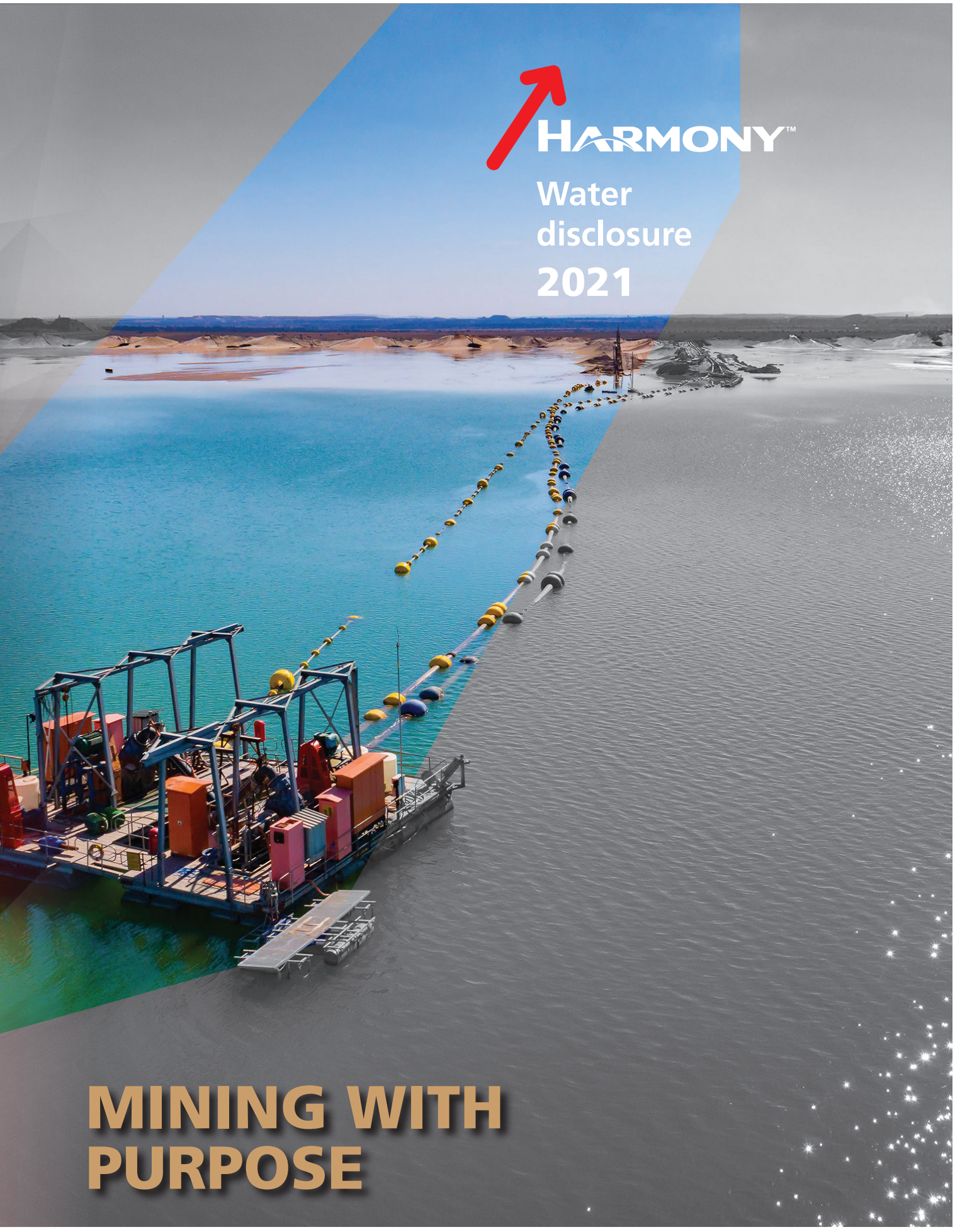

HARMONY™

Water disclosure 2021

MINING WITH PURPOSE

Welcome to your CDP Water Security Questionnaire 2021

W0. Introduction

W0.1

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

Harmony Gold Mining Company Limited (Harmony or the Group) is a gold mining and exploration company, established over six decades ago with operations in South Africa and Papua New Guinea (PNG) a premier gold-copper region in South-east Asia. Harmony is currently the largest producer of gold in South Africa.

Harmony's South Africa operations consist of nine underground mines located within the world-renowned Witwatersrand Basin – one in the Klerksdorp goldfield, two in the West Rand and six in the Free State. The nine underground operations are Moab Khotsong (acquired 1 March 2018), Doornkop, Kusasalethu, Tshepong operations (including the Phakisa mine), Target 1, Masimong, Bambanani, Unisel and Joel. Additionally, Harmony has one open pit mine on the Kraaipan Greenstone Belt (Kalgold) and several surface treatment operations in the Free State Province. Harmony also acquired a uranium processing plant when it acquired Moab Khotsong. The acquisition of Moab Khotsong resulted in a significant change to the water accounting totals and accounted for 30% of the total water use for primary activity in the reporting year.

PNG is one of the world's foremost new gold-copper regions and has an established gold-copper portfolio in the country. Harmony owns 100% of the Hidden Valley open-pit gold and silver mine, located in the Morobe Province. Harmony acquired Newcrest Mining Limited's (Newcrest) 50% share in Hidden Valley in October 2016. Harmony also owns a 50% stake in the Wafi-Golpu copper-gold project in the Morobe Province, through a 50:50 joint venture with Newcrest.

The Wafi-Golpu copper-gold project is situated approximately 65km southwest of Lae, in the Morobe Province. The proposed mine site sits at an elevation of approximately 400m above sea level in moderately hilly terrain and is located near the Watut River, approximately 30km upstream from its confluence with the Markham River.

Gold contained in the mineral resources at the South African operations represented 60% of Harmony's total of 117.3 million tonnes (Mt), with the PNG assets representing 39% of total gold and gold equivalent mineral resources as at 30 June 2019. In South Africa, Harmony's Free State underground and surface operations account for 29% of the company's gold equivalent mineral resources, with West Rand contributing 12%, the Klerksdorp goldfield underground and surface contributing 10%, and the Kraaipan Greenstone Belt contributing

2.4%. In PNG, Hidden Valley contributes 3.5%, Wafi-Golpu contributes 30% and other PNG assets contribute 9.6% of Harmony's total gold equivalent mineral resources.
Harmony has embedded sustainable development practices into its business strategy and decision making, understanding that while corporate citizenship rests on the inextricable link between profitability and sustainability. Harmony's sustainable development framework considers the 10 principles advocated by the International Council of Minerals and Metal (ICMM), which serve as a best-practice framework for sustainable development in the mining and metals industry. Harmony has also considered and is now implementing the United Nations Global Compact and Sustainable Development Goals.These processes and practices have incorporated the necessary standards and systems, including the relevant ISO systems, developed group standards for environment and safety, and standardised processes and definitions. These principles have become embedded in Harmony's culture, values and approach to leadership.
Harmony endeavours to reduce energy consumption and greenhouse gas emissions, adapt to climate change and diversify the energy mix by: promoting energy efficiency at our deep-level mines in South Africa; optimising and rebalancing our asset portfolio; promoting an alternative energy mix and aligning its rehabilitation programme with the green energy agenda.
Furthermore, Harmony is finalising the construction of three 10MW solar PV plants in the Free State to provide renewable energy to its operations.
Harmony has a water management strategy in place articulating its commitment to climate change mitigation and adaptation at a strategic level. The water strategy supports conservation and demand management, including optimisation of supply in regions such as Welkom, particularly to secure supply during a protracted drought, and for the sustainable development of the business and its host communities. Across the group, Harmony has implemented a campaign to re-use process water and thus reduce dependency potable water while increasing the amount of water recycled. This has enabled Harmony to continue to maintain a favourable water use intensity. Conservation of potable water is a priority, particularly in light of the recent impact of drought in South Africa and foreseeable drought patterns in future. Enhanced water awareness campaigns and water management initiatives, including recycling, among others, were effective throughout FY19.

W-MM0.1a

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

Activity	Details of activity
Mining	Copper Gold Silver
Processing	Gold Silver Other non-ferrous materials processing, please specify Uranium

W0.2

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

	Start date	End date
Reporting year	July 1, 2019	June 30, 2020

W0.3

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

Papua New Guinea
South Africa

W0.4

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

ZAR

W0.5

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

Companies, entities or groups in which an equity share is held

W0.6

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

No

W1. Current state

W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Important	Direct use: Water with varying high quality standards is used in all stages of mining – from mining to gold processing to dust suppressions and slurry transport. A continuous fresh water supply is

			essential to the operational continuity of Harmony's mines, its employees and the profitability of the business as any service disruptions caused due to a lack of water would have significant financial impacts. For this reason sufficient amounts of good quality freshwater are considered to be important to Harmony's operations. Harmony is retreating process water in order to offset the demand on potable water from municipal sources and is considering further treatment options to reduce dependency on potable water supplies. Harmony is progressing with exploration in PNG. These assets will result in higher dependency on freshwater availability in order to sustain Harmony's growing operational footprint. Indirect use: Harmony's supply chain produces goods that require large quantities of good quality fresh water. Harmony's key commodities purchased from stakeholders include steel, timber, cement, cyanide, caustic soda and lime. Water is used in the cement mixing process as well as caustic soda production. Furthermore, water is necessary in timber production for the growing of plantations. Sufficient amounts of good quality freshwater are thus considered to be important to Harmony's value chain. Harmony's increased operational footprint will require an increase of commodities, resulting in higher demand for freshwater upstream in the supply chain.
Sufficient amounts of recycled, brackish and/or produced water available for use	Important	Not very important	Direct use: Approximately half of Harmony's operations are located in the Free State region of South Africa. Due to freshwater constraints in the area, the reuse of process, sewage and fissure water at Harmony's operations is considered to be important. Continued pumping of underground water is required to enable mining and ensure the safety of employees. Harmony is exploring viable passive treatment options with trees to limit seepage from tailings and to treat underground water daylighting on surface based on future groundwater modelling

			scenarios. As a result, Harmony has implemented a group-wide campaign to re-use processed water in order to reduce dependency on existing ground water and municipal suppliers, especially on potable water supplies. This builds climate resilience in Harmony's operations and reduces the impact on the already constrained water sources in areas of operation. Harmony's water recycling initiatives have been successful and the company will continue to drive these efforts. As such higher volumes of recycled water could become available for use across Harmony's operations. This would aid Harmony's future increase of water demand based on the company strategically growing its asset base. Therefore, sufficient amounts of recycled water will remain important in the future. Indirect use: None of Harmony's value chain partners make use of brackish or produced water when manufacturing their goods. For this reason, sufficient amounts of produced or brackish water is classified as not very important to Harmony's value chain partners. This is not anticipated to change in the future.

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	All of Harmony's (100%) operations measure the total volume of water withdrawn on a monthly basis. The total withdrawal volumes are measured and monitored on a monthly basis to ensure Harmony's operations' compliance and to track their performance towards its water use targets. The monitoring is conducted using an online management system. All water withdrawal volumes are verified and available online. The online system also integrates with other water consumption drivers and tracks performance. Internal stakeholders have access to

		all the information. The information from the system is used in monthly operational reviews.
Water withdrawals – volumes by source	100%	All of Harmony's operations (100%) measure the total volume of water withdrawals per source on a monthly basis using an online management system. This data is measured and monitored to ensure accuracy and compliance with regulations as these volumes are published in Harmony's annual reports. The annual reports are developed in line with (amongst others) the Global Reporting Initiative G4 guidelines and are independently audited. The category G4-EN8 'Total water withdrawal by source' is defined as a material reporting aspect for Harmony. This allows Harmony to track its water use against targets as well as track water withdrawal costs from the different sources.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	100%	Entrained water volumes are not relevant at 12/19 of Harmony's reported operations in the reporting year. Harmony monitors entrained water volumes at 100% (The remaining 7 operations) of their operations where entrained water is relevant. The volumes of water are monitored on a monthly basis by measuring the moisture content of the ore milled and the volumes of ore milled. The water volumes can then be calculated using these two parameters.
Water withdrawals quality	100%	Harmony monitors withdrawal quality at 100% of its operations. This aspect is measured by taking water samples at their operations. The surface water samples are taken on a monthly basis and the groundwater samples are taken on a quarterly basis. If the withdrawals are for consumptive purposes, then the monitoring of water quality is done daily.
Water discharges – total volumes	100%	All our operations (i.e. 100%) measure water that is discharged to the environment. This measurement is continuously taken when water is discharged daily at Hidden Valley operations. Discharges are measured per instance at other operations as discharges do not happen continuously. It is important for Harmony to measure its discharge volumes to ensure environmental performance of the company. The

		quality and quantity of water discharges are monitored to ensure compliance with regulations. The volumes are measured using an online metering system and manual meter readings at some operations.
Water discharges – volumes by destination	100%	Only three of Harmony's operations discharge water, these are Joel, Kusasalethu and Hidden Valley (100% of operations that discharge). These two operations discharge water to fresh surface water sources (the Wonderfonteinspruit and Watut rivers respectively). Discharges are measured per instance at Kusasalethu and Joel as discharges do not happen continuously. At Joel, only effluent is discharged. It is important for Harmony to measure its discharge volumes to ensure environmental compliance. The quality and quantity of water discharges are monitored as required by the relevant regulations. These volumes are measured using an online metering system.
Water discharges – volumes by treatment method	100%	Kusasalethu, Joel and Hidden Valley are the only three operations that discharge water at Harmony. All of these operations measure and monitor the total volume of water that is discharged by the required treatment method. Harmony ensures pH balancing through liming, to neutralise and flocculate heavy metals for removal before discharge to the environment. Discharged water is monitored continuously at the Hidden Valley operations. At Hidden Valley untreated discharges from waste dumps and TSF embankments are measured monthly. Kusasalethu and Joel discharge mining affected water as a result of being a water positive mine. Water quality monitoring done in line with regulatory best practice guidelines including the water use licence issued to the operation. Discharges are measured per instance at Kusasalethu and Joel as discharges do not happen continuously. It is important for Harmony to monitor water quantity discharged to various treatment methods as these have costs related to them.
Water discharge quality – by standard effluent parameters	100%	Harmony has three operations that discharge water to the environment, Kusasalethu, Joel and Hidden Valley. These measure and monitor water discharge quality data at each discharge instance.

		The volumes are measured using an online management system. The system allows for service water quality to be measured in real-time. Notifications to responsible personnel are automatically triggered should limits be exceeded. This allows for quick reaction and ensures water quality is maintained. The quality performance is also reviewed on a monthly basis. Quality is measured using several parameters such as pH, conductivity, suspended solids, Chemical Oxygen Demand, minerals and metals and E.coli. It is important for Harmony to monitor quality of the discharged water to ensure it remains within compliance limits. Harmony also conducts assays on samples through accredited laboratories.
Water discharge quality – temperature	100%	Harmony monitors water discharge temperature at 100% of its operations. Only three of Harmony's operations discharge water all of which monitor the temperature of the water before discharge, thus 100% is selected. This is monitored to ensure that the temperature of the water discharge is within the range permitted by licensing requirements. Meters at the discharge destination are used for monitoring of volume and handheld meters are used to test temperature and pH at the point when samples are taken. The monitoring frequency is continuous using these meters. In PNG and Harmony SA temperatures are measured only when samples are taken, daily, weekly or monthly.
Water consumption – total volume	100%	100% of Harmony's operations measure their total water consumption on at least a monthly basis. The consumption levels are measured and monitored to track water performance targets at each operation. 80% of the operations also monitors the total water consumption in real-time. Control room operations monitors the consumption 24/7. Alarms and exception notifications are also triggered when consumption patterns are abnormal. Furthermore, a number of operations also monitors the consumption on a component level. Harmony can identify which operations are over- or under performing in terms of water used per tonne of product produced. The water

		consumption volumes are measured using an online metering system and are consistent with the CDP formula of Withdrawals=Discharge+Consumption
Water recycled/reused	100%	100% of Harmony's operations measure the volumes of water they reuse/recycle. This is done on at least on a monthly basis. This provides a way to track their performance against their water recycling target. The volumes of recycled water are measured using an online management system.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Harmony ensures the quality of water supplied to its employees for WASH services is monitored closely. Frequent measurements are taken to ensure the quality of water used for WASH falls within the required quality range where process water is used at Doornkop, Kusasalethu and Nyala. Harmony's employees at other operations have access to municipally supplied water for WASH services. This is monitored as part of the municipal system. Ensuring that Harmony's employees have access to good quality drinking water, water for cooking and cleaning and sanitation is considered to be a vital aspect for Harmony's success and growth. Employees at Kalgold mine have access to water from the reverse osmosis plant installed by Harmony, which is assessed and analysed daily to ensure good quality. At Harmony's Hidden Valley operation employees have access to fresh water which is treated at the onsite treatment plant before being used for WASH services.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	19,693	Lower	Harmony's withdrawals decreased by 16% in the reporting year. This falls within the threshold of between 10% and 40% set for the selection

			of lower in the comparison column. The decrease is due to reduced production as a result of Covid-19 lockdown restrictions which caused our underground operations to be placed temporarily on care and maintenance. Harmony continues to develop its assets in PNG. As such Harmony expects water withdrawals to increase over the short and medium term. However, Harmony continues to manage finite resources responsibly, particularly further moves to maximise the mines' use of recycled water and to further restrict their water discharges.
Total discharges	3,023	Higher	Harmony's discharges increased by 14% in the reporting year. Harmony defines higher/lower as any change between 10% and 40%. Therefore higher was selected in the comparison column. The increase can be attributed to the fact that discharges at Hidden Valley increased significantly. Harmony anticipates that discharges will decrease in the short term and remain similar thereafter.
Total consumption	16,670	Lower	Harmony's consumption decreased by 20% in the reporting year. The consumption value was calculated using the formula W=D+C where W is the withdrawals, D is the discharges and C is the consumption. Therefore C=19693ML/yr – 3023ML/yr. Harmony defines lower/higher as any change between 10% and 40%. Therefore lower was selected in the comparison column. The decrease in water consumption can be attributed to decrease in water withdrawals as a result of increased water recycling. Harmony expects water consumption to increase over the short and medium term. However, Harmony continues to manage finite resources responsibly, particularly further moves to maximise the mines' use of recycled water and to further restrict their water discharges.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress and provide the proportion.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	76-99	Lower	WRI Aqueduct	Harmony uses the WRI Aqueduct Water Risk Atlas tool to better understand water risk within the countries it operates – South Africa and Papua New Guinea (PNG). Harmony uses this tool as it has an up to date overview of regional and global water and water and water constraints. This tool was also used as part of Harmony's TCFD aligned climate change scenario analysis which included a detailed assessment of water risks across its operations. Harmony is already aware of its current water risks and uses the Aqueduct tool to understand future risks in terms of stress, water supply and water demand. The results from the tool form a key part of the input to Harmony's' Water Management Strategy. This focuses on improving water efficiency, protecting water as a resource, accounting for the value of water and strategically partnering for success on water management. Harmony uses the WRI Aqueduct definition of high water stress which is between 40-80% according to the online tool. Harmony defines lower as any

					decrease between 10% and 40%. Harmony's water withdrawals decreased by 16% resulting in a decrease in withdrawals from water stressed areas. Harmony recognises the importance of water, especially in areas of high water stress, and as such has implemented a number of water savings targets and capital projects across its operations in order to manage water as effectively as possible. At many of Harmony's underground operations in South Africa, the company intercepts the aquifer to generate fissure water, which is then treated and used, thus liberating other fresh water supplies for other users in society. Water in South Africa is generally deemed a scarce resource and, as a country, South Africa has adopted an inter- and a multi-disciplinary approach to the management of our water resources by means of catchment management agencies. Harmony participates in the following catchment agencies: • Far West Rand Technical Working Group • KOSH Mine Water Forum • Free State Government Task Team

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant			Harmony did not withdraw from fresh surface water sources in the reporting year. Therefore this source is not relevant.
Brackish surface water/Seawater	Relevant	2,464	Much higher	In the reporting year, some of Harmony's operations withdrew water from poor quality surface water sources therefore this source is relevant. This is a 100% increase when compared to the previous reporting period. This falls above the 40% threshold for the selection of much higher in the comparison column. This is primarily due to an increase in water requirements at Moab Khotsong.
Groundwater – renewable	Relevant	405	Much lower	Harmony withdraws water from renewable groundwater at its operations (87%) and this source is therefore relevant. Withdrawals from this source decreased by 92% compared to the previous reporting year. This decrease is primarily due to a change in our definitions with most of our groundwater being considered non-renewable with the change. Harmony defines any change greater than 40% as much lower/higher. Therefore much lower was

				selected in the comparison column.
Groundwater – non-renewable	Relevant	2,016	Much higher	Harmony withdraws water from non-renewable groundwater at its operations (87%) and this source is therefore relevant. Withdrawals from this source increased by 100% compared to the previous reporting year. This increase is primarily due to a change in our definitions with most of our groundwater being considered non renewable with the change. Harmony defines any change greater than 40% as much lower/higher. Therefore much higher was selected in the comparison column.
Produced/Entrained water	Relevant	596	Higher	Entrained water forms part of Harmony's operations and relates to the moisture contained within the ore that is mined. This source is therefore relevant. The entrained water volumes increased by 24%. Harmony defines higher/lower as any change between 10% and 40%. Therefore higher was selected in the comparison column.
Third party sources	Relevant	14,212	Lower	Harmony withdraws water from third party sources at its operations, therefore this source is relevant. Water withdrawals from this source decreased by 11% compared to the previous

				reporting year. Harmony defines higher/lower as any change between 10% and 40%. Therefore lower was selected in the comparison column.

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	3,023	Higher	Only three of Harmony's operations discharge water from their sites. These are Kusasalethu and Joel in South Africa and Hidden Valley in PNG. All these sites discharge water into fresh surface water sources. Discharges increased by 14% in the reporting year. Kusasalethu and Joel discharge water on an ad hoc basis. Due to high rainfall, Hidden Valley discharges water due to a positive water balance. Higher rainfalls led to an increase in discharges at Hidden Valley. This increase is the primary reason for the increase in overall discharges. Harmony defines any change greater than 5% and less than 40% as higher/lower. Therefore, higher was selected in the comparison column.
Brackish surface water/seawater	Not relevant			No water is discharged to brackish surface water/seawater sources at any of Harmony's operations.

Groundwater	Not relevant			None of Harmony's operations discharge water to groundwater sources.
Third-party destinations	Not relevant			None of Harmony's operations discharge water to municipal treatment facilities. Harmony treats their own discharged water to meet environmental regulations.

W1.2j

(W1.2j) Within your direct operations, indicate the highest level(s) to which you treat your discharge.

	Relevance of treatment level to discharge	Volume (megaliters/year)	Comparison of treated volume with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant				Harmony does not do any tertiary treatment to its water discharges
Secondary treatment	Not relevant				Harmony does not apply any secondary treatment to its water discharges.
Primary treatment only	Relevant	246	Much lower	91-99	Harmony ensures that all water discharges are properly treated before discharge at our SA operations. These

					discharges relate to all SA operations which accounts for 95% of our operations. These discharges decreased by 55% in the reporting year.
Discharge to the natural environment without treatment	Relevant	2,777	Higher	1-10	Harmony's Hidden Valley operation (5% of total operations) does not treat its discharges to the natural environment. These discharges increased by 32% in the reporting year.
Discharge to a third party without treatment	Not relevant				Harmony does not discharge water to a third party without treatment.
Other	Not relevant				This category is not relevant to our operations.

W-MM1.3

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

Yes

W-MM1.3a

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

Product	Numerator: Water aspect	Denominator	Comparison with previous reporting year	Please explain
Gold	Total water use	Ton of ore processed	Lower	Harmony's water strategy supports conservation and demand management including optimisation. The water use intensity metric is used to track their performance in this regard. Harmony has a water target to reduce its water use volumes and this metric is used to monitor the progress towards achieving this target. This target forms part of the above strategy. This strategy will result in a reduction in the water intensity. The decrease in the metric can be attributed to water conservation efforts at our operations. Harmony defines lower/higher as any change that is greater than 5% but less than 40%. Therefore lower was selected in the comparison column as the intensity metric decreased by 11% in the reporting year. The intensity metric is anticipated to decrease in the future as the target is met to reduce the water use volumes.

W1.4

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

Yes, our suppliers

Yes, our customers or other value chain partners

W1.4a

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

Row 1

% of suppliers by number

1-25

% of total procurement spend

76-100

Rationale for this coverage

Harmony has engaged with its top 20 suppliers (by operational spend) on their water use. Engagement with suppliers on water use is key to Harmony's overall sustainability goals. Harmony engages with its suppliers to ensure their processes are in line with the groups' human rights & environmental standards, code of ethics & empowerment requirements and national environmental legislation. By selecting the top 20 suppliers, Harmony ensures that the majority of its upstream value chain is covered by this engagement. Harmony uses this information to understand how water is prioritised within the suppliers' organisation, as well as their approach to sustainability as a whole Harmony requests these suppliers to provide information on their water management policies & usage, & whether they have been impacted by any water risks in the reporting year. This information feeds into how Harmony manages supplier contracts. Contracts will be suspended if suppliers in contravention or non-compliant.

Impact of the engagement and measures of success

Harmony's contractors are also expected to adhere to the company's Water Management Standard. The standard articulates good practice & set the minimum expectations for responsible water management.

Harmony requests suppliers to provide information on their water management policies & usage, & whether they have been impacted by any water risks in the reporting year.

Should a supplier be found to be in contravention or to be non-compliant, Harmony's contracts with them will be suspended. To date, there have been no such suspensions, & we have not received any reports of grievances against suppliers regarding adverse environmental impacts. This metric is used by Harmony to assess the success of its engagement.

Harmony uses the information provided during supplier engagement to ensure alignment on environmental policies. The information is further used in meeting procurement targets related to the company's mining rights.

Comment

Harmony found that the engagement with its suppliers on GHG emissions and climate change strategies strengthened the relationship with each of the suppliers. The engagement allowed Harmony and the supplier to gain a common understanding with respect to water-related information. Furthermore, the engagement has built credibility and trust with suppliers.

W1.4b

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

Type of engagement

Onboarding & compliance

Details of engagement

Requirement to adhere to our code of conduct regarding water stewardship and management

% of suppliers by number

76-100

% of total procurement spend

76-100

Rationale for the coverage of your engagement

All Harmony's contractors are expected to adhere to the company's Water Management Standard as well as the various environmental management programmes developed per water use license.

The rationale for engaging with 100% of contractors in this regard is to ensure that all contractors understand and abide by the good practice standards and the minimum expectations for responsible water management set out in Harmony's Water Management Standard.

The ultimate aim is to conserve and use water in a responsible manner, for the benefit of Harmony's operations and its wider host communities.

Impact of the engagement and measures of success

The beneficial outcomes of the engagement activity assist Harmony to influence and manage water use within its boundaries but also within its wider scope of influence.

Well informed contractors may extend the learnings on water management to different spheres of their respective business operations. Measures that conserve or responsibly manage water use will benefit wider communities and the environment.

Harmony measures success in this regards by the number of suppliers whose processes are in line with the group's human rights and environmental standards, its

code of ethics and its empowerment requirements.

To date, there have been no such suspensions, and we have not received any reports of grievances against suppliers regarding adverse environmental impacts.

Comment

W1.4c

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

Harmony engages with various partners in their value chain. Harmony prioritises engagements with their employees, surrounding communities and local governing authorities specifically regarding water-related issues. The rationale for prioritization is based on Harmony's recognition of the importance of an engaged, skilled and motivated workforce. Host community acceptance of Harmony's mines is key in maintaining social licences to operate as well as forming partnerships with the community. Both Harmony's operational strategy and their socio-environmental rehabilitation plan refers to responsible resource management and thus, the health and safety of employees and community members, as well as adherence to the regulation of their operating regions, are prioritised.
The method of engagement with value chain partners includes:
1) formal communications: including information sharing and engagement campaigns; and
2) informal communications: roadshows, pamphlets and public announcements.
The strategy of engagement with value chain partners is based off Harmony's commitment to:
1) improve the living conditions of their employees and host communities, and
2) enhance socio-economic development, and ecological conservation, particularly with mine closures. Harmony's aim for post-mine closure is to ensure that the communities can support their own economies and live free from environmental/ health issues induced by poor mining practice.
Harmony measures success by comparing their performance to their targets. In South Africa, for example, the operations are measured in comparison to their group's targets related to the nine pillars of the South African Mining Charter. As such, Harmony's performance would be assessed against pillar 7 (Mine community and development) and pillar 8 (Sustainable development and growth). Pillar 7's indicator is 'Up to date project implementation' and for pillar 8 the relevant indicator is the 'implementation of approved environmental management plans'.

W2. Business impacts

W2.1

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

Yes

W2.1a

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

Country/Area & River basin

South Africa
Orange

Type of impact driver & Primary impact driver

Physical
Increased water stress

Primary impact

Increased operating costs

Description of impact

Water is essential to Harmony's operations. It is consumed in the development and growth of Harmony's assets and is used throughout all the mining processes. In South Africa, a shortage of water supply poses a significant threat to the operational continuity of Harmony's mines, as well as to the profitability of the business (since stoppages lead to large financial implications).

Harmony, in South Africa, is largely dependent on municipal water supply and in turn, related tariff increases and/or shortages in supply. Most of the areas in which Harmony operates experienced droughts or water shortages over the past three years. The Free State Province is predicted to become increasingly hotter and drier. Rising temperatures and prolonged droughts are likely to increase the risk of water scarcity. This could have significant impacts on water availability and the operations of Harmony's Free State Operations. Increased water scarcity could also lead to more stringent water use requirements and potential tariff increases. The risk of water rationing, and periodic cuts could also increase.

Since water is critical to Harmony's operations, without the necessary permits or a lack of sufficient water volumes, Harmony will not be able to operate, resulting in production interruptions and major revenue losses. Stoppage of the Free State operations as a result of no water due to drought or constrained municipal supply could result in losses of up to R 62 million per day.

Primary response

Adopt water efficiency, water reuse, recycling and conservation practices

Total financial impact

16,800,000

Description of response

Harmony has adopted a group-wide campaign to re-use process water and reduce their dependency on groundwater. To do this, Harmony set long-term targets to reduce the water used for primary activities by 7% and increase water recycled by 6%, by FY22. To achieve these targets, various water conservation initiatives are implemented.

Harmony has constructed two water treatment plants that assist in continuing to secure water for operations, whilst also reducing water consumption and assisting with water conservation initiatives. Harmony built a third water treatment plant in FY19 which can treat 2.8ML of water per day resulting in R3.2 million in savings of water bills per year. In total, the three water treatment plants save Harmony approximately R5.6 million per year.

Harmony already has two water treatment plants (WTP) in Gauteng, to treat fissure water to potable standards, provide water to operations, and reduce their groundwater consumption. These WTPs treat 6ML of water a day, saving Harmony approximately R6.5 million in water bills annually. The group has also constructed the Nyala WTP to a treat a further 2.8ML per day at a capital cost of R16.8 million, intending to save R3.2 million per annum.

W2.2

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

No

W3. Procedures

W-MM3.2

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

Country/Area & River basin

South Africa
Orange

Number of tailings dams in operation

14

Number of inactive tailings dams

28

Comment

The number of tailings facilities in South Africa increased in FY19 when Harmony's Moab Khotsong operations came into operation.

Country/Area & River basin

Papua New Guinea
Fly

Number of tailings dams in operation

1

Number of inactive tailings dams

0

Comment

There is also a deep-sea tailings facility being considered for the Wafi-Golpu project to ensure minimum impact.

W-MM3.2a

(W-MM3.2a) Do you evaluate and classify the tailings dams under your control according to the consequences of their failure to human health and ecosystems?

Row 1

Evaluation of the consequences of tailings dam failure

Yes, we evaluate the consequences of tailings dam failure

Evaluation/Classification guideline(s)

South Africa (SANS) 10286

Tailings dams have been classified as 'hazardous' or 'highly hazardous'

Yes, tailings dams have been classified as 'hazardous' or 'highly hazardous' (or equivalent)

Please explain

Harmony identifies all our active tailings storage facilities (TSFs) as hazardous. The hazardous classification is applied as per the National Environmental Management Act. Hazardous implies any waste that contains organic or inorganic elements or compounds that may, owing to the inherent physical, chemical or toxicological characteristics of that waste, have a detrimental impact on health and the environment. Harmony operates, designs, and audits their TSFs in line with the SANS 10286 standard as well as the DMRE Code of Practice. Since the TSFs are hazardous, they are operated under Harmony's environmental codes, to ensure maximum care is taken.

The status of each TSF determines the management strategy applied. Regular inspections are conducted. TSFs that are operational and being re-mined, are inspected daily to facilitate proactive management and plant management meet monthly to review them. In addition to external audits, Harmony's chief operating officer, certain executive managers and senior engineering staff meet on a quarterly basis to assess compliance and management. External specialists are invited to these quarterly

meetings as and when required.

Harmony notes the publication in 2019 of the Global Industry Standard on Tailings Management. Underpinned by an integrated approach to tailings management. Harmony has adopted and implemented many of the principles and measures advocated by the Standard. We are considering the full implications of the Standard.

W-MM3.2b

(W-MM3.2b) Provide details for all dams classified as 'hazardous' or 'highly hazardous'.

Tailings dam name/identifier

Avgold Limited: Target 1 and 2

Country/Area & River basin

South Africa
Orange

Latitude

26.626147

Longitude

-27.785108

Hazard classification

Hazardous

Guideline(s) used

South Africa SANS 10286

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

48.3

Planned tailings storage impoundment volume in 5 years (Mm3)

51.7

Please explain

Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their environmental codes.

Target Mine is situated in South Africa and has two subsections of their tailings storage facility (i.e. Target 1 and Target 2). Together, these two TSFs held 48.3 million m3 of tailings in FY2019.

Tailings dam name/identifier

Harmony Gold Mine (Harmony 1 Plant): FSS2

Country/Area & River basin

South Africa
Orange

Latitude

26.794074

Longitude

-28.02117

Hazard classification

Hazardous

Guideline(s) used

South Africa SANS 10286

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

39.3

Planned tailings storage impoundment volume in 5 years (Mm3)

50.4

Please explain

Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their environmental codes. Harmony 1 is a tailings dam which is situated in the Free State in South Africa. This TSF in FY2019 held 39.3 million m3 of tailings from all Harmony's Free State surface operations.

Tailings dam name/identifier

Harmony Gold Mine (Central Plant): Dam 23 (H4)

Country/Area & River basin

South Africa
Orange

Latitude
26.892874

Longitude
-28.06944

Hazard classification
Hazardous

Guideline(s) used
South Africa SANS 10286

Tailings dam's activity
Active

Current tailings storage impoundment volume (Mm3)
43.6

Planned tailings storage impoundment volume in 5 years (Mm3)
66

Please explain
Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their environmental codes.

The Central Plant's tailings dams includes Dam 23(H4). which is situated in South Africa and in FY2019 held 43.6 million m3 of tailings.

Tailings dam name/identifier
Harmony Gold Mine (Central Plant): Brand D

Country/Area & River basin
South Africa
Orange

Latitude
26.852812

Longitude
-28.005319

Hazard classification

Hazardous

Guideline(s) used

South Africa SANS 10286

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

49.1

Planned tailings storage impoundment volume in 5 years (Mm3)

71.5

Please explain

Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their environmental codes.

The Central Plant's tailings dams includes Brand D. which is situated in South Africa and held 49.1 million m3 of tailings in FY2019.

Tailings dam name/identifier

Harmony Gold Mine (Saaiplaas Plant): St Helena 123

Country/Area & River basin

South Africa
Orange

Latitude

26.709771

Longitude

-28.034362

Hazard classification

Hazardous

Guideline(s) used

South Africa SANS 10286

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

35.6

Planned tailings storage impoundment volume in 5 years (Mm3)

75.1

Please explain

Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their environmental codes.

The Saaiplass St Helena 123 TSF is also situated in South Africa and held 35.6 million m3 of tailings in FY2019.

Tailings dam name/identifier

Harmony Gold Mine (Doornkop Plant): Doornkop

Country/Area & River basin

South Africa
Orange

Latitude

27.784882

Longitude

-26.205289

Hazard classification

Hazardous

Guideline(s) used

South Africa SANS 10286

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

49.4

Planned tailings storage impoundment volume in 5 years (Mm3)

63.6

Please explain

Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their

environmental codes.

The Doornkop Plant in South Africa has a TSF which in FY2019 held 49.4 million m3 of tailings.

Tailings dam name/identifier

Harmony Gold Mine (Kusasalethu Plant): Kusasalethu Upper and Lower

Country/Area & River basin

South Africa
Orange

Latitude

27.353305

Longitude

-26.465038

Hazard classification

Hazardous

Guideline(s) used

South Africa SANS 10286

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

32.9

Planned tailings storage impoundment volume in 5 years (Mm3)

37.4

Please explain

Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their environmental codes.

The Kusasalethu Plant in South Africa has an Upper and Lower TSF. Together these two sub-divided TSFs held 32.9 million m3 of tailings in FY2019.

Tailings dam name/identifier

Harmony Gold Mine (Noligwa Plant): Mispah 1 and 2

Country/Area & River basin

South Africa
Orange

Latitude

26.774707

Longitude

-26.997888

Hazard classification

Hazardous

Guideline(s) used

South Africa SANS 10286

Tailings dam's activity

Active

Current tailings storage impoundment volume (Mm3)

64.9

Planned tailings storage impoundment volume in 5 years (Mm3)

13.8

Please explain

Harmony recognises the detrimental impacts which tailings storage facilities (TSF) could pose on their surroundings and the knock-on impact that could have on their host communities.
Harmony thus establishes a Zone of Influence boundary around all of their TSFs and manages their TSFs in line with the SANS 10286 standard as well as their environmental codes.

The Noligwa Plant in South Africa has two sub-divided TSFs as well, called Mispah 1 and 2. In FY2019 held these two dams help 64.9 million m3 of tailings together.

W-MM3.2c

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

Procedure	Detail of the procedure	Please explain
Acceptable risk levels	Establishment of site-level guidance and standards for acceptable risk levels across all life stages, including post-closure Establishment of company-wide standards for acceptable risk	1) The potential impacts of Harmony's TSFs on human health and ecosystems are managed through use of the Mandatory Code of Practice (CoP) for Mine Residue Deposits (MRD). MRD updates are provided every two years to the South African Department of Mineral Resources and

	levels that folllow a company policy to eliminate or minimize water-related risks associated with tailings dams Other, please specify Establishment of site-level guidance and standards for acceptable risk levels for occupational health and safety	Energy (DMRE). This extends to Harmony's PNG mine practices as well, to manage all TSFs uniformly. The CoP is reviewed annually to ensure it remains updated. All TSF waste was managed by (i) minimising the quantity of material stored to limit the extent of the footprint of land disturbed, (ii) ensuring storage sites are physically and chemically safe and well-engineered, and (iii) undertaking progressive rehabilitation – returning affected land to productive use after mining. The CoP stipulates a suggested closing methodology which Harmony uses to inform their site-specific closing strategy, such to maintain acceptable risk levels in the closure of their mines. This closing methodology is reviewed annually to ensure that it remains current, applicable, and compliant with country-specific legislation. 2) Harmony's quantification of acceptable risk levels form part of the CoP for MRD, which is used as a framework for each of Harmony's tailings storage facility to detail the individual CoPs. Monthly, quarterly, and annual reports are compiled based off the CoP while weekly inspections are conducted. The reports are submitted to Harmony's board, the operating team and the DMRE. Similarly, the site-specific operating procedures are reviewed annually to maintain applicability and legislative compliance. 3) Daily inspections, to facilitate proactive management, are conducted on TSFs to ensure that all TSFs are in adequate condition and to minimise risks associated with spillages or flooding of a TSF. The CoP for MRD sets out the framework to manage Harmony's deposits, even after mine closure (as per DMRE's mandatory requirement). All Harmony mines make use of this guidance as a means through which to ensure basic adherence to the South African occupational health and safety standards. The health and safety of mine employees and any other persons affected by the deposits is of key priority to Harmony. The guidance provided by the CoP is adapted on a site-to-site basis. 4) All our tailings storage facilities are in good standing and have been verified by the International Mining Industry Underwriters on an annual basis; the Cyanide Management Institute every 18 months

		and the DMRE every two years.
Operating plan	An operating plan that includes the operating constraints of the dam and its construction method An operating plan that considers the consequences of breaching the operating constraints of the dam An operating plan that includes periodic review of the foundations and slope materials An operating plan that evaluates the effectiveness of the risk management measures and whether performance objectives are being met	1) The potential impacts of Harmony's tailings dam facilities on human health and water ecosystems are managed through use of the Mandatory Code of Practice (CoP) for Mine Residue Deposits. Harmony uses the CoP across its operations both in South Africa and Papua New Guinea, to develop their individual site-level operating plans, which consider all applicable design limitations, assumptions, and principles regarding TSFs. Harmony operates within the design limits of the dam, continuously referring to the CoP as a framework for each TSF and considering the health and safety of mine employees and any other affected persons in the process of developing site-based operating plans. Each operating plan is reviewed on an annual basis to remain current, applicable, and compliant with legislation. 2) As some aspects of our operations particularly tailings deposition, entail altering the physical landscape permanently it is our aim to rehabilitate the land concurrently (where it is possible) to effective and appropriate post-mining land use once mining has ceased. Harmony's TSFs were constructed with specific volume constraints which have been maintained and revitalised from time to time. The design specifications of each dam stipulates the constraints of that dam, as well as the construction methodologies used. To ensure that Harmony can manage their impact on human health and water ecosystems, Harmony must adhere to the design specifications. The company monitors its TSFs frequently and reports on their tailings capacity used, annually. In FY19, none of Harmony's TSFs were operated beyond the design threshold.
Approval	A policy to eliminate or minimize water-related risks associated with tailings dams is approved by a C-suite officer The operating plan and the life of facility plan are approved by the EHS manager	Harmony's Water Management Strategy and Policy, company-wide (and site-specific) operating plans and the life of facility plans are all approved by the Board and Exco as part of planning process. The Environment, Social and Governance (ESG) board-level committee (the EHS committee within Harmony) over-sees the policy development and

	The operating plan and the life of facility plan are approved by a C-suite officer The results of the assurance program and the change management process are approved by the EHS manager	planning, while the implementation of plans are managed by the COO (C-suite officer). Harmony manages the potential impacts to human health or water ecosystems associated with tailings dams through the Mandatory Code of Practice (CoP) for Mine Residue Deposits (MRD) as well as through the Environmental Management Programmes (EMPr). This is an over-arching document for management of the TSFs under Harmony's control. The CoP for MRD is compiled by a multi-sectoral team including representatives from Harmony, national and regional authorities, labour unions and tailings storage facility specialists. This assurance programme document and associated procedures are signed off by Harmony's ESG team. The principle objectives of this document include: • To set out plan to manage all applicable design assumptions and principles during the life of the deposits; and • The protection of health and safety of mine employees and any other person affected by the deposits. This document covers all operations and is used as a framework for each tailings storage facility to details site-specific CoPs. Monthly, quarterly, and annual reports compiled based on the CoP, while daily monitoring also occurs. The reports are submitted to both Harmony's operating team and the DMRE. The COP, operating plans and procedures, closure methodology and assurance programs are reviewed on an annual basis, to ensure they are current, applicable and compliant with legislation.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Tools and methods used

WRI Aqueduct

Other, please specify

Internal company methods

Comment

Company level:
Harmony's Executive Management and Executive Directors (including the Chief Operating Officer and General Managers) meet on a quarterly basis to evaluate business risks that should be considered. Environmental issues, including water insecurity and the various expenses associated, form part of the risk assessment processes followed and the business risks that are identified and assessed. These risk analyses take place both internally (for operational cost and compliance purposes) as well as externally (considering suppliers that may be impacted by water shortages affecting their production). Water risk considerations are also considered in the annual life of mine plans and budget plans.

Supply chain

Coverage

Full

Risk assessment procedure

Water risks are assessed as part of other company-wide risk assessment system

Frequency of assessment

More than once a year

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Tools and methods used

WRI Aqueduct

Other, please specify

Internal company methods

Comment

Facility level:
All Harmony's operations adopt a Water Management Strategy. This strategy details the risk assessment procedure that each operation is required to undertake. The risk assessment procedure followed includes:
1) hydrological and geo-hydrological investigations;
2) an identification of the sources, pathways and receptors for pollution impact;
3) an evaluation of impacts on the operation's catchment resource;
4) the completion of a water census; and
5) the assessment of local water-related legislation and permitting.

The completion of the necessary steps outlined by the water risk assessment strategy and procedure gives rise to the identification of each operation's top water risks.

Other stages of the value chain

Coverage

None

Comment

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	Explanation of why this issue is included in the assessment: Water availability, across Harmony's operations and value chain, is considered a highly relevant contextual issue as it is a critical natural resource used in our mining and processing activities and as potable water for our employees and communities. SA has several water scarce catchments in the country which poses a significant threat to the operational continuity of Harmony's mining operations and, in turn, their overall business profitability. In PNG Harmony's mines make use of the primarily hydro-powered electricity grid. Changes in river water availability in PNG could thus result in decreased electricity availability to Harmony's operations.

		Harmony assesses the relevance of water-related contextual issues through their extensive risk assessment process. Anticipated changes in water availability to Harmony's operations is key for the company to identify relevant risks. These issues provide essential information for the development of Harmony's water management strategies, water recovery projects, and optimisation initiatives and targets, annually. To alleviate their dependency on freshwater sources and conserve water, Harmony aims to increase the use of recycled water. In FY19, Harmony established a third water recycling plant at its SA operations to assist in the shift towards increasing water recycling. Harmony uses the WRI's Aqueduct Water Risk Atlas and associated geohydrological models to maintain awareness regarding the change levels and anticipated impacts of water stress experienced in both SA and PNG. Water scarcity is anticipated to increase, and water supply is expected to decrease, by 2040, in accordance with the WRI Aqueduct. Harmony has also conducted a Climate Change Scenario Analysis, informed by the TCFD guidelines, which enables the company to navigate the most likely scenarios which might play out because of climate change. The Scenario Analysis included an in-depth assessment of Harmony's operations in terms of water availability in the areas in which they operate, considering different climatic scenarios. Tools/methods used in the assessment: Harmony makes use of internal company methods such as their extensive risk assessment process as well as the WRI Aqueduct Tool to assess water-related risks associated with water availability at a basin/catchment level.
Water quality at a basin/catchment level	Relevant, always included	Explanation of why this issue is included in the assessment: Not only is water quality relevant to Harmony's operations and to maintain compliance with their water use and discharge licenses, but it is also of key importance to the health and safety of the surrounding communities and environment. To alleviate their dependency on freshwater sources, Harmony places great focus on maximising volumes of recycled water across their operations and restricting their water discharges from their mining operations.

		Harmony also continuously monitors water quality at the various discharge points through use of various water testing equipment and meters. Ultimately, Harmony aspires to have zero water discharge. For example, Harmony's Doornkop operation is licensed to discharge water. However, with the introduction of their water treatment plant, the need to discharge has been mitigated. Similarly, their Kusasalethu operations are also licensed to discharge, but maintain their commitment to optimise their water balance to minimise their discharge. In FY19, Harmony established a third water treatment facility in the Free State, South Africa. This plant will treat 2.8ML of water daily. Harmony monitors, reports on and remediates all direct and indirect water discharges, even beyond their mining areas, in terms of environmental management plans. Harmony recognises environmental incidents through a scale-based classification system where medium-term impacts are reported. Risk assessment are conducted alongside water monitoring programmes. At Hidden Valley in PNG, water is treated prior to discharge into the Watut River. In FY19, there were two water quality management challenges that occurred, as evident through Harmony's compliance monitoring on water quality environmental incidents. For Hidden Valley in particular, which is a water quality related focus region for Harmony, quality water management techniques implemented to mitigate the negative impacts. Through adequate remedial measures, Harmony was able to stabilise the water discharge. Thereafter, increased focus on water treatment plant monitoring and processing has led Harmony to increase their focus on water quality. Tools/methods used in the assessment: Harmony makes use of internal company methods such as a scale-based classification system to assess water related risks associated with water quality at a basin/catchment level.
Stakeholder conflicts concerning water	Relevant, always included	Explanation of why this issue is included in the assessment: Harmony recognises the importance and scarcity of water resources. Access to water is a basic human right and is

resources at a basin/catchment level		necessary for almost all economic activities. As such, conflict among stakeholders can arise over alternate uses of water and these conflicts could lead to Harmony losing its license to operate (for example, social unrest due to lack of water resources could lead to a revocation of Harmony's social license).Hence, Harmony recognises the importance and relevance of this contextual issue on their operations. According to the WRI's Aqueduct Water Risk Atlas, South Africa's water scarcity is anticipated to increase and water supply is anticipated to decrease, by 2040. This water scarcity in South Africa is anticipated to exacerbate conflicts between stakeholders as they compete for water. Therefore, water stress and the impact of such on various stakeholders of Harmony's operations is an important component of Harmony's risk assessment process. Harmony is dedicated to transparency and consistent stakeholder engagement to allow the company to build local relations. This ensures pro-active community communication on issues like water. In FY20, under the Wafi-Golpu cocoa programme, Harmony provided assistance, in the form of a storage shed and improved access to water, to the Babuaf Cocoa Farmers' Cooperative to expand their nursery at Wames so that they could more easily supply planting material to other farmers throughout the project impact area. Harmony also invested in clean water, toilets and washing facilities under the Wfi-Golpu joint venture. Tools/methods used in the assessment: Harmony uses the WRI Aqueduct Tool to assess water-related risks associated with water scarcity and stakeholder conflicts.
Implications of water on your key commodities/raw materials	Relevant, always included	Explanation of why this issue is included in the assessment: Harmony notes its key commodities as steel, timber, cement, cyanide, caustic soda and lime. These commodities are essential for the extraction of gold (for both the construction and the gold extraction processes). Each of these commodities require large volumes of water for their production. Harmony makes use of the WRI Aqueduct Water Risk Atlas as the tool to assist the company in quantifying the extent of their water-related risks regarding their key commodities.

		Harmony's upstream value-chain is largely dependent on water. Thus, Harmony incorporates the current implications of water on its key commodities into their quarterly company-wide risk assessments. In addition, Harmony engaged its top 20 suppliers with the purpose of sensitising them to their water footprints. Another commodity, on which Harmony is reliant specifically at their South African operations, is coal-fired electricity. Coal-fired power plants require large volumes of water for electricity generation. As a result, water insecurity to these generators will impact Harmony's operational continuity. Harmony relies on internal knowledge to understand electricity provision risks and implement appropriate mitigation measures. Harmony aims to reduce its reliance on coal-fired electricity and move to renewable energy sources such as wind and solar. In order to assess these risks related to the implications of water on Harmony's commodities, Harmony engages with its suppliers of key commodities on an annual basis such to ensure their risks are kept at bay. This engagement includes discussions on water-related risks through the value chain. Tools/methods used in the assessment: Harmony uses internal company knowledge and the WRI Aqueduct Tool to assess water-related risks associated with implications of water scarcity on our key commodities.
Water-related regulatory frameworks	Relevant, always included	Explanation of why this issue is included in the assessment: Harmony considers water-related regulations as a relevant issue in their assessment of operational profitability and sustainability, through their risk analysis process. Any changes in legislation poses a risk to Harmony's operating costs, their ability to utilise various local resources, and their operational continuity. Through their allegiance with organisations like the Energy Intensive User Group and the Minerals Council of South Africa (SA), Harmony is able to remain abreast the changing regulations which may pose risk to their operations. An example of such a risk is the increasing scarcity of water in both SA and Papua New Guinea (PNG), with which, the price of water tariffs could increase resulting in financial risks to the group.

		Water purchases make up around 1.2% of Harmony's operational spend annually, thus any changes to water tariffs could pose an increased risk to Harmony operational costs. As such, changes in local water tariffs are monitored closely and reported on. Harmony is appropriately managing the risks associated with regulatory and tariff changes by engaging with SA's Department of Water and Sanitation (DWS) regularly, ensuring that the company is kept updated of future regulatory plans and can thus respond timeously. As per regulation, Harmony requires a water use licence, which restricts their quantity and quality of water withdrawal and discharge. The DWS in SA focuses on improving water conservation and demand management regulations. This poses an additional risk to Harmony's operational continuity. The tightening of water-related regulations will result in more stringent criteria being enforced on water use license applications. Water availability could thus become a problem, as conservation efforts could limit Harmony's water resources in certain operations. Harmony's water risk assessments incorporate regulatory frameworks and water tariff schemes. It is imperative that Harmony maintains its licence to operate. This means that Harmony needs to comply and stay updated on the relevant regulations in SA and PNG. Regulatory risks are discussed in Harmony's quarterly internal risk assessment meetings. These risks are then managed through establishing and maintaining relationships with the local communities and relevant authorities. Tools/methods used in the assessment: Harmony uses internal company knowledge to assess water-related risks associated with regulations.
Status of ecosystems and habitats	Relevant, always included	Explanation of why this issue is included in the assessment: Harmony operates in South Africa (SA) and Papua New Guinea (PNG), both of which are recognised by Harmony to present challenging geographies and climates, and complicated ecosystems. Ecosystems that are highly sensitive to a changing climate are often susceptible to impacts such as drought. Harmony has identified this as a relevant contextual issue for the sustainability of their operations. To maintain their social license to operate, Harmony acknowledges their responsibility to protect and rehabilitate disturbed

		ecosystems and their surrounding natural environment. Good water stewardship must also incorporate local-level elements that may be impacted by water withdrawals conducted by Harmony's operations. Harmony discusses and identifies the current status and pending vulnerabilities faced by the host communities and surrounding ecosystems through continuous internal assessments and quarterly risk management meetings. To mitigate any ecosystem and habitat related risks, Harmony employs an environmental scientist with internal company knowledge, who puts appropriate controls in place, to ensure that local ecosystems are not adversely impacted. Harmony has about 74,000 hectares of land under its management in mining rights. Harmony recognises the importance of potential changes in status of various ecosystems and habitats, and the implications thereof on their operations, even though none of the company's producing operations fall within areas of high ecosystem/ biodiversity value. Harmony has implemented biodiversity management plans at each site, through mine closure plans, environmental management plans and/or specific biodiversity action plans. These plans involve the protection and conservation of indigenous plants, as well as removal of alien and invasive plant species. These plans limit the water consumption of Harmony's land rehabilitation projects. By FY2019, the 5-year target towards implementing these actions plans by 2022 are 50% complete. Tools/methods used in the assessment: Harmony uses internal company knowledge, such as effective communication techniques as a tool to ensure risk minimisation. In addition, Harmony makes use of the WRI Aqueduct Water Risk Atlas to contextualise their water risks in relation to ecosystem. Harmony has also developed a baseline to assess these issues by combining internal company knowledge with local knowledge on biodiversity and natural habitats.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	Harmony recognises that the safety and well-being of its employees is of key importance to their internal environment and overall operational sustainability. Thus, Harmony maintains a proactive healthcare strategy through its risk-based safety management system that is integrated into its daily work philosophy.

		Given the Covid-19 pandemic which emerged in March 2020, Harmony published and rolled out a Covid-19 risk management strategy within two weeks. Preventative measures such as personal hygiene procedures and increased hand washing were implemented. Fully-functioning, safely managed WASH services for all employees remains critically important during this pandemic. Harmony adopts industry-leading safety practices, including WASH facilities. Hence this is a contextual issue that is relevant to Harmony's operations and sustained water availability thus influences Harmony's employee safety through their access to quality WASH services. People's nature and behaviour, their surrounding environment and Harmony's mining practices all result in certain risks that are posed to the workforce. Through extensive internal examination, consistent monitoring and the diligent use of occupational health and safety standards (like ISO 18001) Harmony aims to avoid, mitigate, and manage water-related risks impacting on its employees. Employee wellbeing at Harmony is thus considered at each individual site, as well as in the context of their peers. Harmony incorporates (amongst others) access to fully functioning WASH services at all mining operations and hostels, and other such safety measures in line with site-specific requirements, as well as industry-related safety practices. Harmony believes that prevention is better than cure. The group's pro-active health strategy and programmes are integrated into their daily business practices and reflect industry best practice to always ensure employee safety. Tools/methods used in the assessment: Harmony uses the WRI Aqueduct Water Risk Atlas as a tool to quantify the relevant water risks faced by their various operations and the associated safety risks faced by their employees. To minimise the risks identified in the tool, Harmony has set targets in place at all their operations aiming to minimise their freshwater consumption and maximise the re-use of water. Harmony also continuously monitors their water recycling processes, to ensure

		appropriate and safe water use for the various operational functions are provided.
Other contextual issues, please specify		

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Relevant, not included	Why these stakeholders were not included: In accordance with the 2020 World Gold Council first quarter results, the demand for gold increased slightly (by around 1%). This was based mainly on the increase in Exchange Traded Funds (ETFs) and similar products in light of the Coronavirus outbreak. Even though the jewellery market decreased significantly, the ETFs balanced this trend to result in a net positive growth for the industry. Harmony, however, produces unrefined gold, which is a base commodity whose consumer-side demand is not influenced by water risks. The group has evaluated the materiality of their downstream value chain. Harmony has thus concluded that currently, their customers are not influenced by water risks, due to the gold procurement processes and Harmony being situated at the initial stages in the value chain. The risks associated with the extraction of gold are considered minimal compared to the other parts of the refining process. Thus, Harmony does not consider its customers in the development of their water-related risk assessments. A future plan of action: Harmony is aware of the growing interest in sustainable and water-efficient commodity sourcing methods by their customers. Thus, Harmony anticipates the potential need to include customers in their risk management in future. Customers could potentially form part of Harmony's future stakeholder considerations around water-related risks, but are not currently considered.
Employees	Relevant, always included	An explanation of why these stakeholders are included: Harmony considers their employees in their water-related risk assessments since their employees are highly valued and

		considered core assets to their business success. Harmony thus prioritises the health of its employees and contractors as both a moral imperative and an essential measure to ensure the sustainability of their business operations. Water is acknowledged by Harmony as a critical factor in maintaining good employee health and general wellbeing. A key element of Harmony's water management strategy (WMS) is "Partnerships for success", indicating the interdependent/ "connectedness" stakeholder relations, which includes Harmony's employees. Harmony also recognises that their employees are a key factor in ensuring operational sustainability and that their operational targets are met (including the company's water-related targets). As such, awareness and buy-in by Harmony's employees is considered crucial for the successful implementation of Harmony's WMS and the sustainability of their operations. Method of engagement: Thus, Harmony engages with their employees regularly through various methods including presentations from general managers, CEO roadshows, workgroups, workshops, newsletters, communication campaigns, mine TV, and social media, on - amongst other things - water. In addition, Harmony actively communicates with their employees through the "world of Harmony" quarterly newsletter which keeps employees updated and informed on key business outcomes, safety considerations, and community and employee events. Harmony regularly engages with their employees on topics including operational challenges, employee safety and health, asset optimisation, possible improvements in productivity, and recognition. Harmony also discusses their water targets and their aspirations for greater water efficiency. Harmony also provides fully functioning WASH services at all of their mining operations and hostels, for use by their employees. Any risks associated with the provision of WASH services and other water-related risks to employees are considered in their quarterly risk assessments and communicated accordingly. Employees are considered both a current and a future consideration in the risk identification and management processes associated with water- and climate-related risks.

Investors	Relevant, always included	An explanation of why these stakeholders are included: Harmony understands their responsibility in managing and balancing shareholder expectations with that of their investors and financiers. Through continuous engagement, Harmony is made aware of the requirements and interests of investors and financiers. In recent years, there is an increased interest by shareholders and investors for awareness and consideration for the impacts of climate-related risks. These climate risks include the water risk faced by Harmony's operations, and the long-term financial implications these risks could pose on the company's performance. As such, water risks are considered by investors and financiers and in turn, Harmony must account for these considerations within their water related risk assessment processes. Water risks impacting shareholders have been noted as increasingly important to Harmony and have resulted increased emphasis on actions to identify, disclose and adapt to the risks and opportunities present as a result of climate change. Any inadequate response to water issues could be perceived as indifference and could pose risk to investors in obtaining returns on their investments. As such, it is important that these investors and their expectations are factored into the company's water risks and associated water management strategy. Method of engagement: Regular communication with their broader investment community is a means through which Harmony manages their shareholder expectations and also remains connected with the interests of shareholders. Harmony continuously engages with their investors through regular updates of the company website; results presentations; annual reporting; one-on-one calls and industry conferences; meetings, including the annual general meeting; regulatory announcements and emails sent to their database. In addition, investors are kept informed through information and compliance releases through the Stock Exchange News Service of the Johannesburg Stock Exchange and through the Electronic Data-Gathering, Analysis and Retrieval system of the United States Securities and Exchange Commission. Investors and financiers are considered both a current and

		future stakeholder in Harmony's considerations around water-related risks.
Local communities	Relevant, always included	An explanation of why these stakeholders are included: Harmony is dependent on their fixed mineral deposits and cannot relocate to new locations when facing deteriorating socio-enviro-political conditions. For this reason, companies need to be able to navigate these complex dynamics to retain their social licence to operate through stakeholder engagement to manage and address a wide range of issues, particularly those relating to host (local) communities. Harmony recognises that clear communication with local communities is just as important as having a robust water management strategy (WMS) and water accounting framework, for Harmony to ensure the smooth operations while maintain its social license to operate. Harmony has begun implementing community engagement programmes which pre-empt the challenges and vulnerabilities faced by their host communities. This investment of time for stakeholder engagements was found to be far more valuable to Harmony's operation successes and various project implementation than a reactive or post-feasibility approach. Including and prioritising community needs have been integrated into Harmony's WMS, recognising water as a critical resource for local communities, as a key principle in their WMS. The WMS aims to ensure that all operations adopt a uniform approach to understand and manage their operations in the context of their host communities, to avoid impact on communities and providing support where possible. Harmony considers host communities a primary stakeholder group included in Harmony's water risk assessments as they are most affected by Harmony's response to water. Host communities are always included in water related risk assessment consultation processes to ensure that all water-related risks, and the risk of conflict with regards to water availability, are managed appropriately. These communities compete for the valuable resource and may be impacted by sporadic water discharges from Harmony's operations. Method of engagement: Harmony engages with host communities on major environmental incidents, and operational changes that could

		impact them, to ensure public safety and encourage shared value. Engagement methods includes quarterly conferences with host communities, on-going presentation, workshops, community radio, billboards and continuous face-to-face interaction. Host communities are considered both a current and future stakeholder in Harmony's considerations around water-related risks.
NGOs	Relevant, always included	An explanation of why these stakeholders are included: Harmony aims to establish collaborative partnerships with host communities and NGOs based on shared values. Hence, Harmony recognises the crucial importance of on-going, regular, and in-depth communication and engagement that exceeds basic regulatory requirements with NGOs. Harmony acknowledges the critical role played by NGOs in their local communities and towards environmental preservation. To remain abreast the initiatives and efforts of NGOs and possibly add value to these organisations' plights, Harmony considers the role of NGOs as stakeholders in their communities as relevant to their operational success and for maintenance of their social license to operate. Thus, Harmony deems it important that NGO groups are factored into their water risk assessments. Harmony collaborates with Birdlife South Africa, a local NGO, in creating safe nesting and feeding habitats for a variety bird species, specifically lesser flamingos. The most recent collaboration looks at establishing an island in Voëlpan in the Free State, South Africa. NGOs are considered both a current and future stakeholder in Harmony's considerations around water-related risks. Method of engagement: Forms of engagement with NGOs include issues-based meetings.
Other water users at a basin/catchment level	Relevant, always included	An explanation of why these stakeholders are included: Harmony's operations draw from two main water basins, namely the Orange River Basin and the Markham River Basin. Harmony is not the sole water user within these basins and thus recognises the importance of water to other individuals and companies in the regions surrounding Harmony's operations as a significant factor for consideration in their water risk assessment process. Thus, to minimise the potential for conflict over this scarce

		resource, Harmony regularly engages with other water users within their host communities. Harmony engages with the local farming communities surrounding the Free State with the aim of ensuring that Harmony's operations do not impact on their water supply. These engagements take place through workshops roadshows, public consultations and other such platforms. Other users in the river basin are considered both a current and future stakeholder in Harmony's considerations around water-related risks. Method of engagement: Forms of engagement with NGOs include issues-based meetings as well as workshops roadshows, public consultations and other such platforms.
Regulators	Relevant, always included	An explanation of why these stakeholders are included: Harmony is greatly impacted by changes in local water legislation, relevant for the process of obtaining relevant water licences. By building long-standing relationships with regulators and legislators at all levels of government – regional, provincial and national, Harmony is aware that they will remain alert to possible legislative change, as well as have a greater influence in engagements which support the company's long-term business strategies. These legislative changes could pose risk to Harmony's water use and water costs and thus, regulators at a local level are considered a key stakeholder group that is factored into Harmony's water risk assessments. Harmony engages with regulators through industry bodies including the Minerals Council South Africa. Harmony further facilitates personal interaction through a dedicated senior executive responsible for government relations. Harmony has recently been approached by the South African Department of Water and Sanitation to form part of the Strategic Water Partners Network (SWPN). The SWPN convenes stakeholders, carries out participatory problem and opportunity analysis and develops, incubates, and scales projects to improve water security. Harmony will form part of the SWPN going forward as the company recognises its role in both managing water risk from a national perspective, but also sharing knowledge and expertise in this regard across and within sectors. Regulators are considered both a current and future stakeholder in Harmony's considerations around water-related risks.

		Method of engagement: Harmony engages with regulators in formal reports and through issues-based meetings. As well as through industry bodies such as the Minerals Council of South Africa.
River basin management authorities	Relevant, always included	An explanation of why these stakeholders are included: For Harmony's operations in South Africa, the river basin management/ catchment management agency authorities are the same stakeholder as "regulators at a local level". Harmony is impacted by the management of the river basin with regards to water availability and quality. Such issues could pose a risk to Harmony's operations and thus are factored into the water risk assessment process. Similar to their engagement practices with "regulators at a local level", Harmony engages with their relevant river basin catchment authorities through various industry bodies including the Minerals Council South Africa. As such, Harmony considers river basin management authorities as key stakeholders that are considered in the water risk assessment processes. River basin management authorities are considered both a current and future stakeholder in Harmony's considerations around water-related risks. Method of engagement: Harmony engages with regulators in formal reports and through issues-based meetings. As well as through industry bodies such as the Minerals Council of South Africa.
Statutory special interest groups at a local level	Relevant, always included	An explanation of why these stakeholders are included: Harmony is exposed to risks associated with negative perceptions from statutory interest groups regarding mining. As such, it is important that these groups are factored into Harmony's water risk assessments. The Harmony Gold Executive: Sustainable Development sits on several catchment forums arranged by the Department of Water and Sanitation (DWS). By extension, the position held by the Executive: Sustainable Development provides insight to Harmony on requirements and points of interest for the statutory interest group, as well as insight into industry-wide practices generally adhered to. Harmony maintains their close communications with this stakeholder to remain abreast the water related risks identified in these local level meetings. Statutory interest groups are considered both a current and

		future stakeholder in Harmony's considerations around water-related risks. Method of engagement: Harmony engages with statutory special interest groups through water catchment management forums arranged by the DWS. Harmony participates in several inter- and multi-disciplinary regional catchment management agencies including the Far West Rand Technical Working Group, the KOSH Mine Water Forum and the Free State Government Task Team. We are also represented on the board of the Margaret Water Company in Orkney, in partnership with Village Main Reef, to manage the KOSH water basin.
Suppliers	Relevant, always included	An explanation of why these stakeholders are included: Suppliers provide raw materials, inputs and services essential to the conduct of Harmony's business. Harmony is aware that their key suppliers could be impacted by water constraints, which may cause a ripple effect, resulting in delays in product delivery, and thereby impacting Harmony's operations. As such, on a quarterly basis, all major suppliers are contacted and those exposed to water risks (which can impact their product delivery to Harmony) form part of Harmony's in-depth risk assessment processes. Method of engagement: Harmony engages with its top 20 suppliers (by operational spend) on their water use and water availability. Engagement with suppliers on water use is a key component of Harmony's overall sustainability goals. Harmony engages with its suppliers to ensure that their processes are in line with the groups' human rights & environmental standards, its code of ethics & its empowerment requirements. Harmony requests their top 20 suppliers to provide information on their water management policies and usage, and to disclose whether they have been impacted by any water risks in the reporting year. Harmony uses this information to understand how water is prioritised within the suppliers' organisation, as well as their approach to their own operational sustainability. Suppliers are considered both a current and future stakeholder in Harmony's considerations around water-related risks.
Water utilities at a local level	Relevant, always included	An explanation of why these stakeholders are included: A key resource used in the day-to-day operations at Harmony's mines is freshwater. Harmony is reliant on local water utility

		companies to provide for the majority of the company's potable water needs. As such, any changes in these utilities' supply or any adjustments to the proposed tariff structure can impact Harmony's business and the associated profitability of the mines, both in terms of production and operational costs. Method of engagement: Harmony is managing these risks through a targeted engagement and lobbying process. Not only does Harmony keep abreast of the local water-related strains through communications with the Minerals Council South Africa and other industry bodies, but also engages closely with their local municipalities regularly. Harmony identifies these engagements key since water utilities are considered high priority to Harmony's operations. Water utilities at local level are considered both a current and future stakeholder in Harmony's considerations around water-related risks.
Other stakeholder, please specify		

W3.3d

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

Harmony's process for identifying, assessing, and responding to water-related risks is based on their engagement between management and the board regarding their direct operations, and between the company and stakeholders regarding other stages of their value chain. Through maintaining transparent and healthy relationships with all relevant stakeholders, Harmony can adequately manage the risks and uncertainties surrounding their operations. The executive committee and the audit and risk committee have quarterly meetings where they discuss water risks and changes in the responses to these risks.
Harmony's operations are critically dependent on water. Thus, water-related risks are earmarked as key in Harmony's risk assessment process. Climate change impacts on water, results in risks and opportunities to Harmony's operations, assets, and social considerations. These risks will impact on Harmony's operating costs, business infrastructure, general operations, host communities and their supply chain.
Harmony makes use of the WRI Aqueduct Tool to pre-empt water-related risks which could impact on their business operations, value chain and other relevant stakeholders. Harmony also makes use of continuous water monitoring processes to track their water consumption, to improve their management methods. Harmony's use of the WRI Aqueduct tool in conjunction with their monitored consumption values to drive water recycling initiatives. During 2020,

Harmony produced their first report in accordance with the TCFD. An increase in rainfall patterns and drought were highlighted as physical risks in the disclosures.
In conjunction with use of the WRI Aqueduct Tool, Harmony's process to identify key water-related risks and opportunities is driven by:
1) identifying and understanding the key water-related risks affecting their water strategy and the opportunities afforded to achieve their business goals.
2) input from key stakeholders.
3) facilitating engagements with stakeholders to ensure risks are addressed systematically.
4) ensuring that identified water risks/ opportunities consider challenges faced by the gold sector.
5) adherence to national and international water commitments to identify emerging risks/ opportunities.
The outcomes of the above-mentioned risk assessment process inform Harmony's internal decision-making structure. This decision making is done through Harmony's evaluation of their risk appetite and tolerance levels, which contextualises the group's overall risk. Harmony recognises the potential impacts of water risk leading to a substantive financial impact for their business. Impacts include safety incidents (e.g., WASH aspects); regulatory changes (e.g., increasingly stringent water use licencing requirements) and major infrastructure incidents (e.g., flood damages). Harmony defines substantive financial impact as the revenue losses incurred if one day of operations was lost, resulting in around R 10 million losses (average loss for Free State operation).
Harmony uses scenario modelling through a digital twin of their mining operations, to pre-empt the risks/opportunities faced by their operations. These models determine tactical methods of combating the negative impacts of climate change and the water impacts for Harmony's operations. Conversations on outcomes of these models take place daily, weekly, and monthly amongst engineers at Harmony's operations. This twinning technology makes use of unique simulation capabilities specifically determined for Harmony, which can conduct root-cause analyses of existing inefficiencies, evaluate the effect of new and existing initiatives, as well as conduct cost modelling analyses on all items.
Several operation's water networks have been modelled to indicate the costs associated with the cycling of water to be significant (on average R18/kL). The biggest portion of these costs are energy related - to pump and cool mine water. Given that Harmony recycles 60.325 Megalitres per year, the costs associated to cycle water could be as high as R1.085 billion per year (60,325,000 ML x R18/kL).
Harmony has a comprehensive water conservation strategy. The strategy consists of the several main initiatives, including:
1) Underground water management, focussed on reducing wastage and optimising water demand by monitoring water storage, quality, demand, and supply in real-time. This management system has been rolled out at Tshepong, Target and Bambanani mines.
2) Surface water management, which aims to improving the management of water between different mining operations through focusing on developing a global water balance. This allows engineers to improve water distribution which results in fewer water wastages.
3) Underground water leak reporting system, which is an online water leak reporting system. The system allows personnel to report and log water leaks from anywhere in the mine. After the water leak is logged, the relevant employee is notified.

W4. Risks and opportunities

W4.1

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

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

W4.1a

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

To Harmony, a substantive financial change (or strategic impact) within business practices, operations, revenue or expenditure is defined as:
approximately R10 million which equates to an average loss of one day of production at a typical Harmony operation.
Harmony defines their substantive changes as a change that can negatively impact on the following four measures:
1. The safety and health of Harmony's employees;
2. Business objectives;
3. The stability of the workforce; and
4. Its license to operate;
This definition applies to both Harmony's direct and their supply chain substantive changes, considering that both their direct changes and their upstream value chain's changes could potentially hinder production from Harmony, resulting in revenue losses.
Harmony measures the impact of substantive changes through the revenue lost in the process of these changes. With substantial changes in production output or increase frequency of stoppages, revenue to stakeholders will decrease and thus these losses are view as financial risks.
Harmony's threshold for such metric changes is defined as a percentage annual revenue that could possibly be lost due to production stoppage for longer than a day. Such stoppages/ production losses could potentially reduce Harmony's total revenue by 0.3% per annum (which Harmony defines as a substantive change).
The metric of "operation stoppages for longer than a day" is reviewed on a quarterly basis during Harmony's risk assessment process. On a quarterly basis, Harmony's Executive Management and Executive Directors evaluate business risk in which topics such as environmental issues relating to water, is one of the business risks considered.
An example of a substantive impact is the water restrictions (that could occur as a result of drought) which could lead to Harmony having to stop production, due to lack of water for operations. Water scarcity is thus considered a substantive financial risk to Harmony's operations.

W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	18	100	Water in South Africa is considered a scare resource, particularly in the regions in which Harmony's operations are situated. A shortage of water supply poses a significant threat to the operational continuity of Harmony's mines, as well as to the profitability of the business (since stoppages lead to large financial implications). Water is essential to Harmony's operations. It is consumed in the development and growth of Harmony's assets and is used throughout all of the mining processes – from gold processing to dust suppressions and slurry transport. Harmony's South African operations are situated in water stressed areas and thus all its facilities are exposed to water risks that could generate a substantive change to operations. This risk has been amplified in the current reporting period due to the increasing drier conditions in South Africa. The South African facilities at risk include Doornkop, Kusasalethu, Phakisa, Target 1, Tshepong, Masimong, Bambanani, Unisel, Joel, Kalgold, Harmony's surface operations as well as the newly acquired Moab Khotsong. At Kalgold, water availability is critical to business continuity and operational growth. Given the scarcity of water in the region, Harmony ensures that what we use does not impact upstream and downstream users. To help protect and preserve the water resource here, we undertake stakeholder engagement with upstream and downstream users as well as the relevant regulators. In Papua New Guinea, Harmony has three separate entities, of which two are classified as exploration projects with no production currently occurring. The operation at which production does occur, the Hidden Valley mine, is the one operation which is at risk to substantive change to operations resulting in production stoppages created by flooding. As this is the only Harmony operation that produces a product that generates revenue in Papua New Guinea, following

			Harmony's definition of substantive change, one operation in Papua New Guinea is exposed to risk within the river basin. The characteristics of the Hidden Valley operation – namely steep surrounding topography, high rainfall and low levels of evaporation – results in a year-round positive water balance. This poses significant environmental challenges for Harmony, particularly in terms of managing the near-continuous discharge of water from the mine site into the surrounding environment.

W4.1c

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

Country/Area & River basin

South Africa
Orange

Number of facilities exposed to water risk

17

% company-wide facilities this represents

76-99

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

22,432,183,000

% company's total global revenue that could be affected

100%

Comment

The majority of Harmony's South African operations are situated in water stressed areas around the Vaal river basin, in both Gauteng and the Free State Province. As all of these operations contribute to Harmony's production output in South Africa (and revenue generated), 100% of Harmony's operations could be affected within this river basin in terms of either flooding or drought.

Country/Area & River basin

Papua New Guinea
Fly

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

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

3,689,799,000

% company's total global revenue that could be affected

100%

Comment

In Papua New Guinea, Harmony has three separate entities, of which two are classified as exploration projects with no production currently occurring. The operation at which production does occur, the Hidden Valley mine, is exposed to water risks which could result in substantive change in production output and revenue generated accordingly. This is due to it being the only operational facility in Papua New Guinea. As such, it results in 100% of the chosen metric which could be affected within the river basin.

W4.2

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

Country/Area & River basin

South Africa
Orange

Type of risk & Primary risk driver

Physical
Drought

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Water is a critical resource in Harmony's operations. Water in South Africa is considered a scarce resource, particularly in the regions in which our operations are situated. As such drought in South Africa poses a significant risk to Harmony's operations specifically considering their continuity and profitability.

Droughts can produce the following risks for Harmony's operations:
1. Reduced mining and or processing activities
2. Increased dust loads for open-pit operations such as Kalgold

3. Reduced viability of rehabilitation plans
4. Increased health and safety risks as clean water is critical for ensuring the health and safety of Harmony's employees and host communities especially given the current Covid-19 pandemic.

Significant amounts of water are used in all of Harmony's operations and development practices. In FY20, Harmony used 19.69 million m3 of water for primary activities (down from 23.2 million m3 in FY19). For Harmony's SA operations, water is not drawn directly from surface sources (except for Kalgold, which draws from an aquifer and Moab which has a small allocation to use water from the Vaal River), as Harmony is restricted by legislation. Bulk water service providers supply Harmony with most of the water that they consume. Other water sources for Harmony includes surface water run-off, water that enters underground operations, recycled water, and boreholes. Additionally, given the contiguous nature of our orebodies, many mines operate within the same catchment area. This, combined with the scarcity of water, puts further strain on water resources.

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Very likely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

113,077,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Water insecurity, caused by droughts or other reasons for intermittent water supply, could result in production stoppages and revenue losses.
This figure specifically considers Harmony's Free State operations and considers the following in the calculation: the gold produced, the gold price, revenue loss, cash operating costs and capital expenditure. In this regard the total loss per day of all of Harmony's Free state operations total R 113 077 000.

Primary response to risk

Other, please specify

Water-related capital expenditure

Description of response

Harmony is implementing a number of initiatives to consider water demand and pumping optimisation, leak management and water supply optimisation to address quick wins with regards to water conservation. These include the following:
• Moab Khotsong Operations waterjet dry shut-off system – cost savings, R 5.5 million
• Moab Khotsong Operations Victoria rock drills – cost savings, R 1.2 million
• Mponeng SIVs – cost savings, R 8 million
• Doornkop – redistribution of river discharge water to the process water tank the gold plant – cost savings, R 1.9 million
• Doornkop compressors cooling towers repair – cost savings, R 3 million

Cost of response

12,500,000

Explanation of cost of response

The implementation costs of the above mentioned projects are as follows:
• Moab Khotsong Operations waterjet dry shut-off system – cost R 9.5 million
• Moab Khotsong Operations Victoria rock drills – cost R 980 000
• Mponeng SIVs – cost R 2 million
• Doornkop – redistribution of river discharge water to the process water tank the gold plant – cost R 0
• Doornkop compressors cooling towers repair – cost R 0

Country/Area & River basin

South Africa
Orange

Type of risk & Primary risk driver

Physical
Flooding

Primary potential impact

Brand damage

Company-specific description

Flooding of tailings, pits and water storage facilities presents a significant and long-term challenge, with additional operational costs associated with water treatment and discharge that may extend over several years. Material climate- and water-related risk – which could result in substantive financial impacts include safety issues, include aspects such as flash flooding. Flash flooding can also result in major infrastructure incidents. As such, Harmony has identified flash flooding as a risk to their direct operations. This is supported by our 2020 TCFD Report as well as the risk and vulnerability assessment conducted by OneWorld. In addition, the WRI Aqueduct Tool lists the Free State region in South Africa as high risk to flash flooding.

Harmony operates multiple tailings facilities in the Free State region. Should extreme

flooding occur there is a risk that the tailings dam could fail due to the increased volumes of water. This would result in reputational damage to the company and further impact on their social license to operate in the region.10402040365

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

10,402,040,365

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The potential financial impact relates to the estimated drop in share price that could result should tailings dam failure occur. An average share price of R 71.86 /share was used as the closing price as at 30 June 2020. The number of issued ordinary shares at the end of the period was 603 142 706.
An estimated 24% drop in share price could occur from a tailings dam failure. This figure is based on a similar incident that occurred at a recent international tailings dam failure. The resultant share price is estimated at R 54.61/share. The difference in share price was then multiplied by the number of issued shares to obtain the financial impact of the drop in share price. This equated to R 10 402 040 365.

Primary response to risk

Other, please specify

Harmony's response to this risk is to monitor its tailings dams to mitigate the risk. The monitoring is conducted for safety purposes to minimize the chance of the dam failing.

Description of response

Harmony identifies all our active tailings storage facilities (TSFs) as hazardous. Harmony operates, designs, and audits their TSFs in line with the SANS 10286 standard and by Pr Engineers, as per SANS requirements. This standard is used since it is the preferred international standard by which to practice safe TSF management in South Africa (SA) within which Harmony operates. Since the TSFs are hazardous, they are operated under Harmony's environmental codes, to ensure maximum care is taken.

The status of each TSF – operational, re-mined or dormant – determines the management strategy that is applied. Regular inspections are conducted – in the case of those TSFs that are operational and being re-mined, such inspections are undertaken daily to facilitate proactive management. Our TSFs are inspected daily and plant management meet monthly to review them. In addition to external audits, Harmony's chief operating officer, certain executive managers and senior engineering staff meet on a quarterly basis to assess compliance and management. External specialists are invited to these quarterly meetings as and when required.

Harmony notes the publication in 2019 of the Global Industry Standard on Tailings Management. Underpinned by an integrated approach to tailings management. Harmony has adopted and implemented many of the principles and measures advocated by the Standard. We are considering the full implications of the Standard and will report against these in FY21.

Cost of response

2,500,000

Explanation of cost of response

The cost of the response is the amount that Harmony spent on the monitoring and maintenance of all its tailings facilities. TSF maintenance and monitoring undertaken by contractors and consultants cost roughly R 14.5 million. In addition, capital spend projects to ensure TSF stability cost R 5.7 million.

W4.2a

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

Country/Area & River basin

Papua New Guinea
Fly

Stage of value chain

Supply chain

Type of risk & Primary risk driver

Physical
Severe weather events

Primary potential impact

Reduction or disruption in production capacity

Company-specific description

Harmony's value chain exposes them to additional climate- and water-related risks. The characteristics of the Hidden Valley operation in Papua New Guinea – namely steep surrounding topography, high rainfall and low levels of evaporation – puts the operation and its value chain at risk to extreme weather events. Climate-related disruption to supply chains can occur through flooding and intense storms. In Papua New Guinea extreme weather events such as prolonged rainfall and tropical storms are becoming more common. These extreme events in conjunction with a rise in sea level energy could result in port closures.

In the ICMM's latest report Adapting to a Changing Climate, several members highlighted risks to port facilities during extreme weather events and from gradual sea-level rise. These risks are particularly acute when operations are dependent on a single transportation link that is owned and operated by an external body over which the mining or metals company does not have direct control. The potential disruption and delay in deliveries can cause operational losses and impact on the entire value chain.

In Papua New Guinea, a small island developing nation, most supplies are imported for mining operations making Harmony dependent on long global supply chains. The reliability of transport and infrastructure is highly vulnerable to climate change impacts which has consequences for supply chains and logistics. Port closures can therefore impact mining operations significantly. Should ports close, Harmony's Hidden Valley operation would be required to stop production as there would be a shortage in required goods.

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Likely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

35,247,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

Should ports close due to extreme weather events such as tropical storms, Harmony will be unable to receive the necessary goods it requires and the Hidden Valley operation's production would stop.

Therefore, the potential financial impact relates to the cost for stopping production at Harmony's Hidden Valley operation for a day which is estimated at R 35 247 000. This figure was calculated considering the gold price, amount of gold produced, revenue, capital expenditure and operating costs.

Primary response to risk

Supplier engagement

Other, please specify

Early Warning Response System and Coastal Engineering Protection

Description of response

The Climate Act in Papua New Guinea requires participation in several initiatives including an early warning response system and coastal engineering protection. This early warning system will allow Harmony to anticipate extreme weather events in advance and provide an opportunity to minimize the risk to their Hidden Valley operation. By participating in the early warning system, Harmony can engage with suppliers to ensure that their goods are delivered and are not affected by any extreme weather events.

Furthermore, by participating in the coastal engineering protection programme, Harmony can assist in the development of infrastructure that can protect ports against extreme weather events thus reducing the delays experienced in getting their necessary supplies. Since this response involves engaging with suppliers and other stakeholders, there is no cost involved in the response.

Cost of response

1

Explanation of cost of response

There is no cost associated with stakeholder engagements with the PNG government and suppliers around both the early warning response system and the coastal engineering protection programme.

W4.3

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

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

W4.3a

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

Type of opportunity

Efficiency

Primary water-related opportunity

Cost savings

Company-specific description & strategy to realize opportunity

Why this opportunity is considered strategic:
Harmony recognises an opportunity to reduce its operating costs through recycling its water. Process water recycling is prioritised to limit as far as practicable the volumes extracted from the surface environment. Harmony's water strategy supports the shift towards self-generation and zero discharge of water, to encourage the group's water conservation and demand management objectives. Harmony prioritises the conservation of potable water, especially considering the impact of drought in South Africa. In FY20 Harmony spent R213 994 133 on municipal water.

Actions to realize the opportunity:
Thus, Harmony has adopted a group-wide campaign to re-use process water and reduce their dependency on potable water. To do this, Harmony set long-term targets to reduce the water used for primary activities by 7% and increase water recycled by 6%, by FY22. Further to these short-term targets, Harmony has a 10 year target to recycle 80% of their water with zero discharge by FY27. To achieve these targets, various water conservation initiatives are implemented.

Case study of the strategy in action:
Harmony has constructed two water treatment plants (WTP) that assist in continuing to secure water for operations, whilst also reducing water consumption and assisting with water conservation initiatives. All capital investment in water treatment plants was completed in FY19. Harmony built a third WTP in FY19 which can treat 2.8ML of water per day resulting in R3.2million in water bills per annum. In total the three WTPs save Harmony approximately R5.6million.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

19,400,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

The financial impact relates to the cost to implement the various water conservation initiatives in FY19 as well as the cost to install the third water treatment plant. The cost breakdown is as follows:
Water treatment plant: R16.8 million (excluding operating costs)
Tshepong Decline WSO valves/ water jet refurbishment: Implementation cost, R 2.6 million

Type of opportunity

Markets

Primary water-related opportunity

Strengthened social license to operate

Company-specific description & strategy to realize opportunity

Why this opportunity is considered strategic:
Water is a basic human right and limited access to this resource due to drivers outside of Harmony's control could jeopardise the company's relationship with their host communities and threaten Harmony's social license to operate. Harmony understands its role in making meaningful contributions towards community development, particularly in communities close to the mines.

In this regard, the strategic investment in water resources and infrastructure can help to reduce competition for scarce water resources and provide better lives for the community. This would give Harmony the opportunity to improve their social license to operate.

Actions to realize the opportunity:
Harmony optimises the supply of regional water in Welkom, Free State Province. This initiative provides support to the local government in terms of basic service delivery as well as ensuring sufficient supply for Harmony's operations in the event of a protracted drought. Harmony continues this initiative and embarked on several significant water projects within its host communities in South Africa. These projects further ensure that Harmony's host communities have access to safe potable water. The COVID-19 pandemic has highlighted the important of access to clean and safe water to combat diseases such as the coronavirus. By assisting in the provision of potable water to the community, Harmony has improved the resilience of their host communities in the Free State.

Case study:
In FY19, Harmony installed a third water-treatment plant to treat fissure water. This helps to provide potable water in their host communities. The plant will treat 2.8ML of water a day and cost R16.8 million to build.

Estimated timeframe for realization

Current - up to 1 year

Magnitude of potential financial impact

High

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

11,000,000

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact

Harmony spent R11 million was spent as CAPEX for the construction of the Nyala water treatment plant in FY19. Considering that both water and road infrastructure form part of Harmony's relationship development process with their host communities, Harmony's investment in maintaining good relations was valued according to this. In addition, the Nyala water plan will be used to treat water that will then be provided to the host community as potable water.

W5. Facility-level water accounting

W5.1

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

Facility reference number

Facility 1

Facility name (optional)

Doornkop

Country/Area & River basin

South Africa
Orange

Latitude

-26.217517

Longitude

27.790908

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

658

Comparison of total withdrawals with previous reporting year

Much higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

57

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

62

Withdrawals from third party sources

539

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

658

Comparison of total consumption with previous reporting year

Much higher

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Doornkop increased their withdrawals by 105% and increased their consumption by 105% in the reporting year as they did not discharge water as in the previous reporting year.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 2

Facility name (optional)

Kusasalethu

Country/Area & River basin

South Africa
Orange

Latitude

-26.454481

Longitude

27.3592

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

2,720

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

50

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

34

Withdrawals from third party sources

2,636

Total water discharges at this facility (megaliters/year)

156

Comparison of total discharges with previous reporting year

Much lower

Discharges to fresh surface water

156

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

2,564

Comparison of total consumption with previous reporting year

About the same

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of

Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Kusasalethu decreased their withdrawals by 16%, decreased their discharges by 71% and decreased their consumption by 5% in the reporting year.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 3

Facility name (optional)

Phakisa

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,720

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1,720

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

1,720

Comparison of total consumption with previous reporting year

About the same

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines about the same as any change below 10%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Phakisa increased their withdrawals by 9% and increased their consumption by 9% in the reporting year. As in the previous reporting year they did not discharge any water at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 4

Facility name (optional)

Target 1

Country/Area & River basin

South Africa

Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

357

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

357

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

357

Comparison of total consumption with previous reporting year

Lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Target 1 decreased their withdrawals by 25% and decreased their consumption by 25% in the reporting year. As in the previous reporting year, there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 5

Facility name (optional)

Tshepong

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,092

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1,092

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

1,092

Comparison of total consumption with previous reporting year

About the same

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines about the same as any change below 10%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Tshepong decreased their withdrawals by 9% and decreased their consumption by 9% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 6

Facility name (optional)

Masimong

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

510

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

510

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

510

Comparison of total consumption with previous reporting year

Lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Masimong decreased their withdrawals by 29% and decreased their consumption by 29% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 7

Facility name (optional)

Bambanani

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,120

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

2,230

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

2,230

Comparison of total consumption with previous reporting year

Lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Bambanani decreased their withdrawals by % and decreased their consumption by 4% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not

withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 8

Facility name (optional)

Unisel

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

414

Comparison of total withdrawals with previous reporting year

Higher

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

414

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

414

Comparison of total consumption with previous reporting year

Higher

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Unisel increased their withdrawals by 13% and decreased their consumption by 13% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 9

Facility name (optional)

Joel

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

850

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

850

Total water discharges at this facility (megaliters/year)

90

Comparison of total discharges with previous reporting year

Much higher

Discharges to fresh surface water

90

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

760

Comparison of total consumption with previous reporting year

About the same

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Joel increased their withdrawals by 1% and decreased their consumption by 9% in the reporting year. The operation discharged water in the reporting period, therefore there was a 100% increase in discharge volumes.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 10

Facility name (optional)

Kalgold

Country/Area & River basin

South Africa
Orange

Latitude

-26.172222

Longitude

25.25

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

307

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

74

Withdrawals from groundwater - renewable

194

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

39

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

307

Comparison of total consumption with previous reporting year

Much lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Kalgold decreased their withdrawals by 49% and decreased their consumption by 49% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 11

Facility name (optional)

Hidden Valley

Country/Area & River basin

Papua New Guinea
Fly

Latitude

-6.723669

Longitude

146.9909

Located in area with water stress

No

Total water withdrawals at this facility (megaliters/year)

1,820

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

1,625

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

195

Withdrawals from third party sources

0

Total water discharges at this facility (megaliters/year)

2,777

Comparison of total discharges with previous reporting year

Higher

Discharges to fresh surface water

2,777

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

-957

Comparison of total consumption with previous reporting year

Much lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

The Hidden Valley operation operates in a region that experiences heavy rainfalls. As a

result of higher rainfalls, the operation's discharges are higher than the operation's withdrawals in the reporting year leading to a negative consumption figure. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Hidden Valley decreased their withdrawals by 9%, increased their discharges by 32% and decreased their consumption by 1000% in the reporting year.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 12

Facility name (optional)

Joel Plant

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

3

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

3

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

3

Comparison of total consumption with previous reporting year

Much lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Joel Plant decreased their withdrawals by 77% and decreased their consumption by 77% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 13

Facility name (optional)

Harmony 1 Plant

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

345

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

5

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

171

Withdrawals from third party sources

169

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

345

Comparison of total consumption with previous reporting year

Much lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Harmony 1 Plant decreased their withdrawals by 68% and decreased their consumption by 68% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 14

Facility name (optional)

Target plant

Country/Area & River basin

South Africa

Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

114

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

19

Withdrawals from third party sources

95

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

114

Comparison of total consumption with previous reporting year

About the same

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Target Plant increased their withdrawals by 6% and increased their consumption by 6% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 15

Facility name (optional)

Saaiplaas Plant

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

320

Comparison of total withdrawals with previous reporting year

About the same

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

320

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

320

Comparison of total consumption with previous reporting year

About the same

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Saaiplaas Plant increased their withdrawals by 5% and increased their consumption by 5% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 16

Facility name (optional)

Central Plant

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

No

Total water withdrawals at this facility (megaliters/year)

171

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

171

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

171

Comparison of total consumption with previous reporting year

Lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of

Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Central Plant decreased their withdrawals by 10% and decreased their consumption by 10% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 17

Facility name (optional)

AMF

Country/Area & River basin

South Africa
Orange

Latitude

-28

Longitude

26.833333

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

1,197

Comparison of total withdrawals with previous reporting year

Much lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

1,197

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

1,197

Comparison of total consumption with previous reporting year

About the same

Please explain

AMF is an aggregate of several surface operations owned by Harmony Gold in the Free State area.

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

AMF decreased their withdrawals by 40% and decreased their consumption by 40% in the reporting year. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 18

Facility name (optional)

Moab Khotsong

Country/Area & River basin

South Africa
Orange

Latitude

-26.979163

Longitude

26.781464

Located in area with water stress

No

Total water withdrawals at this facility (megaliters/year)

5,958

Comparison of total withdrawals with previous reporting year

Lower

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

760

Withdrawals from groundwater - renewable

104

Withdrawals from groundwater - non-renewable

2,016

Withdrawals from produced/entrained water

76

Withdrawals from third party sources

3,002

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

About the same

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

5,958

Comparison of total consumption with previous reporting year

Lower

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Harmony defines higher/lower as any change between 10% and 40% and about the same as any change below 10%. Much higher/lower is defined as a change greater than 40%.

Moab Khotsong's withdrawals decreased by 13%, and their consumption decreased by 13%. As in the previous reporting year there were no discharges at the operation.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

Facility reference number

Facility 19

Facility name (optional)

Nufcor

Country/Area & River basin

South Africa
Orange

Latitude

-26.309144

Longitude

27.73853

Located in area with water stress

No

Total water withdrawals at this facility (megaliters/year)

17

Comparison of total withdrawals with previous reporting year

This is our first year of measurement

Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

17

Total water discharges at this facility (megaliters/year)

0

Comparison of total discharges with previous reporting year

This is our first year of measurement

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

0

Total water consumption at this facility (megaliters/year)

17

Comparison of total consumption with previous reporting year

This is our first year of measurement

Please explain

The WRI Aqueduct Tool was used to evaluate the water stress in the operation's area.

Harmony calculates their water consumption in accordance with the CDP's formula of Withdrawals minus consumption. Their water withdrawal and discharge volumes are obtained from direct measurements using an online data monitoring system.

Since Nufcor's acquisition, this is the first reporting year that data has been included. Therefore, this is the first year of measurement of its water accounting data.

If a zero value is reported for this operation it indicates that the operation did not withdraw from that source or discharge to that destination.

Harmony anticipates their future water volumes to reduce in line with their water targets and water conservation initiatives such as process optimisation and water recycling.

W5.1a

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

Water withdrawals – total volumes

% verified

76-100

What standard and methodology was used?

International Standard on Assurance Engagements (ISAE) 3000. Scope - Assurance Engagements other than audits or reviews of historical financial information. The water use (as part of water used for primary activities) was audited with limited assurance. The scope of coverage for the audit was corporate.

Water withdrawals – volume by source

% verified

76-100

What standard and methodology was used?

International Standard on Assurance Engagements (ISAE) 3000. Scope - Assurance Engagements other than audits or reviews of historical financial information. The water use (as part of water used for primary activities) was audited with limited assurance. The scope of coverage for the audit was corporate.

Water withdrawals – quality

% verified

Not verified

Water discharges – total volumes

% verified

Not verified

Water discharges – volume by destination

% verified

Not verified

Water discharges – volume by treatment method

% verified

Not verified

Water discharge quality – quality by standard effluent parameters

% verified

Not verified

Water discharge quality – temperature

% verified

Not verified

Water consumption – total volume

% verified

76-100

What standard and methodology was used?

International Standard on Assurance Engagements (ISAE) 3000. Scope - Assurance Engagements other than audits or reviews of historical financial information. The water

use (as part of water used for primary activities) was audited with limited assurance. The scope of coverage for the audit was corporate.

Water recycled/reused

% verified

Not verified

W6. Governance

W6.1

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

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

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of business impact on water Description of water-related performance standards for direct operations Description of water-related standards for procurement Reference to international standards and widely-recognized water initiatives Company water targets and goals Commitment to align with public policy initiatives, such as the SDGs Commitments beyond regulatory compliance Commitment to water-related innovation	Harmony has adopted a company-wide approach to water management. Thus, the water management strategy and standards provide a consistent approach and baseline for use across the group's operations. Harmony's water management strategy provides the minimum requirements, strategic goals and the overarching principles defined by Harmony to guide the group's internal water management practices. Harmony's water management strategy includes (but is not limited to) the content specified, indicating Harmony's commitment to being a leader in environmental stewardship (both internally and externally) in managing water, to recognise it as scarce natural resource and in terms of driving operational efficiencies. Water management is recognised as a key priority for the group and therefore the company-wide policy needs to comprehensively address a wide range of elements in a consistent and well-coordinated manner. Over and above the business's dependency on water for their direct and indirect operations, the company is committed to the health and safety of their employees and surrounding communities, thus Harmony aims to ensure minimal social and environmental impact.

		Commitment to stakeholder awareness and education Commitment to water stewardship and/or collective action Commitment to safely managed Water, Sanitation and Hygiene (WASH) in the workplace Commitment to safely managed Water, Sanitation and Hygiene (WASH) in local communities Acknowledgement of the human right to water and sanitation Recognition of environmental linkages, for example, due to climate change	As part of Harmony's licence to operate in both South Africa and Papua New Guinea, the company commits to adhere to both local legislative limitations. Since both countries have committed to the SDGs, Harmony's commitment to such public policies and other such regulations are part and parcel of Harmony's responsible operational practices. Harmony aims to reduce their water footprint on their surrounding communities. Thus, Harmony has set long-term targets are set to reduce the amount of water used for primary activities by 4.5%, while increasing the amount of water recycled by 5%. A company specific example of a company-wide water management approach is Harmony's specification of performance standards related to its operations and procurement practices. The performance standards set for water include all stages of operation across the different regions in which the group operates. The performance standards therefore apply to planning, implementation and monitoring phases.

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Chief Executive Officer (CEO)	Water is considered critical to Harmony's operations. Thus, water risks are effectively managed through influence from the Chief Executive Officer (CEO), who addresses issues at board-level through the Social and Ethics sub-committee, pro-actively filtering decisions and actions into Harmony's operational targets. The CEO (an executive director on the Board is ultimately responsible for the management of climate change and water-related risks at Harmony. It is responsibility of the CEO to integrate adequate water management and operational consistency in a top-down approach. The CEO's water-related responsibility includes overseeing strategy development

	and implementation and identifying risks and opportunities. Water-related targets and incentives, for example, were approved by the CEO. The Executive: Sustainable Development, who is responsible for the implementing Harmony's water strategy, supports the CEO in his responsibilities. This strategy informs the appropriate management of water within Harmony.

W6.2b

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

	Frequency that water-related issues are a scheduled agenda item	Governance mechanisms into which water-related issues are integrated	Please explain
Row 1	Scheduled - all meetings	Monitoring implementation and performance Overseeing acquisitions and divestiture Overseeing major capital expenditures Providing employee incentives Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy	As part of the mining industry, Harmony is afforded the responsibility and opportunity to be a responsible corporate citizen. In order for Harmony's board to adequately execute their responsibilities, tasks are delegated to various board committees, not to reduce the overall responsibility of directors but rather reporting directly to the board. Harmony has integrated a thorough understanding of water management and water risks across its operational spectrum. We have integrated water into our long-term business objectives, our business strategy as well as our financial planning. As such Harmony's commitment to responsibly managing water is driven from an executive level and has evolved from a strategy into practical and relevant actions across the group. This process is achieved through Harmony's Water Strategy. The Social and Ethics Committee (SEC) has the highest level of strategic oversight regarding water-related risks at Harmony. This committee is appointed by Harmony's Board. This SEC ensures that water-related risks are well managed, and opportunities are earmarked, underpinning Harmony's values. The SEC is guided by the relevant environmental legislation, including the Paris Agreement on Climate Change and the Nationally Determined Contributions by South Africa. In addition Harmony subscribes to the 17 UN Development Goals (SDGs), which consider water

		Reviewing innovation/R&D priorities Setting performance objectives	and water-related risks across the various goals. There is a direct line of communication between the SEC, Harmony's Board of Directors and the executive management team. The executive management team is invited to all SEC meetings.

W6.3

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

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

Chief Executive Officer (CEO)

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

Harmony recognizes the need to be a responsible corporate citizen. This is monitored by the board of directors (the board), who are responsible for appointing the CEO.

Harmony's CEO serves as a link between the board and management and is accountable for reporting to the board and stakeholders. The CEO reports to the board and relevant stakeholders, quarterly, on Harmony's operating status, targets, and regulatory and including water-related actions.

The CEO is responsible for the implementation and execution of board-approved strategy, policies and planning, including Harmony's reputational value and their associated response to climate change and water-related impacts.

Ultimately, the CEO is responsible for all day-to-day management decisions and the implementation of the Company's long- and short-term plans. As such, water, its management, environmental and social stewardship, resource efficiency and emissions reduction are part of the CEO's operational responsibilities.

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

Other, please specify

Executive- Sustainable Development

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

At the fore-front of Harmony's environmental stewardship and climate (including water-related) actions, is Harmony's Executive: Sustainable Development. This position forms part of the Executive Management Committee, who report directly to the CEO.
In particular, the Executive: Sustainable Development manages and navigates group-wide climate- and water-related challenges faced throughout Harmony's operations. This role acts as a support to the CEO's ultimate responsibility.
All reporting to the board on climate change and water-related actions/ impacts are done on a quarterly basis.

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

Safety, Health, Environment and Quality committee

Responsibility

Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Quarterly

Please explain

The CEO is supported by an Executive Management Team. Harmony's executive management comprises the CEO's office, which is supported in its work by management teams for the South Africa and South-east Asia operations. Members of the Executive Management Committee meet weekly to discuss matters arising which includes water and climate related impact on water which could influence inter alia energy and emission targets, operational safety, the environment and community relations.

W6.4

(W6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?

	Provide incentives for management of water-related issues	Comment
Row 1	Yes	NA

W6.4a

(W6.4a) What incentives are provided to C-suite employees or board members for the management of water-related issues (do not include the names of individuals)?

	Role(s) entitled to incentive	Performance indicator	Please explain
Monetary reward	Board/Executive board Chief Executive Officer (CEO) Chief Operating Officer (COO) Other, please specify General Managers; Environment/ Sustainability managers	Reduction of water withdrawals Reduction in consumption volumes Improvements in efficiency - direct operations Implementation of employee awareness campaign or training program	Harmony's Social and Ethics Committee is a board-level committee whose responsibilities include providing the strategic direction for Harmony's water management strategy and related targets. The CEO assists the board in setting targets for their direct operations. Similarly, Harmony's COO: South Africa and CEO: South-east Asia are rewarded based on their ability to optimise their operational efficiency, while Harmony's General Managers are monetarily rewarded for the achievement of operational-level water efficiency management and withdrawal reductions, and target achievements. Similarly, the environmental managers are rewarded for managing Harmony's water footprint, the implementation of water efficiency programmes and water re-use initiatives. As such, efficiency targets are included in as Key Performance Indicators for these managers. The committee is remunerated for serving on the board, with 36% guaranteed pay, and a 35% long-term and 23% for short-term incentive. Short-term incentives are based on tangible target achievements including water-related incentives. The annual pay mix for the CEO constitutes 34% guaranteed pay, with 36% long-term incentives and 24% short-term incentives. Short-term incentives are based on tangible target achievements, including water-related incentives. Annually, 5% of all employee short-term incentives are based on environmental (including water) target achievements.
Non-monetary reward	No one is entitled to these incentives		Non-monetary rewards are not applicable in terms of Harmony's remuneration policy.

W6.5

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

Yes, direct engagement with policy makers
Yes, trade associations
Yes, funding research organizations

W6.5a

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

Harmony adopts a company-wide water management strategy which provides a consistent approach and operations baseline for use across the group. This document clearly sets out Harmony's objectives related to water conservation, efficient water use and the necessities surrounding water in the context of its host communities. In particular this includes:
· Integrating water management and efficiencies
· Acknowledging water in respect climate change
· Water management at mine closure
· Recognising water as critical resource for local communities
To ensure the successful implementation of the Water Strategy in the overall group context, a framework for monitoring progress, integrating initiatives and communicating progress was developed. The well-defined communication component of the Strategy facilitates policy implementation and reporting, for both internal and external stakeholders.
Internal communication, including education and awareness, encourages buy-in and behavioural change to water conservation. Using communication and education, regarding Harmony's Water Strategy, the executive board and management can identify inconsistencies and mitigate accordingly.

W6.6

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

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

HAR-TCFD20.pdf
HAR-IR20.pdf
HAR-ESG20.pdf

W7. Business strategy

W7.1

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

	Are water-related issues integrated?	Long-term time horizon (years)	Please explain
Long-term business objectives	Yes, water-related issues are integrated	16-20	Harmony acknowledges that water is a key resource in the continuity and sustainability of their operations. Harmony's Water Management Strategy thus aims to direct water management efforts, promote conservation and demand management with a uniform Group-wide approach. Harmony integrates relevant water issues into their long-term objectives, to ensure its operation remain feasible and sustainable. The water issues that are integrated into the business objectives include: 1) Awareness around the increasing frequency of extreme weather events (like drought and flooding), how this will affect their access to water, and in turn, their operations. 2) Efforts towards decreasing Harmony's water consumption such that operating costs remain minimised with the ever-increasing water tariffs in South Africa (water scarce country) and Papua New Guinea 3) Managing water such to ensure availability for the growth aspirations of Harmony's assets. An example of how these water-related issues is integrated into Harmony's long-term business strategy is indicated in the principles of Harmony's water management strategy which stipulate that all development strategies for new mines need to consider water management and optimal water-use practices, from the projects' foundation phase. This indicates how Harmony acknowledges the interconnectedness of water security and the success of all its operations, as interdependent role-players in achieving their key business objectives.

Strategy for achieving long-term objectives	Yes, water-related issues are integrated	16-20	Harmony annually publishes suite of reports which govern their business practices, stipulates their business strategy, and directs their actions towards achieving their long-term business objectives. Within these annual reports, Harmony explores their strategy used for optimising their water use and limiting their impact (see ESG Report page 28). This annual reporting of Harmony's water-related actions is conducted in line with Harmony's water management policy and strategy. In addition, water issues are integrated into in Harmony's life of mine plans and 5 year business plan. As such water fundamentally informs Harmony's capital investment programme and organic growth programme. Harmony has implemented a Water Management Strategy which directs their water usage and management techniques to ensure that all Harmony's operations maintain a uniform, group-wide approach to water management, such to obtain their stipulated long-term water use objectives.
Financial planning	Yes, water-related issues are integrated	11-15	The impacts of climate change, including changes in precipitation extremes and droughts, have been noted to have one of the highest impacts on the profitability of Harmony's business. Water is critical to Harmony's business operations, thus interruption in water supply pose a significant threat to Harmony's operational continuity and profitability in both South Africa and Papua New Guinea. Thus, in Harmony's Water Management Strategy, the financial implications of inefficient water availability are considered and integrated into Harmony' risk management processes annually.

W7.2

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

Row 1

Water-related CAPEX (+/- % change)

-97

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

5

Water-related OPEX (+/- % change)

-52

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

53

Please explain

OPEX and CAPEX expenditure were affected as a result of the COVID-19 pandemic. The Covid-19 pandemic significantly affected Harmony's operations, gold production and employees in the last quarter of the financial year to June 2020 , following the South African government's imposed temporary closures on underground mines as part of the nation-wide lockdown.

The national lockdowns associated with the Covid-19 pandemic prevented us from maximising production to meet the increased demand, particularly in the fourth quarter of the year under review.

Production at our Hidden Valley operation continued to be affected by the planned move from stage 5 to stage 6 mining in the pit during the year. The mine imposed its own site-lockdown for several weeks from the onset of the pandemic but was able to maintain production at a reduced rate.

In addition, the decrease in CAPEX is due to all capital investment in water treatment plants being completed in FY19.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	NA

W7.3a

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

Yes

W7.3b

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

	Climate-related scenarios and models applied	Description of possible water-related outcomes	Company response to possible water-related outcomes
Row 1	Nationally determined contributions (NDCs)	Harmony earmarks key climate-related risks as stipulated in the relevant NDCs for their operations in both South Africa (SA) and Papua New Guinea (PNG). These are: For SA: 1) Varying rainfall intensity patterns leads to increased disruptions in production, and in turn, increased costs of alternate water sources and water management systems. 2) Temperature increases affects surface cooling plants' efficiencies and cause heat stress for surface and underground employees, and 3) Climate change-related regulatory requirements are changing, posing uncertainty to Harmony's operations. For PNG: 1) Harmony's PNG operations are susceptible to coastal and inland flooding, malaria and vector-borne diseases, landslides, and water/sanitation. 2) Exploration around mitigation options in PNG (including increasing renewable energy sources for national electricity supply, transportation and increasing the sequestration	Harmony uses the outcomes of scenario analyses for both SA and PNG to inform their business plans and budget allocations for water-related risks across the lie of mine of its operations, thus over a 30-year timeframe. For example, through scenario analysis outcomes, Harmony identified business and strategic risks faced by their Hidden Valley operations (i.e. steep topography, high rainfall and low levels of evaporation) posing significant water management challenges to their operations. Water management techniques used include: 1) controlled rainfall run-off 2) recycling of site water to limit freshwater required and water footprint. 3) treatment of wastewater prior to discharge. In accordance with their climate-related projections and NDC, SA is anticipated to experience increasingly dry climate, which Harmony has recognised as a risk to their operations. As such, Harmony has implemented a campaign to re-use their process water, thus reducing their dependency on freshwater by 4.5%, while increasing the amount of water recycled by 5%. Harmony has exceeded this target. To determine the possible impact of protracted drought, Harmony reviewed their water balance at each operation. The water treatment plants (WTP) at Doornkop, Kusasalethu and now Tshepong minimises

		options in the forestry sector). 3) Capacity building and skills transfer is required for adequate policy implementation and management of regulatory uncertainty in PNG.	the impact of water stress on these operations. Harmony engages with WTP service providers to develop more WTP. This will secure water for their operations, reduce their water consumption, and increase conservation.

W7.4

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

Row 1

Does your company use an internal price on water?

No, but we are currently exploring water valuation practices

Please explain

Water is a basic human right and Harmony's water policy earmarks the importance of water. Furthermore, Harmony acknowledges the unique water-related risks and opportunities faced by each of their operations in the various countries. The impacts of climate change on water resources are noted by Harmony to affect broader social costs related to water and water access. Thus, Harmony is in the process of implementing several water-related projects to assist its host communities in obtaining sustainable water supply, factoring the broader social context of water into its operational spend. Harmony's Water Management Strategy contributes greatly to the group's awareness on water efficiency practices and encourages water recycling programmes. Even though they do not use an internal water price, Harmony is very much aware of the significance of water to both their own operations and to the livelihoods of their host communities and the importance of protecting this resource.

W8. Targets

W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Company-wide targets and goals Site/facility specific	Targets are monitored at the corporate level Goals are monitored at	Harmony's water strategy guides setting and monitoring water targets and goals. This includes conservation and demand management, including optimisation of supply in the various regions, particularly to secure supply during a protracted drought, and for the sustainable development of the business and our host communities. In addition, Harmony

	targets and/or goals	the corporate level	has reviewed the water balances at each operation to determine the likely effects of the protracted drought. In this regard Harmony has set itself the target of reducing the volumes of water it uses for primary activities by7% against a 2018 baseline of 18.6 million m3. To achieve this target Harmony has been improving water efficiency by investing in process changes. Harmony set a group-wide goal to reduce water used for primary activities. Harmony's deep level underground mining operations are inherently water intensive. As such Harmony views the mitigation of its water use as a key priority for achieving operational sustainability and retaining its licence to operate. The achievement of this goal will also be beneficial to local communities who are dependent on the same resources. Measuring the success of this goal involves tracking the reductions on the use of ground water.

W8.1a

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

Target reference number

Target 1

Category of target

Water consumption

Level

Company-wide

Primary motivation

Water stewardship

Description of target

Harmony has set itself the target of reducing the volumes of water it uses for primary activities by 7% against a 2018 baseline of 15.4 million m3. Harmony aims to achieve this target by 2022. To achieve this target Harmony has been improving water efficiency by investing in process changes.
This target improves Harmony's water security as they become less reliable on water withdrawal and thus are less prone to water scarcity related risks.

Quantitative metric

% reduction in total water consumption

Baseline year
2018

Start year
2019

Target year
2022

% of target achieved
100

Please explain
Harmony achieved a 11% reduction in water use for primary activity when compared to the base year of 2018 volumes. Therefore, the target has been fully achieved. When doing this comparison, the Moab Khotsong acquisition is not included as the operation was not present in FY18.

Target reference number
Target 2

Category of target
Water recycling/reuse

Level
Company-wide

Primary motivation
Cost savings

Description of target
Harmony has set itself the target of increasing the percentage of water recycled at mining operations by 6% against a 2018 base year. Harmony aims to achieve this target by 2022. To achieve this target Harmony has been investing in; water treatment plants, recycling systems, larger return-water dams and covered tanks to limit evaporation.
By increasing the percentage of water recycled Harmony reduces their water withdrawal requirements which results in cost savings from both municipal bills as well as reduced pumping demands.

Quantitative metric
% increase in water use met through recycling/reuse

Baseline year
2018

Start year
2019

Target year

2022

% of target achieved

100

Please explain

Harmony has increased the volumes of water recycled by 49% when compared to the base year of 2018. This has enabled us to full achieve our target of increasing the percentage of water recycled.

Target reference number

Target 3

Category of target

Product water intensity

Level

Company-wide

Primary motivation

Cost savings

Description of target

Harmony has set a target to reduce the water intensity of their operations. The target aims to reduce the kilolitres per tonne milled by 7% by 2022 against a FY18 base year. This target is applied at a company level and is motivated by the cost savings that would result in achieving the target. These cost savings can arise from several places including lower water volumes purchased from third parties and decreased pumping requirements.

Quantitative metric

% reduction per unit of production

Baseline year

2018

Start year

2019

Target year

2022

% of target achieved

100

Please explain

Harmony implemented a range of water efficiency projects in the reporting year. This resulted in a reduction in the water intensity of 31% when compared to FY18. This target has therefore been achieved in the reporting year.

W8.1b

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

Goal

Other, please specify

Reduce dependency on potable water supplies

Level

Company-wide

Motivation

Risk mitigation

Description of goal

Harmony aims to significantly reduce its dependency on potable water supplies by 2022.

This is relevant to Harmony since the occurrence of dry spells can result in unreliable potable water supplies. Harmony hopes to mitigate the risks of an intermittent water supply by reducing its dependency on these sources.

This goal is important to Harmony since Harmony operates in South African and Papua New Guinea, both of which are considered water scarce countries which are prone to water shortages. Since water is a key resource which ensures that Harmony's operations are sustained, this is an important risk management practice.

Harmony set a group-wide target or goal to reduce water used for primary activities by 7% (intensity and absolute targets) by 2022 against a 2018 baseline.

Harmony's deep level underground mining operations are inherently water intensive. As such Harmony views the mitigation of its water use as a key priority for achieving operational sustainability and retaining its licence to operate.

The achievement of this goal will also be beneficial to local communities who are dependent on the same resources. Measuring the success of this goal involves tracking the reductions on the use of potable water supplies.

Baseline year

2018

Start year

2019

End year

2022

Progress

Harmony uses primary water volumes as obtained from water flowmeters at inlet points as indicators for assessing their progress towards the target.

The threshold for success is based on comparisons to base year 2018's water volumes aiming for a reduction of 7% by FY22.

In this, FY20, Harmony has reduced its water used for primary activities volumes by 11%, therefore achieving the target and the related goal.

Therefore, the goal has been exceeded in the reporting year. The goal was therefore achieved.

W9. Verification

W9.1

(W9.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1a)?

Yes

W9.1a

(W9.1a) Which data points within your CDP disclosure have been verified, and which standards were used?

Disclosure module	Data verified	Verification standard	Please explain
W1 Current state	Water use	ISAE 3000	Water use for primary activities are verified and reported in Harmony's ESG Report, annually. These figures form part of Harmony's risks and opportunities assessments, in terms of determining impacts related to climate change (example, drought), which Harmony identifies as a risk to its operations.
W8 Targets	Water use	ISAE 3000	Water use for primary activities are verified and reported in Harmony's ESG Report, annually. These figures form part of Harmony's risks and opportunities assessments, in terms of determining impacts related to climate change (example, drought), which Harmony identifies as a risk to its operations.

W10. Sign off

W-FI

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

W10.1

(W10.1) Provide details for the person that has signed off (approved) your CDP water response.

	Job title	Corresponding job category
Row 1	Chief Executive Officer (CEO)	Chief Executive Officer (CEO)

W10.2

(W10.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].

No

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms