

Managing water risk

Water is a vital input for our business and our host communities. Therefore, our water stewardship is of critical importance to our business and our stakeholders. Our approach is to ensure both an adequate supply of water for our operations and to protect (or improve) the supply and quality of water for our local communities.

This approach is underpinned by a set of ambitious internal targets to ensure responsible water use. Our targets include:

- **Recycle** 75% of process water, by 2020.
- **Improve** water use efficiency to 1.4m³/tonne of ore milled, with freshwater use in our processing plant to be below 0.5 m³/tonnes milled.
- **Monitor and ensure** all water discharged by our operations is returned to source at the same or better quality, including zero uncontrolled discharges.

The water our mines abstract is drawn from a combination of surface water (rivers and dams), groundwater and water from mine dewatering. The amount of freshwater we can abstract is strictly limited by government issued permits, and we carefully monitor abstraction rates to ensure compliance with the permits. We take equal care with any water we discharge back into the environment, testing all water to be discharged for traces of 30 different chemicals prior to discharge.

Complementing the group's targets we have in place, each operational mine has its own tailored water management plan, which takes into account the different catchment users needs, the specific climate, surface and ground water availability and quality, evapotranspiration rates of the site as well as permit allowances and details how water is to be managed. Every mine is different. For example, the Loulo, Goukoto, Morila and Tongon mines are located in a tropical savanna zone, which is prone to water stress, while Kibali is located in a tropical wet climate zone and enjoys a long rainy season.

Our performance

In 2017 we abstracted a total of 56.9 million litres of water, this represents a 20% increase on 2016 levels. We attribute this increase to three main factors. Firstly, the most significant increase on abstraction occurred at Morila, where the tailings reclamation project uses a series of high pressure water guns and large volumes of water to transform the TSF back into a slurry that can then be processed. Secondly, as we are now operating multiple pits at our Kibali mine, we are pumping more water from the pits. Finally, increases in overall production also required additional water to be abstracted.

Despite an increase in overall water used, we are encouraged by a 21% improvement in our water efficiency to 1.2m³ water per tonne of ore milled, while freshwater efficiency improved to 0.5m³, from 0.52m³ in 2016. We are also pleased to report an increase in water recycling rates to 73% this year, up from 59% in 2016. These improvements can be attributed, in part, to the regular use of our new water management tool for each site. This tool provides us with comprehensive and constantly updated data on our water use from flowmeters at every point on site. The constant stream of data enabled us to use water more strategically and efficiently across our sites, which in turn drove up water recycling rates.

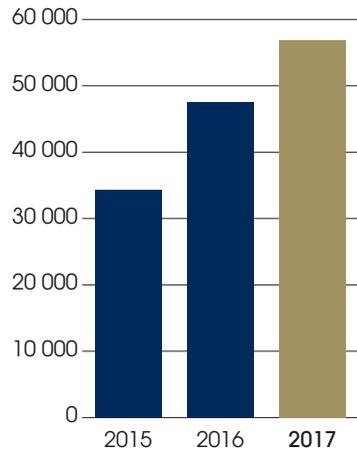
Unfortunately, our abstraction from rivers in areas vulnerable to water stress as a proportion of total abstraction increased significantly in 2017 to 65%. However, as shown on the following graph, river water accounts for 27% of our total water use, in these areas.

Water quality

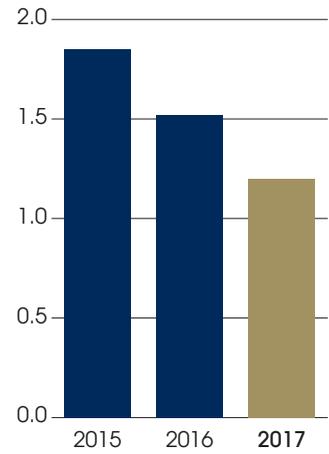
Alongside regular testing of discharge water, we also work with external consultants and national water laboratories to assess the groundwater quality and aquatic health of the rivers and streams around our operations. Water samples from both up and down stream of our operations are taken and assessed for major ions, heavy metals and bacteria. The health of aquatic fauna is also assessed. These assessments provide us with insight into the impact of our operations on local waterways, and results are also conveyed to local communities. For example, water sampling at Loulo-Goukoto by the Malian national laboratory of water, found no significant increase in chemicals, however it did indicate significant faecal matter as a result of community housekeeping. We are now working in conjunction with the national laboratory to provide housekeeping advice to the communities to reduce bacteria levels in the water.

No incidences of non-conformity with national or IFC standards were recorded in 2017. During 2017, as an alternative to water treatment plants or chemical treatment plants, we constructed wetlands at our Loulo and Tongon mines to treat and reduce nitrate levels in the water discharged from the operations. A constructed wetland is a passive treatment system that is sustainable over the long term and incurs lower maintenance and operational costs post closure. Initial post construction monitoring indicates the wetlands are working well. For example, at Tongon monitoring of the water quality during the dry season shows an improvement in all parameters with dissolved concentrations of nitrate reduced by 54% on average, and arsenic by 69%. These are levels comfortably below the various water standards and limits set by both local authorities and IFC guidelines. We will continue to monitor the performance of the wetlands with a view to introducing them across all operations.

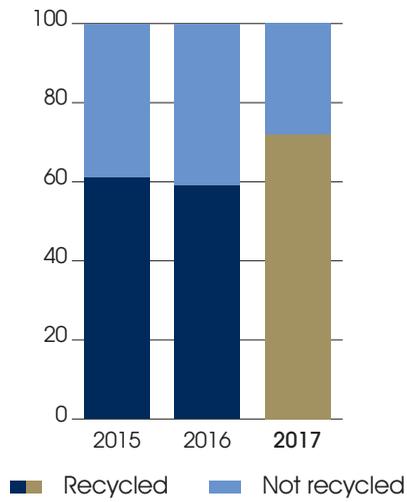
TOTAL WATER TAKE-OFF (MI)



WATER USE EFFICIENCY (-M³/t)



TOTAL WATER RECYCLED (%)



WATER USE IN AREAS OF WATER STRESS

