatment and is again sent to the same or another task (Source: Water Accounting Framework for the Minerals Industry, User Guide Version 1.3, Minerals Council of Australia, 2014).

Reuse
Reused water is water that has been through a task and is again sent to the same or another task (Source: Water Accounting Framework for the Minerals Industry, User Guide Version 1.3, Minerals Council of Australia, 2014).

Reuse and recycling efficiency
The total volume of both untreated and treated water used in tasks / processes which has already been worked (used) by the site (ie previously used and recovered) as a percentage (%) of the total volume of all water used in tasks / processes (Source: A practical guide to consistent water reporting, ICMM, 2017).

Reuse Efficiency
The total volume of untreated water used in tasks / processes which has already been worked (used) by the site (ie previously used) as a percentage (%) of the total volume of all water used in tasks / processes (Source: A practical guide to consistent water reporting, ICMM, 2017.

River basin
The term river basin is sometimes used interchangeably with catchment, drainage basin or watershed. A river catchment is the area of land from which all surface run-off and subsurface waters flow through a sequence of streams, rivers, groundwater aquifers and lakes into the sea or another outlet at a single river mouth, estuary or delta; and the area of water downstream affected by the site's discharge. (Source: A practical guide to catchment-based water management for the mining and metals industry, ICMM, 2015).

WASH
WASH is the collective term for Water Access, Sanitation and Hygiene (Source: UNICEF, https://www.unicef.org/wash/3942_3952.html)

Water discharge
Water discharged to surface water, seawater, groundwater or exported to third parties (eg for treatment or reuse). Water discharge excludes water entrained in waste material or final product/by-product or that is lost for any other reasons (eg evaporation).

Water input
Total water withdrawn and water entrained in processed materials (eg ores).

Water output
Total water discharge, water entrained in waste/product/by-product and water losses (eg evaporation).

Water quality category 1
Water is of a high quality and may require minimal and inexpensive treatment (eg disinfection and pond settlement of solids) to raise the quality to appropriate drinking water standards (Source: Water Accounting Framework, Minerals Council of Australia (MCA), 2014).

Water quality category 2
Water is of a medium quality with individual constituents encompassing a wide range of values. It would require moderate level of treatment such as disinfection, neutralisation, removal of solids and chemicals to meet appropriate drinking water standards (Source: Water Accounting Framework, MCA, 2014).

Water quality category 3
Water is of a low quality with individual constituents encompassing high values of total dissolved solids, elevated levels of dissolved metals or extreme levels of pH. It would require significant treatment to remove dissolved solids and metals, neutralise and disinfect to meet appropriate drinking water standards (Source: Water Accounting Framework, MCA, 2014).

Water used
Water used is synonymous with water consumed and describes the volume of water used by the site and not returned to the water environment or a third party.

Water withdrawal
Water withdrawn from surface water, seawater, groundwater, rainwater, third parties (eg potable and non-potable water). Water withdrawal excludes water entrained in ore and water losses (eg evaporation).

Appendix 1

Overview of 2019 water input of our sites by country, river basin and baseline water stress level (ML)

Overview of 2019 water input of our sites by country, river basin and baseline water stress level (ML)[1]

Country	River basin (major / minor)	Baseline water stress level[2]	# of sites	Surface water	Seawater	Groundwater
Argentina	La Plata / San Francisco	Low	1	0	0	1,437
	Salinas Grandes / Belen	Low - Medium	1	0	0	1,351
	South America, Colorado / San Juan	Medium - High	1	0	0	0
Australia	Australia, East Coast / Burdekin	Low	2	560	0	486
	Australia, East Coast / Fitzroy	Low	1	335	0	3,442
		Low - Medium	1	0	0	191
		Medium - High	1	0	0	246
		High	1	0	0	1,351
	Australia, East Coast / Hunter	Low - Medium	8	6,147	0	10,921
	Australia, East Coast / MacQuarie / Tuggerah Lakes	Low	1	0	0	0
	Australia, East Coast / Ross	Low - Medium	1	0	0	31
	Australia, Interior / Salt Lake	Arid and Low Water Use	1	0	0	11,994
	Australia, North Coast / Flinders	Low - Medium	1	668	0	4,785
	Australia, North Coast / Leichhardt	High	5	0	0	5,264
	Australia, North Coast / McArthur	Low	1	0	0	4,328
	Murray - Darling / Darling	Arid and Low Water Use	1	0	0	148
Bolivia	La Plata / Pilaya	High	2	96	0	2,833
	La Puna Region / Lago de Poopa	Low	1	0	0	4,225

Rainwater	Potable water from third party	Other water from third party	Water entrained in input	Total water input	Category 1 - input[3]	Category 2 - input[3]	Category 3 - input[3]
0	0	0	5	**1,442**	1,437	0	5
1,695	0	0	0	**3,046**	3,046	0	0
0	0	0	0	**0**	0	0	0
5,119	1,781	1,951	982	**10,879**	3,923	3,537	3,419
2,417	0	1,804	468	**8,467**	1,062	1,690	5,714
3,862	0	991	885	**5,929**	599	3,262	2,067
2,311	0	953	1,428	**4,937**	229	2,327	2,381
441	0	271	2,800	**4,863**	528	1,264	3,071
7,011	58	12,140	5,341	**41,618**	7,539	9,544	24,535
353	0	0	0	**354**	32	322	0
41	164	0	0	**237**	164	0	72
0	0	0	0	**11,994**	0	0	11,994
4,699	0	0	83	**10,235**	3,849	6,303	83
3,859	6,146	25,192	491	**40,952**	6,146	465	34,341
1,353	0	0	79	**5,760**	361	261	5,138
10	0	870	40	**1,069**	159	0	910
104	30	0	19	**3,082**	133	96	2,852
144	0	0	8	**4,378**	0	0	4,378

Country	River basin (major / minor)	Baseline water stress level[2]	# of sites	Surface water	Seawater	Groundwater
Canada	Hudson Bay Coast / Bell	Low	1	3,438	0	1,722
	Hudson Bay Coast / Central Mattagami	Low	1	6,720	0	184
	Hudson Bay Coast / Rio de Puvirnituq	Medium - High	1	738	0	3,246
	St Lawrence / Montreal Island	Low	2	4,461	0	0
	St Lawrence / Upper Ottawa / Kinojevis	Low	1	9,735	0	368
	St Lawrence / Upper St Lawrence / Raisin	Low	1	58,084	0	0
	St Lawrence / Vermilion	Low	1	0	0	506
	St Lawrence / Wanapitei	Low	1	3,789	0	7,180
Chad	Lake Chad / Efian	Low	1	17	0	146
Chile	North Chile, Pacific Coast / Caracoles	Arid and Low Water Use	1	4,775	0	793
	North Chile, Pacific Coast / Negra	Arid and Low Water Use	1	0	0	712
Colombia	Caribbean Coast / Colombia North Caribbean Sea Coast	Low	1	379	0	28
	Magdalena / Cesar	Low	1	58	0	1,368
	Magdalena / Magdalena 1	Low	1	0	0	2,383
Democratic Republic of Congo	Congo / Lulaba 3	Low	2	6,072	0	67,017
England	England and Wales / Thames Delta	Medium - High	1	0	0	0
Germany	Ems - Weser / Weser Delta	High	1	8,935	0	0
Italy	Mediterranean Sea Islands / Mannu	Extremely High	1	2,966	0	276
	Mediterranean Sea Islands / Tirso	Extremely High	1	0	0	25
Kazakhstan	Ob / Irtys	Low	14	14,125	0	40,899
		High	1	4,161	0	984
	Syr Darya / Sarysu	Low - Medium	1	0	0	2,482

Rainwater	Potable water from third party	Other water from third party	Water entrained in input	Total water input	Category 1 - input[3]	Category 2 - input[3]	Category 3 - input[3]
6,169	0	0	13	**11,342**	3,474	0	7,868
12,166	0	0	32	**19,101**	0	19,069	32
1,603	0	0	30	**5,618**	738	0	4,880
972	582	0	0	**6,015**	1,554	4,461	0
15,878	259	394	71	**26,706**	10,012	15,878	816
243	7	0	0	**58,334**	14	58,321	0
36,291	0	3,393	0	**40,189**	0	0	40,189
1,628	269	0	123	**12,988**	269	5,453	7,266
0	1	0	0	**164**	9	154	0
0	0	0	0	**5,568**	5,568	0	0
0	11	2,773	0	**3,496**	562	0	2,934
33	0	0	0	**440**	0	440	0
9,981	0	0	0	**11,407**	0	11,407	0
8,317	0	0	0	**10,699**	0	10,699	0
694	0	0	818	**74,600**	73,088	694	818
45	29	0	0	**74**	74	0	0
75	784	0	18	**9,812**	9,720	75	18
379	2	0	10	**3,633**	2	3,242	389
22	6	0	0	**53**	6	47	0
6,582	2,637	19,103	506	**83,852**	21,893	17,819	44,141
2,110	0	0	238	**7,493**	7,255	0	238
134	553	0	101	**3,270**	3,170	0	101

Country	River basin (major / minor)	Baseline water stress level[2]	# of sites	Surface water	Seawater	Groundwater
New Caledonia	South Pacific Islands / New Caledonia	Low	1	156	19,146	284
Norway	Scandinavia, North Coast / West Norway Coast	Low	1	0	24,433	0
Peru	Amazon / Apurimac	Medium - High	1	1,019	0	20,156
	Amazon / Mantaro	Low - Medium	9	15,138	0	89,169
	Peru, Pacific Coast / Huaura	Low	1	506	0	3,016
	Peru, Pacific Coast / Lima Coast	Low	3	759	0	16
Philippines	Philippines / Visayan Islands	Low	1	0	38,296	2,722
South Africa	Limpopo / Elefantes	High	12	3,335	105	19,614
	Limpopo / Krokodil	High	8	1,797	0	1,631
	South Africa, South Coast / Inkomati	Low - Medium	1	0	0	862
	South Africa, West Coast / Groot Berg	Extremely High	1	0	0	0
Spain	Spain - Portugal, Atlantic Coast / Northern Spain Coast	Medium - High	4	3,462	50,161	370
Tanzania	Nile / Kagera	Low	1	0	0	1
United States of America	Atlantic Ocean Seaboard / Blackstone	Medium - High	1	0	0	0
	California / Coyote	Low	1	0	0	0
Zambia	Congo / Lake Mweru	Low	1	1,347	0	41,137
	Zambezi / Kafue 1	Medium - High	1	0	0	2
	Zambezi / Lufwanyama	Low	1	11,991	0	26,488

1 Refer to 'About this report' section regarding the scope of this table
2 Baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. For further information refer to Glossary.
3 The water quality categories are aligned with the Minerals Council of Australia's WAF; the sum of categories 1 and 2 aligns with the ICMM's water category 'high quality' and category 3 with 'low quality'

Rainwater	Potable water from third party	Other water from third party	Water entrained in input	Total water input	Category 1 - input[3]	Category 2 - input[3]	Category 3 - input[3]
0	0	0	0	**19,586**	439	19,146	0
49	1,764	0	0	**26,246**	1,764	24,482	0
2,038	438	0	0	**23,651**	438	3,057	20,156
12,502	0	21,403	560	**138,771**	10,054	51,581	77,137
0	0	0	22	**3,543**	144	3,016	383
0	7	0	37	**819**	730	51	37
6	2	0	0	**41,026**	2,724	38,302	0
1,821	930	2,357	1,588	**29,751**	1,575	3,650	24,526
763	2,252	32	0	**6,475**	2,730	3,528	216
113	0	0	63	**1,038**	48	0	990
0	1,136	333	0	**1,469**	1,136	0	333
191	42	35	76	**54,337**	52,426	1,609	303
0	0	0	0	**1**	0	0	0
0	0	0	0	**0**	0	0	0
4	1	0	0	**4**	4	0	0
0	1,520	0	7	**44,010**	1,520	42,484	7
0	0	0	0	**2**	2	0	0
0	941	0	36	**39,456**	941	38,479	36

Appendix 2

Overview of 2019 water discharge of our sites by country, river basin and baseline water stress level (ML)

Overview of 2019 water discharge of our sites by country, river basin and baseline water stress level (ML)[1])

Country	River Basin (major / minor)	Baseline water stress level[2]	# of sites	Discharge to surface water	Discharge to sea water / ocean	Discharge to groundwater
Argentina	La Plata / San Francisco	Low	1	472	0	0
	Salinas Grandes / Belen	Low - Medium	1	0	0	0
	South America, Colorado / San Juan	Medium - High	1	0	0	0
Australia	Australia, East Coast / Burdekin	Low	2	1,102	0	0
	Australia, East Coast / Fitzroy	Low	1	345	0	58
		Low - Medium	1	29	0	0
		Medium - High	1	431	0	1
		High	1	0	0	0
	Australia, East Coast / Hunter	Low - Medium	8	3,073	0	0
	Australia, East Coast / MacQuarie / Tuggerah Lakes	Low	1	146	0	90
	Australia, East Coast / Ross	Low - Medium	1	0	0	0
	Australia, Interior / Salt Lake	Arid and Low Water Use	1	0	0	0
	Australia, North Coast / Flinders	Low - Medium	1	3,849	0	0
	Australia, North Coast / Leichhardt	High	5	0	0	1,786
	Australia, North Coast / McArthur	Low	1	522	0	0
	Murray - Darling / Darling	Arid and Low Water Use	1	0	0	0
Bolivia	La Plata / Pilaya	High	2	2,306	0	0
	La Puna Region / Lago de Poopa	Low	1	3,247	0	0

Discharge for offsite treatment or disposal	Water exported to a third party	Water entrained in output	Total water Output	Category 1 – Output[3]	Category 2 – Output[3]	Category 3 – Output[3]
0	0	4	1,442	1,438	**0**	4
0	0	0	3,821	3,821	**0**	0
0	0	0	0	0	**0**	0
0	0	2,445	12,606	9,059	**1,102**	2,445
0	0	818	10,143	8,922	**0**	1,220
0	0	1,929	5,114	3,155	**29**	1,929
0	5	1,428	2,396	531	**431**	1,434
0	0	2,800	5,151	2,351	**0**	2,800
8	11,932	10,829	43,043	17,201	**5,025**	20,817
0	0	0	388	152	**236**	0
0	0	0	231	231	**0**	0
0	0	0	11,994	11,994	**0**	0
0	0	3,151	10,242	3,243	**3,849**	3,151
135	16,795	10,960	39,550	9,902	**0**	29,648
0	0	943	8,378	6,913	**0**	1,465
0	0	0	1,048	1,048	**0**	0
0	0	210	3,271	754	**2,306**	210
0	0	210	4,389	932	**3,247**	210

Country	River Basin (major / minor)	Baseline water stress level[2]	# of sites	Discharge to surface water	Discharge to sea water / ocean	Discharge to groundwater
Canada	Hudson Bay Coast / Bell	Low	1	11,085	0	0
	Hudson Bay Coast / Central Mattagami	Low	1	18,066	0	0
	Hudson Bay Coast / Rio de Puvirnituq	Medium - High	1	2,106	2	0
	St Lawrence / Montreal Island	Low	2	0	0	0
	St Lawrence / Upper Ottawa / Kinojevis	Low	1	16,149	0	120
	St Lawrence / Upper St Lawrence / Raisin	Low	1	57,708	0	0
	St Lawrence / Vermilion	Low	1	17,760	0	0
	St Lawrence / Wanapitei	Low	1	12,535	0	0
Chad	Lake Chad / Efian	Low	1	0	0	0
Chile	North Chile, Pacific Coast / Caracoles	Arid and Low Water Use	1	0	0	0
	North Chile, Pacific Coast / Negra	Arid and Low Water Use	1	0	0	0
Colombia	Caribbean Coast / Colombia North Caribbean Sea Coast	Low	1	0	0	0
	Magdalena / Cesar	Low	1	4,043	0	2,864
	Magdalena / Magdalena 1	Low	1	5,129	0	1,914
Democratic Republic of Congo	Congo / Lulaba 3	Low	2	18,552	0	0
England	England and Wales / Thames Delta	Medium - High	1	39	0	0
Germany	Ems - Weser / Weser Delta	High	1	9,241	0	0
Italy	Mediterranean Sea Islands / Mannu	Extremely High	1	0	0	0
	Mediterranean Sea Islands / Tirso	Extremely High	1	25	0	0
Kazakhstan	Ob / Irtys	Low	14	49,727	0	0
		High	1	0	0	0
	Syr Darya / Sarysu	Low - Medium	1	246	0	0
New Caledonia	South Pacific Islands / New Caledonia	Low	1	0	19,064	0
Norway	Scandinavia, North Coast / West Norway Coast	Low	1	0	25,561	0

Discharge for offsite treatment or disposal	Water exported to a third party	Water entrained in output	Total water Output	Category 1 – Output[3]	Category 2 – Output[3]	Category 3 – Output[3]
0	0	258	11,342	0	**11,085**	258
0	32	19	19,692	1,576	**18,098**	19
0	0	184	6,117	5,932	**0**	184
6,013	0	0	6,015	36	**5,979**	0
86	0	162	26,706	10,189	**16,149**	368
7	0	48	58,327	564	**57,715**	48
0	0	0	40,189	22,429	**0**	17,760
0	0	0	12,988	453	**12,535**	0
0	0	0	164	164	**0**	0
0	0	0	5,568	5,568	**0**	0
0	165	506	3,500	2,994	**0**	506
0	0	0	440	440	**0**	0
0	0	0	9,299	2,391	**6,907**	0
0	0	0	10,464	3,420	**7,043**	0
0	0	3,509	71,567	61,570	**6,489**	3,509
2	0	0	74	35	**39**	0
4	0	88	9,813	9,725	**0**	88
2,037	0	70	3,637	1,530	**2,037**	70
3	0	0	53	25	**28**	0
3,163	406	5,410	84,208	25,965	**34,764**	23,479
0	0	3	7,493	7,490	**0**	3
0	0	32	3,326	3,295	**0**	32
0	0	0	19,586	522	**19,064**	0
23	0	0	26,246	662	**9,068**	16,516

Country	River Basin (major / minor)	Baseline water stress level[2]	# of sites	Discharge to surface water	Discharge to sea water / ocean	Discharge to groundwater
Peru	Amazon / Apurimac	Medium - High	1	6,886	0	0
	Amazon / Mantaro	Low - Medium	9	102,027	0	0
	Peru, Pacific Coast / Huaura	Low	1	2,789	0	0
	Peru, Pacific Coast / Lima Coast	Low	3	232	0	0
Philippines	Philippines / Visayan Islands	Low	1	0	38,873	0
South Africa	Limpopo / Elefantes	High	12	502	0	0
	Limpopo / Krokodil	High	8	325	0	0
	South Africa, South Coast / Inkomati	Low - Medium	1	0	0	0
	South Africa, West Coast / Groot Berg	Extremely High	1	18	933	0
Spain	Spain - Portugal, Atlantic Coast / Northern Spain Coast	Medium - High	4	0	51,992	0
Tanzania	Nile / Kagera	Low	1	0	0	1
United States of America	Atlantic Ocean Seaboard / Blackstone	Medium - High	1	0	0	0
	California / Coyote	Low	1	1	0	0
Zambia	Congo / Lake Mweru	Low	1	27,098	0	0
	Zambezi / Kafue 1	Medium - High	1	0	0	0
	Zambezi / Lufwanyama	Low	1	28,406	0	0

1 Refer to 'About this report' section regarding the scope of this table
2 Baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. For further information refer to Glossary
3 The water quality categories are aligned with the Minerals Council of Australia's WAF; the sum of categories 1 and 2 aligns with the ICMM's water category 'high quality' and category 3 with 'low quality'

Discharge for offsite treatment or disposal	Water exported to a third party	Water entrained in output	Total water Output	Category 1 – Output[3]	Category 2 – Output[3]	Category 3 – Output[3]
0	0	0	23,876	23,876	**0**	0
0	21,700	38	138,771	45,409	**82,286**	11,076
0	0	48	3,537	700	**2,789**	48
0	0	5	818	582	**232**	5
0	0	183	41,025	1,969	**38,873**	183
4	1,979	2,500	-36,869	-40,908	**739**	3,300
48	41	0	6,388	5,974	**366**	48
0	0	65	1,050	985	**0**	65
0	0	0	1,469	1,469	**0**	0
1	0	313	54,338	53,443	**581**	314
0	0	0	1	0	**0**	0
0	0	0	0	0	**0**	0
3	0	0	4	1	**3**	0
0	0	0	44,010	16,912	**27,098**	0
0	0	0	2	2	**0**	0
0	928	4	39,456	10,119	**29,333**	4

Appendix 3

Overview of 2019 water use, reuse, recycling, change in storage and efficiency of our sites by country, river basin and baseline water stress level (ML)

Overview of 2019 water use, reuse, recycling, change in storage and efficiency of our sites by country, river basin and baseli

Country	River Basin (major / minor)	Baseline water stress level²	# of sites	Water used in a task / process	Water recycled
Argentina	La Plata / San Francisco	Low	1	405	0
	Salinas Grandes / Belen	Low - Medium	1	1,351	0
	South America, Colorado / San Juan	Medium - High	1	0	0
Australia	Australia, East Coast / Burdekin	Low	2	6,809	0
	Australia, East Coast / Fitzroy	Low	1	3,880	131
		Low - Medium	1	5,907	0
		Medium - High	1	2,325	37
		High	1	1,362	15
	Australia, East Coast / Hunter	Low - Medium	8	17,514	99
	Australia, East Coast / MacQuarie / Tuggerah Lakes	Low	1	0	0
	Australia, East Coast / Ross	Low - Medium	1	108	0
	Australia, Interior / Salt Lake	Arid and Low Water Use	1	11,994	0
	Australia, North Coast / Flinders	Low - Medium	1	3,627	0
	Australia, North Coast / Leichhardt	High	5	33,586	151
	Australia, North Coast / McArthur	Low	1	3,078	0
	Murray - Darling / Darling	Arid and Low Water Use	1	1,047	0
Bolivia	La Plata / Pilaya	High	2	1,648	1,015
	La Puna Region / Lago de Poopa	Low	1	1,384	0

ne water stress level (ML)[1]

Water reused	Change in water in Storage	Reuse efficiency	Recycling efficiency	Reuse / recycling efficiency
22	0	5%	0%	5%
19,059	-775	93%	0%	93%
0	0	0%	0%	0%
1,629	-1,727	21%	0%	21%
923	-1,676	19%	3%	21%
7,682	815	57%	0%	57%
33	2,541	1%	2%	3%
0	-288	0%	1%	1%
12,169	-1,424	31%	0%	32%
0	-35	0%	0%	0%
0	6	0%	0%	0%
431	0	3%	0%	3%
3,091	-7	46%	0%	46%
28,229	1,402	37%	4%	42%
357	-2,618	10%	0%	10%
287	20	21%	0%	21%
545	-190	16%	33%	49%
0	-10	0%	0%	0%

Country	River Basin (major / minor)	Baseline water stress level[2]	# of sites	Water used in a task / process	Water recycled
Canada	Hudson Bay Coast / Bell	Low	1	3,875	0
	Hudson Bay Coast / Central Mattagami	Low	1	7,749	13,657
	Hudson Bay Coast / Rio de Puvirnituq	Medium - High	1	3,985	0
	St Lawrence / Montreal Island	Low	2	580	353
	St Lawrence / Upper Ottawa / Kinojevis	Low	1	10,757	2,737
	St Lawrence / Upper St Lawrence / Raisin	Low	1	58,084	0
	St Lawrence / Vermilion	Low	1	9,112	8,680
	St Lawrence / Wanapitei	Low	1	3,789	0
Chad	Lake Chad / Efian	Low	1	0	29
Chile	North Chile, Pacific Coast / Caracoles	Arid and Low Water Use	1	5,559	155
	North Chile, Pacific Coast / Negra	Arid and Low Water Use	1	4,193	54
Colombia	Caribbean Coast / Colombia North Caribbean Sea Coast	Low	1	411	0
	Magdalena / Cesar	Low	1	2,589	23
	Magdalena / Magdalena 1	Low	1	4,796	25
Democratic Republic of Congo	Congo / Lulaba 3	Low	2	38,027	3,801
England	England and Wales / Thames Delta	Medium - High	1	29	0
Germany	Ems - Weser / Weser Delta	High	1	9,185	0
Italy	Mediterranean Sea Islands / Mannu	Extremely High	1	3,004	873
	Mediterranean Sea Islands / Tirso	Extremely High	1	25	0
Kazakhstan	Ob / Irtys	Low	14	56,593	94,476
		High	1	4,558	0
	Syr Darya / Sarysu	Low - Medium	1	2,834	0
New Caledonia	South Pacific Islands / New Caledonia	Low	1	19,586	356
Norway	Scandinavia, North Coast / West Norway Coast	Low	1	21,848	0

Water reused	Change in water in Storage	Reuse efficiency	Recycling efficiency	Reuse / recycling efficiency
0	0	0%	0%	0%
343	-591	2%	63%	64%
3,246	-498	45%	0%	45%
0	0	0%	20%	20%
0	0	0%	20%	**20%**
614	7	1%	0%	**1%**
0	0	0%	49%	**49%**
0	0	0%	0%	**0%**
0	0	0%	100%	**100%**
6,205	0	52%	1%	**53%**
570	-4	12%	1%	**13%**
59	0	12%	0%	**12%**
0	2,108	0%	1%	**1%**
0	236	0%	1%	**1%**
15,643	3,033	33%	7%	**39%**
0	0	0%	0%	**0%**
521	-1	5%	0%	**5%**
0	-3	0%	23%	**23%**
0	0	0%	0%	**0%**
171,908	-356	15%	4%	**19%**
22,636	0	83%	0%	**83%**
2,134	-56	43%	0%	**43%**
0	0	0%	2%	**2%**
520	0	2%	0%	**2%**

Country	River Basin (major / minor)	Baseline water stress level[2]	# of sites	Water used in a task / process	Water recycled
Peru	Amazon / Apurimac	Medium - High	1	19,598	130
	Amazon / Mantaro	Low - Medium	9	19,055	2,946
	Peru, Pacific Coast / Huaura	Low	1	99	289
	Peru, Pacific Coast / Lima Coast	Low	3	693	2,019
Philippines	Philippines / Visayan Islands	Low	1	41,018	0
South Africa	Limpopo / Elefantes	High	12	17,982	211
	Limpopo / Krokodil	High	8	5,247	438
	South Africa, South Coast / Inkomati	Low - Medium	1	467	10
	South Africa, West Coast / Groot Berg	Extremely High	1	1,469	0
Spain	Spain - Portugal, Atlantic Coast / Northern Spain Coast	Medium - High	4	53,753	0
Tanzania	Nile / Kagera	Low	1	1	0
United States of America	Atlantic Ocean Seaboard / Blackstone	Medium - High	1	0	0
	California / Coyote	Low	1	0	0
Zambia	Congo / Lake Mweru	Low	1	0	0
	Zambezi / Kafue 1	Medium - High	1	0	0
	Zambezi / Lufwanyama	Low	1	0	0

[1] Refer to 'About this report' section regarding the scope of this table
[2] Baseline water stress measures the ratio of total water withdrawals to available renewable water supplies. For further information refer to Glossary

Water reused	Change in water in Storage	Reuse efficiency	Recycling efficiency	Reuse / recycling efficiency
68,325	-226	78%	0%	**78%**
2,151	0	5%	5%	**11%**
878	6	69%	23%	**92%**
1,219	0	40%	18%	**57%**
0	1	0%	0%	**0%**
9,649	66,619	26%	0%	**27%**
3,558	87	30%	4%	**34%**
51	-12	10%	2%	**12%**
0	0	0%	0%	**0%**
3,376	-1	2%	0%	**2%**
0	0	0%	0%	**0%**
0	0	0%	0%	**0%**
0	0	0%	0%	**0%**
0	0	0%	0%	**0%**
0	0	0%	0%	**0%**
0	0	0%	0%	**0%**

Important notice

Important notice concerning this report including forward looking statements

This document contains statements that are, or may be deemed to be, “forward looking statements” which are prospective in nature. These forward looking statements may be identified by the use of forward looking terminology, or the negative thereof such as “outlook”, “plans”, “expects” or “does not expect”, “is expected”, “continues”, “assumes”, “is subject to”, “budget”, “scheduled”, “estimates”, “aims”, “forecasts”, “risks”, “intends”, “positioned”, “predicts”, “anticipates” or “does not anticipate”, or “believes”, or variations of such words or comparable terminology and phrases or statements that certain actions, events or results “may”, “could”, “should”, “shall”, “would”, “might” or “will” be taken, occur or be achieved. Forward-looking statements are not based on historical facts, but rather on current predictions, expectations, beliefs, opinions, plans, objectives, goals, intentions and projections about future events, results of operations, prospects, financial condition and discussions of strategy.

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