Northam Platinum Holdings Limited - Water Security 2023

W0. Introduction

W0.1

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

Northam Platinum Holdings Limited is an independent, empowered, and integrated producer of Platinum Group Metals (PGMs), benefitting from the full mine to market value stream. Northam is an independent, fully empowered, mid-tier, integrated Platinum Group Metal (PGM) producer with three wholly owned primary operating assets: the Zondereinde (ZE), Eland (EP) and Booysendal (BD) Mines in the South African Bushveld Complex. Northam has its own metallurgical operations, including a smelter and base metals recovery plant on the Zondereinde lease area, and recycling assets which are located in the United States with a 50 000 oz recycling potential. Our aspirational growth target is to produce 1 million oz 4E per annum.

Zondereinde mine is an established, conventional, long-life (over 30 years) operation with annual production of 350 000 oz 4E of equivalent refined metals from its own operations. It is located on the northern portion of the western limb of the Bushveld Complex near the town of Thabazimbi. The average depth of its mining is 1750 m, making Zondereinde the deepest platinum mine in the world. Hydro-powered equipment is used for stoping and development, instead of electric powered equipment. Surface infrastructure includes two concentrators, a tailings storage facility, a smelter, and a base metals recovery plant. The geological structure and depth make mining particularly challenging and has an impact on the operation's mining methods and cost profile. Northam has therefore adopted innovative and alternative mining technologies, with implications for its greenhouse gas (GHG) emissions profile.

The Booysendal mining operation, comprised of the North and South mines, is located near Mashishing on the eastern limb of the Bushveld Complex with an increasing production profile aimed at of 500 000 oz 4E of concentrate PGM at steady state. The layout of the Booysendal mining infrastructure has been constructed to be energy-efficient and cost-effective with regard to material handling. The orebody at Booysendal lends itself to brownfield expansion opportunities that are being established on the property with a life of mine of 25 years.

The group acquired the Eland mine in 2018. This is located in the south-western portion of the Bushveld Complex, close to the town of Brits in the North West Province. At the time of purchase the mine was fully equipped and partially developed, but mining had been suspended. The group brought the mine back into production, and it is currently being developed to a steady state of 180 000 4E ounces per annum, which will be reached in 2028. A new enhancement to the Eland operation has been the acquisition and integration of the neighbouring Maroelabult mine during 2022. This has added significant operational flexibility to Eland.

The incorporation of Northam Holdings was followed, during 2021, by the acquisition, of a significant investment in RBPlat. This provides the group with an additional revenue stream in a buoyant PGM price environment. In July 2023, Northam's stake in RBPlat was sold.

Northam's total attributable Mineral Resources as at 30 June 2022, expressed as in situ metal content, comprises 225.47 Moz 4E, an increase of 21.82 Moz 4E on the previous year. The total metal content in Mineral Reserves as of 30 June 2022, comprises 34.50 Moz 4E, an increase of 4.99 Moz 4E on the previous year.

The information disclosed pertains to FY2022 (01/07/2021–30/06/2022) and includes Zondereinde, Booysendal and Eland Mines, of which Northam has financial and operational control.

W-MM0.1a/W-CO0.1a

(W-MM0.1a/W-CO0.1a) Which activities in the metals and mining and coal sectors does your organization engage in?

Activity	Details of activity
Mining	Platinum group metals
Processing	Copper Gold Platinum group metals Nickel Other non-ferrous materials processing, please specify (Cobalt and Chrome)

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 2021	June 30 2022

W0.3

(W0.3) Select the countries/areas in which you operate.

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 over which financial control is exercised

W0.6

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

No

W0.7

(W0.7) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization.	Provide your unique identifier
Yes, an ISIN code	ZAE000298253
Yes, a Ticker symbol	NPH

W1. Current state

W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Vital	Important	Direct use: Water allocation is of critical importance for our three sites (Zondereinde, Booysendal, and Eland) due to mining and mineral processing requiring large volumes of water for operations. Where deemed necessary, fresh water is used in our operations where we do not have any secondary water available, of sufficient quality or in sufficient quantities. Additionally. as per the South African legislation requirements, potable water can be used as drinking water, therefore sufficient amounts of good quality freshwater is important for the health and safety of our employees. Indirect use: Northam is aware of competing demands, and we consistently ensure that water is allocated fairly. Water risks affecting our staff, communities, and local suppliers are an increasingly material concern for the company. We consider the indirect use of freshwater to be important because these risks affect our direct business value drivers, our social license to operate, and water availability for our operations. We conduct upstream and downstream surface and groundwater quality assessments at all our operations, this is done to identify whether there is any impact from the operations. We anticipate our future dependence on direct water use to increase as Northam continues to grow. However, we do not foresee our future dependency on indirect water use differing much in the future.
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Not very important	Direct use: Northam recognizes the importance of water use optimization through reusing and recycling processes. We consider secondary water to be a vital resource to our operations as it reduces our dependency on potable water and bulk water supply services. All mining operations can function with the use of recycled water from the operations that are of a reasonable quality. The potential energy of water under gravitational pressure is used as a primary energy source for our shaft-based hydro mining system at Zondereinde. In FY2022, we recycled approximately 84% of our total water consumed for the group, which is a 2% increase from FY2021. The Zondereinde operation, recycled 90% on F2022. Indirect use: The indirect use of brackish, produced, or recycled water is not prevalent across our value chain and is thus classified as not very important/material to the business. We anticipate our future dependence on direct water use to increase as Northam continues to grow. However, we do not foresee our future dependency on indirect water use differing much 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	Frequency of measurement	Method of measurement	Please explain
Water withdrawals – total volumes	100%	Continuously	Flow meters	Northam monitors the volume of water withdrawal using flow meters. Water use volumes are compared monthly to ensure adherence to the limits stipulated in the Integrated Water Use Licenses (IWULs). Water consumption updates for each region are provided on a quarterly basis in the water management forums.
Water withdrawals – volumes by source	100%	Continuously	Flow meters	Northam monitors the volume of water withdrawal using flow meters. Water withdrawals are measured separately for potable water, borehole water, and fissure water. Water use volumes are compared monthly to ensure adherence to the limits stipulated in the Integrated Water Use Licenses (IWULs). Water consumption updates for each region are provided on a quarterly basis in the water management forums.
Entrained water associated with your metals & mining and/or coal sector activities - total volumes [only metals and mining and coal sectors]	100%	Monthly	Flow meters	All operations have detailed water balances which include the volume of water in the ore. This entrained water is therefore calculated monthly. However, produced/entrained water is not relevant for our water reporting since water in the ore is minimal and indirectly accounted for as part of the concentrator circuits. As such, the volume of the water in the ore is not reported in Northam's annual reporting and therefore is not accounted towards our total reported water withdrawals.
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Water withdrawals quality	100%	Quarterly	Sampling and laboratory analysis	The IWUL requires that surface and groundwater monitoring programmes be implemented at each operation as mandated by the National Water Act No. 36 of 1998. Quarterly quality assessments are performed on groundwater, rivers, streams, and water storage infrastructure at the three mines. External service providers collect samples, which are then analyzed in accredited laboratories. The variables tested include pH, electrical conductivity, total dissolved solids, total hardness, total alkalinity, turbidity, metals concentration (e.g., calcium, sodium, potassium), total coliforms, E. coli count, total viable count, and salmonella count, among others.
Water discharges – total volumes	100%	Other, please specify (on an ad hoc basis)	Estimation from hydrological model	We aim for zero environmental discharges even though the IWUL allows for discharges at certain quality and volumes of fresh water. Should accidental discharges occur, these are monitored closely at all three mines in terms of volume, quality, and destination.
Water discharges – volumes by destination	100%	Other, please specify (on an ad hoc basis)	Estimation from hydrological model	All our mines are zero-discharge operations, meaning that no wastewater is deliberately released. However, our water use licences do allow for discharges up to a certain volume and quality. In the event of any accidental discharges, close monitoring is conducted at all three mines to estimate the volume and track the quality and destination of such discharges and minimize their impact.
Water discharges – volumes by treatment method	100%	Other, please specify (on an ad hoc basis)	Estimation from hydrological model	All our mines are zero-discharge operations, meaning that no wastewater is deliberately released. However, our water use licences do allow for discharges up to a certain volume and quality. In the event of any accidental discharges, close monitoring is conducted at all three mines to estimate the volume and track the quality and destination of such discharges and minimize their impact.
Water discharge quality – by standard effluent parameters	100%	Monthly	Estimation from hydrological model	All our mines are designed to operate as zero-discharge facilities, ensuring no wastewater is released. However, in the event of any discharges, monitoring is conducted at all three mines to track the volume, quality, and destination of such discharges. Water discharge points at the sites are regularly monitored monthly to promptly address any unplanned discharges. Various parameters are measured during the monitoring process, including pH, electrical conductivity, total dissolved solids (TDS), total hardness, total alkalinity, turbidity, metals concentration (such as calcium, sodium, potassium), total coliforms, E. coli count, total viable count (TVC), and salmonella count.
Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)	Not relevant	<Not Applicable>	<Not Applicable>	All our mines are zero-discharge operations. However, our water use licences do allow for discharges up to a certain volume and quality. In the event of any accidental discharges, close monitoring is conducted at all three mines to estimate the volume and track the quality and destination of such discharges and minimize their impact. Given our commitment to zero-discharge operations, the regular measurement of emissions to water is not relevant to our current operations, nor is it anticipated to be relevant in the future. Furthermore, Northam does not make use of or produce as by-products any of the 33 priority substances listed under the Water Framework Directive. Northam's products are in metal form, inert and non-hazardous. Furthermore, although there is seepage from our unlined tailings storage facilities, these are licensed facilities, and we have undertaken several waste classification studies and none of mineral wastes have leachate potential.
Water discharge quality – temperature	Not relevant	<Not Applicable>	<Not Applicable>	All our mines are zero-discharge operations, meaning that no wastewater is deliberately released. However, our water use licences do allow for discharges up to a certain volume and quality. In the event of any accidental discharges, close monitoring is conducted at all three mines to track the volume, quality, and destination of such discharges and minimize their impact. Given our commitment to zero-discharge operations, the regular measurement of discharge temperature is not relevant to our current operations, nor is it anticipated to be relevant in the future.
Water consumption – total volume	100%	Continuously	Flow meters	Due to our zero-discharge operations, our water consumption is equivalent to our water withdrawals. Northam continuously measures water withdrawal volumes using flow meters. Water use volumes are compared monthly to ensure adherence to the limits stipulated in the Integrated Water Use Licenses (IWULs). Water consumption updates for each region are provided on a quarterly basis in the water management forums.
Water recycled/reused	100%	Continuously	Flow meters	Northam continuously measures recycled water via flow meters. We compare our recycled water volumes monthly to ensure that we meet our target to recycle at least 75% of all water consumed. In FY2022, we recycled 84% of all water consumed.
The provision of fully-functioning, safely managed WASH services to all workers	100%	Daily	Physical Inspection	Workers at Zondereinde, Eland, and Booysendal Mines are provided with WASH (Water, Sanitation, and Hygiene) services. These services are provided at facilities used for accommodation and change house facilities at our mines. These services are subject to ongoing monitoring to ensure their effectiveness and functionality.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Please explain
Total withdrawals	6027	Lower	Investment in water-smart technology/process	Higher	Increase/decrease in business activity	Northam's total water withdrawals decreased by 14.8% from the last reporting year. This is due to using less potable water from external water sources in our operations, and to our efforts to recycle more water from the process. In FY2022. We were able to recycle 83.2% of our water, which is a 2% increase compared to the previous year.
Total discharges	0	About the same	Other, please specify (All our mines strictly adhere to a zero-discharge policy)	About the same	Other, please specify (All our mines strictly adhere to a zero-discharge policy)	All our mines are zero-discharge operations. In the reporting year, there were no significant volumes of water discharged, resulting in the total discharges being comparable to the previous reporting year. Going forward, we anticipate that the total discharges will continue to remain at the same level, which is effectively zero. This projection is in line with our strict zero-discharge policies implemented across all our operations.
Total consumption	6110	Lower	Investment in water-smart technology/process	Much lower	Investment in water-smart technology/process	Due to our zero-discharge operations, our water consumption is equivalent to our water withdrawals although evaporative losses and some seepage from out TSFs do occur. Northam's total water withdrawals (and thus consumption) decreased by 13.61% from the last reporting year. This is due to using less potable water from external water sources in our operations and our efforts to recycle more process water.

W1.2d

(W1.2d) Indicate whether water is withdrawn from areas with water stress, provide the proportion, how it compares with the previous reporting year, and how it is forecasted to change.

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Five-year forecast	Primary reason for forecast	Identification tool	Please explain
Row 1	Yes	100%	About the same	Investment in water-smart technology/process	About the same	Other, please specify (no planned changes in Northam's geographical locations)	WRI Aqueduct	Northam conducted an assessment of water stress at each of our three mines using the WRI Aqueduct tool. The results revealed that all three mines are in areas categorized as experiencing High (40-60%) water stress according to the WRI Aqueduct tool. Consequently, Northam acknowledges that all (100%) of our water withdrawals originate from regions known for water stress. As our site locations have remained unchanged from the previous year, there has been no alteration in our exposure to water withdrawals from areas facing water stress.

W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Northam does not withdraw water from fresh surface sources, so this source category is irrelevant for Northam's operations. For example, Eland Mine's water is originally sourced from the Hartbeespoort Dam, a freshwater body, but is conveyed to the mine via the Irrigation Board (a third party).
Brackish surface water/Seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Northam does not engage in water withdrawals from brackish surface sources. Therefore, this source category holds no relevance to Northam's operations.
Groundwater – renewable	Relevant	2230	Higher	Increase/decrease in business activity	This includes water withdrawn from boreholes and fissures. This volume has increased by 4.30% from the last reporting year. This can be attributed to the need for more water after we decreased our demand for potable water from third parties, resulting in the need for more groundwater withdrawals to meet the increasing operational demands. It is worth noting that the total water consumption decreased for FY2022, such that the increase in the amount of groundwater usage did not exceed the larger decrease in potable water usage.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	Northam does not withdraw water from non-renewable groundwater sources, so this source category is irrelevant for our operations.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	At Zondereinde mine, detailed water balances are maintained, which include the volume of water present in the ore. However, the volume of water in the ore is not included in Northam's annual reporting, and therefore, it is not accounted for in our total reported water withdrawals. As a result, the concept of produced/entrained water is not applicable to our water reporting, as all the water withdrawals that are reported are already accounted for under groundwater and third-party sources.
Third party sources	Relevant	3797	Much lower	Investment in water-smart technology/process	Booysendal, Zondereinde and Eland receive potable or bulk water from the Lebalelo Water Use Association, Magalies Water Board, and Hartebeespoort Irrigation Board, respectively. These water withdrawals are classified as water withdrawals from third-party sources. It is worth noting that there has been a decrease of 20.1% in potable water use compared to the previous reporting year. This decline can be attributed to our commitment to operating on a zero-discharge, closed-loop system. However, more recycling water was used for this year, along with more groundwater, to account for the decreased water supply from third parties.

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Primary reason for comparison with previous reporting year	Please explain
Fresh surface water	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	All of our mines are zero-discharge operations. No material volumes of water were discharged in the reporting year. We expect water discharges to remain zero under our zero-discharge policies.
Brackish surface water/seawater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	All our mines are zero-discharge operations. No material volumes of water were discharged in the reporting year. We expect water discharges to remain zero under our zero-discharge policies.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	All of our mines are zero-discharge operations. No material volumes of water were discharged in the reporting year. We expect water discharges to remain zero under our zero-discharge policies.
Third-party destinations	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	All of our mines are zero-discharge operations. No material volumes of water were discharged in the reporting year. We expect water discharges to remain zero under our zero-discharge policies.

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	Primary reason for comparison with previous reporting year	% of your sites/facilities/operations this volume applies to	Please explain
Tertiary treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	All our mines operate on a zero-discharge system, meaning that there were no material volumes of water discharged in the reporting year. Therefore, water discharges are expected to remain at zero on this basis. Therefore, treatment of discharge is not relevant to Northam.
Secondary treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	All our mines operate on a zero-discharge system, meaning that there were no material volumes of water discharged in the reporting year. Therefore, water discharges are expected to remain at zero on this basis. Therefore, treatment of discharge is not relevant to Northam.
Primary treatment only	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	All our mines operate on a zero-discharge system, meaning that there were no material volumes of water discharged in the reporting year. Therefore, water discharges are expected to remain at on this basis. Therefore, treatment of discharge is not relevant to Northam.
Discharge to the natural environment without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	All our mines operate on a zero-discharge system, meaning that there were no material volumes of water discharged in the reporting year. Therefore, water discharges are expected to remain at zero under this basis. Therefore, treatment of discharge is not relevant to Northam.
Discharge to a third party without treatment	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	All our mines operate on a zero-discharge system, meaning that there were no material volumes of water discharged in the reporting year. Therefore, water discharges are expected to remain at zero under this basis. Therefore, treatment of discharge is not relevant to Northam.
Other	Not relevant	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>	All our mines operate on a zero-discharge system, meaning that there were no material volumes of water discharged in the reporting year. Therefore, water discharges are expected to remain at zero under this basis. Therefore, treatment of discharge is not relevant to Northam.

W1.3

(W1.3) Provide a figure for your organization's total water withdrawal efficiency.

	Revenue	Total water withdrawal volume (megaliters)	Total water withdrawal efficiency	Anticipated forward trend
Row 1	34100000000	6027	5657872.90525966	As a growing company with expanding operations, Northam foresees an increase in revenue in the future. Similarly, we anticipate that our water withdrawals will also increase as the expansion of our operations is expected to result in increased water usage. Despite the anticipated increase in water withdrawals, we expect our water withdrawal efficiency to remain relatively consistent.

W-MM1.3/W-CO1.3

(W-MM1.3/W-CO1.3) Do you calculate water intensity information for your metals and mining activities?

Yes

W-MM1.3a/W-CO1.3a

(W-MM1.3a/W-CO1.3a) For your top 5 products by revenue, provide the following intensity information associated with your metals and mining activities.

Product name	Numerator: Water aspect	Denominator	Comparison with previous reporting year	Please explain
Platinum group metals	Total water consumption	Ton of ore processed	About the same	Over the past six years, Northam has had a consistent reduction in water use intensity, declining from 8.3 kiloliters per tonne milled in 2016 to 4.4 kiloliters per tonne milled in 2022. Moving forward, we are committed to maintaining this level of intensity despite our expanding operations, as we prioritize water recycling and efficiency. This particular metric serves as a vital measure for assessing Northam's water use and management performance. Our objective is to ensure that the water intensity remains at or below 10 kiloliters per tonne milled, and we plan to achieve this by consistently meeting or surpassing our water recycling target and implementing enhanced metering systems across all our operations to monitor our performance more effectively. While our primary focus is to maintain water recycling above the 75% mark, it is worth noting that we have consistently surpassed the 80% milestone in recent years.

W1.4

(W1.4) Do any of your products contain substances classified as hazardous by a regulatory authority?

	Products contain hazardous substances	Comment
Row 1	No	Northam's products are in metal form, inert and non-hazardous.

W1.5

(W1.5) Do you engage with your value chain on water-related issues?

	Engagement	Primary reason for no engagement	Please explain
Suppliers	Yes	<Not Applicable>	<Not Applicable>
Other value chain partners (e.g., customers)	Yes	<Not Applicable>	<Not Applicable>

W1.5a

(W1.5a) Do you assess your suppliers according to their impact on water security?

Row 1

Assessment of supplier impact

No, we do not currently assess the impact of our suppliers, but we plan to do so within the next two years

Considered in assessment

<Not Applicable>

Number of suppliers identified as having a substantive impact

<Not Applicable>

% of total suppliers identified as having a substantive impact

<Not Applicable>

Please explain

For Northam's most significant suppliers (i.e., the top 30% of our suppliers who contribute to more than 70% of Northam's total discretionary spend), Northam evaluates monthly reports on suppliers' environmental performance, including water usage and management, to determine if suppliers are compliant with water-related laws and if they pose any risks to the company's value chain. By assessing the monthly reports Northam also evaluates water usage thresholds to understand if the impact is substantive. Additionally, Northam measures success through compliance with water-related environmental legislation, and suppliers who meet these standards are eligible for onboarding.

W1.5b

(W1.5b) Do your suppliers have to meet water-related requirements as part of your organization's purchasing process?

	Suppliers have to meet specific water-related requirements	Comment
Row 1	Yes, suppliers have to meet water-related requirements, but they are not included in our supplier contracts	<Not Applicable>

W1.5c

(W1.5c) Provide details of the water-related requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.

Water-related requirement
Other, please specify (Compliance with water-related regulatory requirements)

% of suppliers with a substantive impact required to comply with this water-related requirement
<Not Applicable>

% of suppliers with a substantive impact in compliance with this water-related requirement
<Not Applicable>

Mechanisms for monitoring compliance with this water-related requirement
On-site third-party audit
Other, please specify (monthly compliance reports)

Response to supplier non-compliance with this water-related requirement
Retain and engage

Comment
Northam is dedicated to ensuring that its critical suppliers adhere to relevant environmental legislation, particularly regarding water-related concerns. Northam conducts environmental audits on all on-site suppliers.

W1.5d

(W1.5d) Provide details of any other water-related supplier engagement activity.

Type of engagement
Innovation & collaboration

Details of engagement
Encourage/incentivize innovation to reduce water impacts in products and services
Educate suppliers about water stewardship and collaboration

% of suppliers by number
1-25

% of suppliers with a substantive impact
<Not Applicable>

Rationale for your engagement
Sustainability of the business is critical to Northam and its shareholders, Northam is committed to sustainability and increasing stakeholder engagement in this area. Northam is committed to ensuring that all its critical suppliers who have processes that may have material impacts on the environment operate responsibly. Additionally, by engaging with its suppliers, Northam is informed about water-related risks that may affect our value chain.

Impact of the engagement and measures of success
All on-site contractors undergo onboarding training annually and prior to entering the site. This onboarding process includes environmental and water awareness aspects. In addition, contractors attend regular internal SHEQ meetings and environmental 'talk topics', as well as external courses, seminars and workshops (paid for by Northam). Additionally, Northam conducts meetings with on-site suppliers to discuss water usage, short-term water plans, and unforeseen water-related issues experienced during the month. The success of this process is measured by compliance of suppliers against relevant legislation, as reported by their monthly compliance reports.

Comment
Not applicable.

W1.5e

(W1.5e) Provide details of any water-related engagement activity with customers or other value chain partners.

Type of stakeholder
Customers

Type of engagement
Innovation & collaboration

Details of engagement
Encourage stakeholders to work collaboratively with other users in their river basins toward sustainable water management
Other, please specify (Educate and work with stakeholders on understanding and measuring exposure to water-related risks.)

Rationale for your engagement
Northam recognizes our customers as one of our key stakeholder groups in our business. We focus on engaging with the top 20% of our customers, who contribute to more than 85% of our total revenue. This ensures that we cover the key customers which have a critical impact on our business. We regularly engage with customers on sustainability-related matters, including water stewardship, to remain abreast of the sustainability of our value chain, in order to ensure ongoing security of product supply to the market.

Impact of the engagement and measures of success
We measure success by the number of successful engagements we have with our customers. For example, we engage BASF, one of our largest customers, twice per year regarding our initiatives surrounding environmental & social issues including water.

Type of stakeholder
Other, please specify (regulators, other water users, water forums and industry associations)

Type of engagement
Education / information sharing

Details of engagement
Educate and work with stakeholders on understanding and measuring exposure to water-related risks

Rationale for your engagement
Northam also participates in various regional water forums that aim to improve water conservation and management. Other participants in these forums include the Department of Water Affairs and Sanitation (DWS), mining companies, and other water users. We are also members of and engage with local water boards and associations where we operate: Lebalelo Water User Association at Booysendal; Hartbeespoort Irrigation Scheme at Eland; and Magalies Water Board at Zondereinde; and we maintain active engagement with government bodies and state-owned water utilities to address water-related issues (e.g. our operations regularly correspond with the DWS to discuss modifications or updates to our Integrated Water Use Licenses. Northam is a proud member of the International Platinum Group Metals Association (IPA), which has commissioned Life Cycle Assessments (LCAs) that examine the cradle-to-gate profile and potential environmental impacts of primary and secondary PGM production. The LCA covers environmental factors such as water consumption and greenhouse gas emissions for platinum, palladium, and rhodium.

Impact of the engagement and measures of success
We measure success by the number of successful engagements we have with our value chain partners.

W2. Business impacts

W2.1

(W2.1) Has your organization experienced any detrimental water-related impacts?
No

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?

	Water-related regulatory violations	Fines, enforcement orders, and/or other penalties	Comment
Row 1	No	<Not Applicable>	

W3. Procedures

W3.1

(W3.1) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?

	Identification and classification of potential water pollutants	How potential water pollutants are identified and classified	Please explain
Row 1	No, we do not identify and classify our potential water pollutants	<Not Applicable>	Our water use licenses specify that we monitor criteria pollutants. All our mines are zero-discharge operations, no wastewater is deliberately released. However, our water use licenses do allow for discharges up to a certain volume and quality. In the event of any accidental discharges, close monitoring is conducted at all three mines to estimate the volume and track the quality and destination of such discharges and minimize their impact. Various parameters are measured during the monitoring process, including pH, electrical conductivity, total dissolved solids (TDS), total hardness, total alkalinity, turbidity, metals concentration, total coliforms, E. coli count, total viable count (TVC), and salmonella count. Our products are in metal form, inert and non-hazardous. Although there is seepage from our unlined tailings storage facilities, these are licensed facilities, and we have undertaken several waste classification studies and mineral wastes have no leachate potential.

W-MM3.2/W-CO3.2

(W-MM3.2/W-CO3.2) By river basin, what number of active and inactive tailings dams are within your control?

Country/Area & River basin	Number of tailings dams in operation	Number of inactive tailings dams	Comment
South Africa – Olifants	2	0	This includes the two tailing dams at Booysendal.
South Africa – Limpopo	2	0	This includes the one tailings dam at Zondereinde and the one tailings dam at Eland.

W-MM3.2a/W-CO3.2a

(W-MM3.2a/W-CO3.2a) Do you evaluate and classify the tailings dams under your control according to the consequences of their failure to human health and ecosystems?

	Evaluation of the consequences of tailings dam failure	Evaluation/Classification guideline(s)	Tailings dams have been classified as 'hazardous' or 'highly hazardous'	Please explain
Row 1	Yes, we evaluate the consequences of tailings dam failure	South Africa (SANS) 10286	Yes, tailings dams have been classified as 'hazardous' or 'highly hazardous' (or equivalent)	The tailings storage facilities (TSFs) have been assessed according to the safety classification system of the SANS 10286. These guidelines enable the categorization of tailings dams according to their level of risk, considering three main consequences associated with the failure of such dams: the potential risk to human life, potential economic losses, and the potential negative effects on the quality of natural resources. Mineral residue facilities in South Africa are regulated by law according to the Guideline for the Compilation of a Mandatory Code of Practice on Mine Residue Deposits which issued by the Department of Mineral Resources and Energy in 2000. Based on this guideline, the implementation of the SANS 10826 Code of Practice for Mine Residue Deposits is compulsory, making SANS 10286 secondary legislation. Northam's TSFs are audited independently on an annual basis. The last audit was undertaken in February 2023. These audits review, amongst other factors, the need to reassess the dam's safety classification. According to the latest audit, the SANS 10286 Risk Classification is Medium-High for Zondereinde's TSF, Extremely Low for Eland's TSF, High for Booysendal North's TSF and Low for Booysendal South's TSF. Additionally, the DWS dam safety risk categorization was 'Exempted' for all paddocks at Eland's TSF, and 'Category III' for Booysendal North's TSF (nothing that this categorisation is not applicable to Zondereinde or Booysendal South).

W-MM3.2b/W-CO3.2b

(W-MM3.2b/W-CO3.2b) Provide details for all dams classified as 'hazardous' or 'highly hazardous'.

Tailings dam name/identifier
Zondereinde

Country/Area & River basin

South Africa	Limpopo

Latitude
-24.822

Longitude
27.377

Hazard classification
Medium High risk facility based on the consequence of failure (SANS 10286: 1998)

Guideline(s) used
South Africa SANS 10286

Tailings dam's activity
Active

Current tailings storage impoundment volume (Mm3)
24.4

Planned tailings storage impoundment volume in 5 years (Mm3)
28.4

Please explain
The current storage is 42.9Mt which equates to 24.4Mm3 (using an in-situ density of 1.8 t/m3) and adding deposition of 120000 t/month or 67000m3/month for 5 years will take it to 28.4Mm3. According to an external review of the group's TSFs, Zondereinde was classified as 'medium high' risk, based on SANS 10286: 1998. Structural risks were not identified; however, stability and integrity studies were completed. The studies concluded that there is a very high degree of cementation in the dam; tailings material forming the outer slopes and beach is not prone to liquefaction; the tailings material is classified as hard rock tailings associated with low plasticity, low permeability and good shear properties; a low phreatic surface; safety factors well in excess of the required values for peak / residual drained conditions; and fulfilment of the stability requirements at the current height as well as a modelled height of 49m.

Tailings dam name/identifier
Booysendal North

Country/Area & River basin

South Africa	Olifants

Latitude
-25.085

Longitude
30.105

Hazard classification
High risk facility based on the consequence of failure (SANS 10286: 1998)

Guideline(s) used
South Africa SANS 10286

Tailings dam's activity
Active

Current tailings storage impoundment volume (Mm3)
11.7

Planned tailings storage impoundment volume in 5 years (Mm3)
18.4

Please explain
The current storage is 21Mt which equates to 11.7Mm3 (using an in-situ density of 1.8 t/m3) and adding deposition of 200000 t/month or 111000m3/month for 5 years will take it to 18.4Mm3. The Booysendal North TSF was inherited with the purchase of the Everest mine and is a sidehill, upstream, cyclone facility located downstream from the Booysendal South concentrator , equipped with its own return water dam for the storage of process and storm water, The facility consists of two sections, Phase 2 and Phase 3, which will ultimately be consolidated into one. An expansion is planned, Phase 4, which will cater for Life of Mine tailings deposition requirements. The facility was constructed prior to the regulatory requirement for impermeable lining and is unlined.

W-MM3.2c/W-CO3.2c

(W-MM3.2c/W-CO3.2c) 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
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	In South Africa, Mine residue deposits are regulated by law in terms of the Guideline for the Compilation of a Mandatory Code of Practice on Mine Residue Deposits issued by the Department of Mineral Resources and Energy in 2000. This guideline makes the implementation of the SANS 10286 Code of Practice for Mine Residue Deposits compulsory; hence making SANS 10286 secondary legislation. Mandatory codes of practice (operating procedures) have been developed for Zondereinde, Booysendal and Eland's tailings storage facilities (TSFs) i.e.all of Northam's TSF's. These operating procedures comply with SANS 10286: 1998. Northam's safe operating procedure details the TSFs' emergency response plans. The aims of this procedure include: 1. To prescribe the minimum requirements in the event of the tailings dam wall failure and to ensure all affected parties are informed of the correct, proper and safe execution of the plan; 2. To prescribe the method of communication within the zone of influence to all the member mines, communities, authorities and companies that are directly and indirectly involved in case of a failure of the Tailings dam wall; 3. To ensure that SHEQ risks are minimised and controlled within the zone of influence in the event of a failure of the Tailings dam wall. The safe operating plan is approved by managers and engineers, including the engineer of record Scheduled and formalised independent reviews of Northam's TSFs and associated procedures are undertaken annually. A third-party review on the group's TSFs is undertaken on an annual basis. The last audit was undertaken in February 2023.

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.

Value chain stage
Direct operations

Coverage
Full

Risk assessment procedure
Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment
Annually

How far into the future are risks considered?
3 to 6 years

Type of tools and methods used
Enterprise risk management
International methodologies and standards
Other

Tools and methods used
Enterprise Risk Management
Environmental Impact Assessment
IPCC Climate Change Projections
ISO 14001 Environmental Management Standard
Other, please specify (External consultants)

Contextual issues considered
Water availability at a basin/catchment level
Water quality at a basin/catchment level
Stakeholder conflicts concerning water resources at a basin/catchment level
Water regulatory frameworks
Status of ecosystems and habitats
Access to fully-functioning, safely managed WASH services for all employees

Stakeholders considered
Customers
Employees
Investors
Local communities
NGOs
Regulators
Suppliers
Water utilities at a local level

Comment

Value chain stage
Supply chain

Coverage
Partial

Risk assessment procedure
Water risks are assessed as part of an established enterprise risk management framework

Frequency of assessment
Annually

How far into the future are risks considered?
1 to 3 years

Type of tools and methods used
Enterprise risk management
International methodologies and standards

Tools and methods used
Enterprise Risk Management
ISO 14001 Environmental Management Standard

Contextual issues considered
Implications of water on your key commodities/raw materials

Stakeholders considered
Suppliers

Comment

W3.3b

(W3.3b) 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.

	Rationale for approach to risk assessment	Explanation of contextual issues considered	Explanation of stakeholders considered	Decision-making process for risk response
Row 1	The security of water supply is currently recognized as one of the top twenty principal risks that our business faces. Our operations consume large quantities of water during the mining and processing of minerals; therefore water availability and good water quality are critical for production. Ensuring the effective integration of risk management into the company's activities is an essential objective. We recognize that water is a shared resource and we operate in areas where there is a huge demand for water from various commercial users. Specifically the Booysendal area. As a member of the Lebalelo Water Use Association the stress on water sources in that region is being considered, and Northam is also looking at future demand. We are aware that certain goods/services provided by other supply chain partners, such as timber, chemicals and Eskom (our electricity supplier) may be affected by water-related risks that may have the potential to have a substantive impact on our operations. However, we do not comprehensively assess water risks related to our supply chain. We plan to enhance the integration of supply chain water risks into our future risk assessments.	Water-related risks are considered together with operational risks. A range of water-related contextual issues are relevant for Northam because Northam considers its entire value chain and all key stakeholders as part of our assessment of risk.	From a regulator and water utility perspective, the terms of our water use and the allowable discharge of excess water into the natural environment is prescribed in our various water use licenses (WULs), which must be complied with. Our employees need portable water for their health. Additionally, the catchments used for our mining activities are shared with other communities. For example, Eland mine is in proximity to an aquifer and water is abundant, yet the neighboring community faces water scarcity. Therefore, potential risks include water related conflicts.	The management team is responsible for designing, implementing, and overseeing the risk management process, including the identification of risks and opportunities. They are held accountable to the Audit and Risk Committee. it is mandatory for the risk management process to occur at least once a year. The overall enterprise risk management process on a corporate level includes the assessment and identification of water-related risks and opportunities. Northam's integrated risk management framework is used through the ISO 14001 Environmental Management System to evaluate current and potential risks and opportunities, and to identify appropriate mitigation measures at site/facility level. External consultants have also facilitated a physical climate risk assessment process using IPCC climate change projections, which included considerations of drought, water stress, flooding and other water-related hazards. All of our mines operate under approved environmental impact assessments and associated EMPs which considered water related risks and impacts on ecological resources.

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?

When identifying or assessing water-related risks, Northam defines a substantive financial or strategic impact as an impact which has the potential to divert the operations and the business from our existing business plan and operational schedules, resulting in a disruption in production at our operations. A substantive climate-related risk may be as a result of unavailability of water and change in regulations. Such risks are identified through our risk assessment process. These risk assessments are typically done on an annual basis or when new activities or acquisitions are made. Risks are rated from minor to catastrophic. A risk is considered substantive if there is a financial impact of 1% of our revenue and/or asset base. Northam's revenue for FY22 was R34 billion and the asset value was R22 billion. As such, a substantive impact would be R340 million (revenue-based) and/or R220 million (asset-value based).

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	3	100	

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	Limpopo

Number of facilities exposed to water risk
1

% company-wide facilities this represents
26-50

Production value for the metals & mining activities associated with these facilities
2073000

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

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

% company's total global revenue that could be affected
51-60

Comment
Zondereinde Mine's production (in tonnes milled) was 23.8% of the Group's total production in FY22. The Zondereinde Mine houses most of the water intensive operations where 72.7% of the water consumed by the company in FY22 was at the Zondereinde Mine. The Zondereinde Smelter and Base Metals Refinery (BMR) treat all of Northam's concentrate. Although the smelter is a low consumer of water, together with the BMR there is still a significant water requirement.

Country/Area & River basin

South Africa	Olifants

Number of facilities exposed to water risk
1

% company-wide facilities this represents
26-50

Production value for the metals & mining activities associated with these facilities
5360256

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

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

% company's total global revenue that could be affected
31-40

Comment
Booysendal Mine's production (in tonnes milled) was 61.4% of the Group's total production in FY22. However, the Mine only contributed 8.8% to total water consumption by the company in FY22.

Country/Area & River basin

South Africa	Limpopo

Number of facilities exposed to water risk
1

% company-wide facilities this represents
26-50

Production value for the metals & mining activities associated with these facilities
1520548

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

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

% company's total global revenue that could be affected
1-10

Comment
Eland Mine's production (in tonnes milled) was 14.8% of the Group's total production in FY22, and the Mine contributed 18.4% to total water consumption by the company in FY22.

(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	Olifants

Type of risk & Primary risk driver

Chronic physical	Water scarcity

Primary potential impact
Reduction or disruption in production capacity

Company-specific description
Northam has identified that water scarcity may directly affect production capacity, particularly at Booysendal Mine which abstracts water from the Olifants River. The area in which the mine is located is already characterized by water scarcity and, according to a physical climate risk assessment compiled by an independent consultant during 2020 and updated during 2022, is at risk of increased frequency and severity of drought. As such, there is a risk that the amount of water available for operations may decline. Large volumes of water are used in the mining and processing of minerals and thus constrained water supply could result in operational downtime and loss of production.

Timeframe
1-3 years

Magnitude of potential impact
High

Likelihood
Likely

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
51200000

Potential financial impact figure - maximum (currency)
358420000

Explanation of financial impact
The financial impact of this risk can be quantified as a loss in operational continuity and consequently loss in production. In order to estimate this, the loss of revenue from a single day of operation was calculated. Booysendal Mine operates all days of the year and revenue in the reporting period was R18.96 billion.

Therefore, operational cessation for one day would reduce revenue by 0.27% (1 day divided by 365 operating days per year = 0.27%), resulting in approximately R51.20 million worth of revenue lost in one day.

Water shortages may often impact the operation for more than one day. An estimated revenue loss of approximately R358.42 million could be experienced if regional water shortages lasted for a week.

Primary response to risk
Increase capital expenditure

Description of response
Booysendal has undertaken various initiatives to address water scarcity, including:
- Significant investments in water infrastructure, including the erection of a 10 ML reservoir as a buffer against water supply disruptions.
- Participation in the feasibility study of the Lebalelo Water User Association / Olifants Management Model (OMM) Programme. The Programme aims to fast-track potable and bulk raw water infrastructure to contribute toward water security for communities and mines in the water-stressed Sekhukhune and Mogalakwena municipalities in Limpopo.
- During FY22, all operations updated their water balances. The water balances are dynamic and will allow for scenario planning to develop a water demand and conservation plan.
- We have also installed electronic flowmeters across some of the operations are continuously working to improve our metering. This allows highly accurate measurement of water volumes and thus enable better management of water resources.
- Northam's operations also prioritize the recycling and reuse of process water with the overall aim to reduce the consumption of potable water. In order to facilitate this, Booysendal implemented a water management system. In FY2022, 76.4% of the mine's water was recycled.

Cost of response
201610000

Explanation of cost of response
The water infrastructure installed had a cost of R111.72 million.
Booysendal contributed R12.43 million to the OMM water feasibility study.
The water management system had a cost of R76.46 million.
The cost of the water balance and water demand and conservation investigation is to total R1 million.
Together these sum up to R201.61 million.

Country/Area & River basin

South Africa	Limpopo

Type of risk & Primary risk driver

Acute physical	Rupture of tailings dams and toxic spills

Primary potential impact
Fines, penalties or enforcement orders

Company-specific description
Northam operates and manages four active tailings storage facilities (TSFs): two at Booysendal in the Mpumalanga and Limpopo Province, one at Zondereinde in Limpopo and one at Eland in the Northwest province. A tailings facility, by virtue of its very existence, poses a risk to the surrounding community and environment.

Eland Mine is water positive. Although this makes Eland resilient to water scarcity, proactive management and drainage of water is required to prevent on-site flooding risks. In the long-term future, projected changes in climate (including an increased frequency and severity of extreme flooding events) may lead to disruptions or infrastructure damage at the site. The main risk associated with flooding is potential failure of tailings storage facilities (TSFs). Failure of the TSF at Eland would cause a severe safety hazard to on-site personnel and people in the neighbouring environment, as well as severe environmental damage. Failure of the TSF would incur increased capital expenditures for the repair of this facility and may also incur additional costs due to wider environmental impacts, such as litigation and remediation costs.

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)
100900000

Potential financial impact figure - minimum (currency)
<Not Applicable>

Potential financial impact figure - maximum (currency)
<Not Applicable>

Explanation of financial impact
The failure of a TSF due to flooding could shut down the operation for approximately two weeks. Given that Eland's revenue for FY2022 was R2.67 billion, and that the mine operates 365 days of the year, one day's revenue can be calculated as approximately R7.2 million. This means that approximately R100.9 million in revenue is earned over two weeks (14 days). Operational shutdown for two weeks would therefore result in approximately R100.9 million in lost revenue. This excludes the potential reputational impact that may occur.

Primary response to risk
Improve monitoring

Description of response
The management of our mineral residue facilities and water systems and structures is centred on adopting best management practices and applying rigorous technical controls to prevent catastrophic failures of our tailings dams.

There are four layers of oversight in managing our tailings facilities namely
• Layer 1: The operator under the control of operational legal appointees, responsible for the day to day operational activities
• Layer 2: Engineer of Record (EOR) providing continuous support from initial design and construction, to monitoring and support.
• Level 3: Third party audits are undertaken on a quarterly basis and incorporate an assessment of structural stability, conformance to design, development and capacity evaluation and operational excellence in terms of code of practice and procedures.
• Layer 4: Scheduled and formalised independent annual reviews to determine: (1) whether the facility can be operated safely and effectively, (2) the level of risk to local communities and the environment, and (3) whether it meets applicable regulatory requirements and South African standards as amplified by emerging international “good practice” norms. These reports are submitted to HSE Board committee for review.

Northam undertakes ongoing maintenance at the TSFs. During 2023 at Eland, this included inter alia maintenance related to electrical components; pipes, valves and pumps, and safety measures. Additionally, the Eland TSF’s dam walls were preconstructed at the onset of the operation. It is an impoundment constructed from waste rock and is being infilled as the operations progress.

Cost of response
38170000

Explanation of cost of response
The operational and capital expenditure on Eland’s TSF controls for FY23 to-date is R38.17 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

South Africa	Limpopo

Stage of value chain
Other, please specify (Communities)

Type of risk & Primary risk driver

Reputation & markets	Community opposition

Primary potential impact
Loss of license to operate

Company-specific description
Although water is abundant at Eland mine, the Integrated Development Plan (IDP) and cluster documents of Madibeng Local Municipality (MLM) indicate that there is a shortage of potable water in the local communities around the mine. Given the intrinsic social responsibility of the mine for supporting the well-being of local communities, there is expectation that the mine assist in supplementing the availability of potable water. A failure to meet this expectation could be met with community grievances and social unrest, causing disruptions to the mine's operations through protest or riot activity. In May 2022 such an event took place in Musina. After a shutdown to their municipal water supply, the community blocked various roads in protest, including the road to a nearby mine, thereby interrupting access to site. Although the mine had not directly caused the water interruption, mine management worked in collaboration with local municipalities to efficiently and safely resolve the issue. Recent unrest at Northam's Eland Mine resulted in road blockages and impeded access to the mine – although unrelated to water supply challenges, it illustrated the detrimental impacts community unrest can have on Northam's operations.

Timeframe
1-3 years

Magnitude of potential impact
Medium-high

Likelihood
Likely

Are you able to provide a potential financial impact figure?
Yes, an estimated range

Potential financial impact figure (currency)
<Not Applicable>

Potential financial impact figure - minimum (currency)
50500000

Potential financial impact figure - maximum (currency)
101000000

Explanation of financial impact
Given that Eland's revenue for FY2022 was R2.67 billion, and that the mine operates 365 days of the year, one day's revenue can be calculated as approximately R7.2 million. This means that approximately R50.5 million in revenue is earned over one week (7 days) - equivalent to the financial impact of community unrest should such activity disrupt operations for a week. In the case unrest lasts for two weeks, the resulting operational shutdown would result in approximately R101 million in lost revenue.

Primary response to risk

Direct operations	Increase capital expenditure

Description of response
Eland mine is working with MLM on a major potable water supply project to increase its supply capacity for potable water by approximately 1.5 million litres a day. The water project includes a new Water Treatment Plant, a reservoir and a pipeline that will connect to the already existing infrastructure at the community. Construction is aimed to take place in 2024. So far, the Water Treatment Plant designs have been completed . Geophysics studies and an EIA will be conducted. Landowners for the route will be consulted.

Cost of response
6400000

Explanation of cost of response
Eland Mine's has set aside R6.4 million rand for the project (with a total contribution to the project to-date as at end-July 2023 of R2.93 million).

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
Markets

Primary water-related opportunity
Improved community relations

Company-specific description & strategy to realize opportunity
Northam has implemented specific community projects in response to the needs of the communities wherein we operate, in order to fulfil our Social and Labour Plan (SLP) commitments, maintain our Social License to Operate and create positive social change. In the Limpopo River basin, at our Eland and Zondereinde operations, we have implemented various Social and Labour Plan initiatives related to water, sanitation and hygiene (WASH). The installation of prepaid water meters in the community surrounding Zondereinde was completed with a total budget of R10.5 million from 2021 to 2022. Provision of flushing toilets and clean drinking water at various schools in the Eastern Cape which is an employee base for the Zondereinde: Total budget: R10million at R2.25 million per annum from 2021 to 2025. Zondereinde budgeted R14.5million to upgrade school infrastructure including ablution facilities at various schools surrounding Zondereinde operations between 2021 and 2025.
Eland has initiated a water supply project for local community at a budget of R6.4 million for 2021-2025. Booysendal in in the process of refurbishing a main sewer plant in the community at a budget of R12 million (2022-2025). Total budget from 2021 to 2025 is: R53.4million of which close to 50% has already been spent.

Estimated timeframe for realization
Current - up to 1 year

Magnitude of potential financial impact
Medium

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
53400000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact
The financial impact disclosed is representative of the investments made and to be made into the community, equated to direct expenditure on SLP initiatives.
The budget is R53.4million for the period 2021 to 2025, of which, close to 50% has already been spent.

Type of opportunity
Efficiency

Primary water-related opportunity
Improved water efficiency in operations

Company-specific description & strategy to realize opportunity
During FY2021, Northam implemented a dry slag granulation process. With this revised method, slag (a high-volume by-product from the metal smelting process) is tapped from the smelter furnace into specially designed bunker areas and is left for a period to solidify by means of atmospheric air cooling (instead of water cooling, as is used during the traditional method of water granulation). Thus, as a result of implementing, smelter water consumption significantly reduced. Simultaneously, dry slag granulation delivers energy savings and carbon emission reductions because it recovers the large amount of high-grade heat contained in molten slag. It also confers benefits for employee safety.

Estimated timeframe for realization
Current - up to 1 year

Magnitude of potential financial impact
Low

Are you able to provide a potential financial impact figure?
Yes, a single figure estimate

Potential financial impact figure (currency)
484000

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact
The process has resulted in average water consumption reductions of 50ML per month which, when multiplied by the cost per kilolitre of water (9.68/kl), equates to a yearly cost saving of approximately R484 000, which is about 1.6% of the total water bill at Zondereinde.

Type of opportunity
Efficiency

Primary water-related opportunity
Cost savings

Company-specific description & strategy to realize opportunity
Maximising water recycling, water saving initiatives and reduction of potable water intake is not only critical in terms of optimal water management but has a huge cost saving potential.

A reverse osmosis plant was installed at Zondereinde to clean process water for water use at the refrigeration plant instead of using freshwater from the Magalies Water Board. This clean 1.6Ml/day of water being pumped from underground. Instead of taking Magalies water, this cleaned water can now be utlised in the refrigeration units. Zondereinde also installed a smelter stormwater dam to improve effluent management and stormwater control. This captures water (including rainwater) for reuse. Additionally, Zondereinde Mine makes use of hydromining. As part of this process, the mine's underground equipment such as drills, water jets and loaders, are powered by a water pressure head, a technical innovation pioneered and refined over time by Northam. Due to the heightened pressure of the water used in the drilling process, much

less water is needed to perform the activities than in a conventional mine: only 10% of the volume of water which would be required in conventional compressed air drilling, which uses water to flush the drill holes before charging.

In general, Northam is continuing to improve data collection and monitoring since more accurate data help to modernise water analytics, reporting and process control, which also contributes towards water efficiency and cost savings.

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)
91077600

Potential financial impact figure – minimum (currency)
<Not Applicable>

Potential financial impact figure – maximum (currency)
<Not Applicable>

Explanation of financial impact
Cost savings from avoided water withdrawal due to hydromining is calculated as follows. The approximate ratio of water consumption to ton of rock mined in a conventional, high temperature mine is 7 m^3 water / ton rock mined. Northam water consumption averages 3.5 m^3 water / ton rock mined. The total tons mined per month is approximately 210 000. Thus savings on water consumed is 210 000 tons per month x 3.5 m^3 water / tonnes rock = 735 000 m^3 water per month, and 8 820 000 annually m^3. The cost per kilolitre of water is R9.68/kl, thus total savings are R85 377 600.
Cost savings due to avoided water withdrawal is calculated as 16000 litres saved per day multipled by 365 days in a year multiplied by the cost of water (R9.68 per litre), which amounts to R5.7million.
Together, these two initiatives amount to R91 077 600 in savings.

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)
Zondereinde

Country/Area & River basin

South Africa	Limpopo

Latitude
-24.6

Longitude
27.4

Located in area with water stress
Yes

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

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
2564

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
230

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
2334

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)
2564

Comparison of total consumption with previous reporting year
Lower

Please explain
At our mines, we adhere to zero-discharge operations. Additionally, the majority of water consumed is previously used water which has been recycled, meaning that the total water consumption significantly is greater than total water withdrawals, and that withdrawals decrease year-on-year.

Facility reference number
Facility 2

Facility name (optional)
Booysendal

Country/Area & River basin

South Africa	Olifants

Latitude
-25.1

Longitude
30.1

Located in area with water stress
Yes

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

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
755

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
44

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
712

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)
755

Comparison of total consumption with previous reporting year
Lower

Please explain
At our mines, we adhere to zero-discharge operations. Additionally, the majority of water consumed is previously used water which has been recycled, meaning that the total water consumption significantly is greater than total water withdrawals, and that withdrawals decrease year-on-year.

Facility reference number
Facility 3

Facility name (optional)
Eland

Country/Area & River basin

South Africa	Limpopo

Latitude
-25.6

Longitude
27.8

Located in area with water stress
No

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

Oil & gas sector business division
<Not Applicable>

Total water withdrawals at this facility (megaliters/year)
2709

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
664

Withdrawals from groundwater - non-renewable
0

Withdrawals from produced/entrained water
0

Withdrawals from third party sources
752

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)
2709

Comparison of total consumption with previous reporting year
Higher

Please explain
At our mines, we adhere to zero-discharge operations. Additionally, the majority of water consumed is previously used water which has been recycled, meaning that the total water consumption significantly is greater than total water withdrawals, and that withdrawals decrease year-on-year. At Eland, the ramping up of production and the acquisition and integration of the neighbouring Maroelabult mine during FY2022 did result in higher levels of water withdrawal when compared with prior year.

W5.1a

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

Water withdrawals – total volumes

% verified
76-100

Verification standard used
This indicator is subjected to annual limited assurance by a third party in accordance with ISAE 3000 (Revised) standards.

The percentage of water recycled, as a proportion of the total water consumption, serves as our chosen water-related indicator. This indicator is subjected to annual limited assurance by a third party in accordance with ISAE 3000 (Revised) standards. As part of the assurance process, the total volumes of water withdrawals are verified, as they are integral to calculating the percentage of recycled water.

Please explain
<Not Applicable>

Water withdrawals – volume by source

% verified
76-100

Verification standard used
This indicator is subjected to annual limited assurance by a third party in accordance with ISAE 3000 (Revised) standards.

The percentage of water recycled (as a percentage of total water consumption) is currently our selected water-related indicator which is verified in terms of limited assurance by a third party. The percentage of water recycled undergoes annual limited assurance in accordance with ISAE 3000 (Revised). As part of the assurance, water withdrawal volumes by source are verified, as they form part of the calculation of recycled water.

Please explain
<Not Applicable>

Water withdrawals – quality by standard water quality parameters

% verified
Not verified

Verification standard used
<Not Applicable>

Please explain
The percentage of water recycled, measured as a ratio of the total water consumption, is the selected water-related indicator for Northam. This indicator undergoes annual limited assurance by a third party, following the guidelines of ISAE 3000 (Revised). It is important to note that currently, the quality of water withdrawals is not subject to third-party verification, as it is not a high priority indicator at this time.

Water discharges – total volumes

% verified
Not relevant

Verification standard used
<Not Applicable>

Please explain
Northam's mines strictly adhere to zero-discharge operations, meaning that water discharges are irrelevant to our operations.

Water discharges – volume by destination

% verified
Not relevant

Verification standard used
<Not Applicable>

Please explain
Northam's mines strictly adhere to zero-discharge operations, meaning that water discharges are irrelevant to our operations.

Water discharges – volume by final treatment level

% verified
Not relevant

Verification standard used
<Not Applicable>

Please explain
Northam's mines strictly adhere to zero-discharge operations, meaning that water discharges are irrelevant to our operations.

Water discharges – quality by standard water quality parameters

% verified
Not relevant

Verification standard used
<Not Applicable>

Please explain
Northam's mines strictly adhere to zero-discharge operations, meaning that water discharges are irrelevant to our operations

Water consumption – total volume

% verified
Not verified

Verification standard used
<Not Applicable>

Please explain
The percentage of water recycled, calculated as a proportion of the total water consumption, serves as our chosen water-related indicator. This indicator undergoes annual limited assurance conducted by a third party in accordance with ISAE 3000 (Revised) standards. However, it is important to note that currently, the total volumes of water consumption are not subject to third-party verification.

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	Commitment to align with international frameworks, standards, and widely-recognized water initiatives Commitment to stakeholder education and capacity building on water security Commitments beyond regulatory compliance Other, please specify (description of water-related performance standards for direct operations)	Water aspects have been included on a general basis in the company-wide Environmental Policy and Sustainability Policy. These policies are available on the Northam Group website. They provide clear commitments in terms of legislative requirements and environmental practices, commitment to continual improvement, engagement, and awareness. They also include pollution prevention by minimizing water effluents and effective and efficient water use. All these aspects are material to Northam and provide the framework for environmental management. Additionally, compliance requirements at all operation sites are outlined in each site's Northam's Integrated Water Use Licenses (IWUL) and Integrated Waste and Water Management Plans. Northam is in the process of developing a standalone water policy as part of its work related to the Taskforce on Nature-related Financial Disclosures.

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 or committee	Responsibilities for water-related issues
Board-level committee	The Health, Safety, and Environmental (HSE) Board-level committee, designated by the Northam Board, is responsible for overseeing and approving environmental policies, monitoring performance, and ensuring compliance, including water-related issues. The chief executive officer (CEO) holds the responsibility for formulating and executing strategies and policies, being accountable to the Board through the HSE committee. The chairperson of the HSE committee provides regular reports to the Board on a quarterly basis, covering new developments, performance, and compliance. Management is accountable to the Board for integrating risk management and environmental concerns, including water-related matters, into the day-to-day operations of the company. The Committee closely monitors our water related impacts. Recently they have requested that an independent wetland impact assessment be undertaken at the Zondereinde operations and to investigate whether an artificial wetland will of be assistance to the ZE water balance. The Board has established internal controls to ensure proper management of risks. The executive committee is responsible for implementing and executing strategies in alignment with the organization's governance structures. In the upcoming fiscal year (FY2023), the HSE Committee will prioritize the ongoing assessment and monitoring of the group's progress in achieving efficient water usage and management.

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 major capital expenditures Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding corporate responsibility strategy Reviewing and guiding major plans of action Reviewing and guiding risk management policies Reviewing and guiding strategy Reviewing innovation/R&D priorities Setting performance objectives	The Board Health, Safety, and Environmental (HSE) committee evaluates and oversees Northam's environmental performance, plans, norms, conformity, and developments, including climate-related challenges. The HSE committee meets formally once a quarter. The HSE committee gets written accounts, presentations, and oral testimonies on climate-related and water-related performance from management and outside specialists on a quarterly basis. In the event of non-/poor performance, the HSE committee is obligated to make suggestions to correct the issue. The Board gets reports summarizing corporate performance from the chairman of the HSE committee for approval or disapproval. Performance is measured against predetermined/agreed-upon goals and objectives with management.

W6.2d

(W6.2d) Does your organization have at least one board member with competence on water-related issues?

	Board member(s) have competence on water-related issues	Criteria used to assess competence of board member(s) on water-related issues	Primary reason for no board-level competence on water-related issues	Explain why your organization does not have at least one board member with competence on water-related issues and any plans to address board-level competence in the future
Row 1	Yes	Northam utilized a competency assessment to examine the competencies of our board members, with reference to the Environmental, Social and Governance considerations, which include climate change and water subject matter. Based on the survey, we confirmed that four of our board members have a level of experience with sustainability, and especially climate change. This allowed Northam to ensure that the competence of our Board members in terms of Sustainability and climate-change related issues is met.	<Not Applicable>	<Not Applicable>

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)

Water-related responsibilities of this position
Assessing future trends in water demand
Assessing water-related risks and opportunities
Managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
More frequently than quarterly

Please explain
The HSE committee holds responsibility for overseeing environmental matters, including water-related issues. On a monthly basis, reports on environmental management issues are submitted to the operational general managers and the CEO and on a quarterly basis, they are presented to the HSE committee. The CEO and general managers of the sites carry the accountability for environmental compliance and performance. The HSE committee's role includes ensuring the group's performance in areas of sustainability particularly with regards to their impact on employees and communities in the operational areas. The committee maintains oversight of policies, records, and reporting systems. Additionally, the committee remains informed about all risks pertaining to water usage and conservation, ensuring the organization stays abreast of the challenges and opportunities associated with water management.

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	All managerial staff from middle management level and above are incentivised through the Northam share incentive plan. Applicable staff are eligible for a monetary reward based on performance factors including operational expenditure. For example, purchased water is considered a major cost component, driving down water consumption, which as a result drives down emissions, is incentivized. The target of 75% water recycled is a dedicated water related KPI included in the annual bonus incentive programme.

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	Contribution of incentives to the achievement of your organization's water commitments	Please explain
Monetary reward	Chief Executive Officer (CEO) Other, please specify (Group Management)	Improvements in water efficiency – direct operations	Northam implements an incentive program to motivate and reward employees to achieve our established objectives. Notably, in FY2022, we successfully attained our target of surpassing a 75% water recycling rate. We were able to achieve a water recycling rate of 84% for our process water.	The Northam share incentive plan provides incentives to all managerial staff at the middle management level and above. These employees have the opportunity to receive monetary rewards, "bonuses", based on their performance in managing important physical risks, maintaining operational continuity, and controlling operating costs. Achieving a water recycling rate of over 75% is a significant aspect of our site-level water management goals and activities. This means improving the water efficiency of our direct operations. Site water recycling rates are considered as an indicator of our water performance because higher rates of recycling and efficiency help reduce our water consumption and reliance on it. The performance of senior management in these areas is evaluated every six months at the group level. Further, the CEO has an incentive (bonus as a % of salary) related to water recycling.
Non-monetary reward	Please select	Please select		

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

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?

As a group, Northam participates in various regional water forums with the goal to improve water conservation and management. Other participants include the Department of Water Affairs and Sanitation, mining companies, and other water users. We are also members of and engage with local water boards and associations where we operate: Lebalelo Water User Association at Booysendal; Hartbeespoort Irrigation Scheme at Eland and Magalies Water Board at Zondereinde.

Internally, the HSE Board-level committee holds the responsibility for overseeing environmental matters, including engagement and water-related issues. The committee ensures that activities aimed at influencing water-related policy are effectively managed. It also assesses/monitors compliance with group policies, standards and legal and regulatory requirements, ensuring alignment with internal and external policies and standards. If any inconsistencies in water policy are identified, the HSE committee is responsible for conveying its findings to the board. The board then considers, reviews, and makes decisions to rectify the inconsistency. The HSE committee plays a vital role in ensuring that water-related policies are in line with the organization's objectives and expectations.

As a member of the Minerals Council of South Africa's Environmental Policy Committee we engage directly with regulators and are provided the opportunity to comment on draft national policies, legislation and guidelines.

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)

summarised-financial-results-2022-final.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	5-10	Water supply risks are integrated into Northam's risk management process. As a mining company, Northam relies on the availability of water for employee WASH facilities and specifically production processes during day-to-day operations. Water is critical in achieving our long-term strategic objectives of generating and returning value (i.e., beyond 30 years). Northam has identified water supply as a top twenty principal risks for the business. Water use and efficiency is ranked 14 for FY2022 in our materiality matrix.
Strategy for achieving long-term objectives	Yes, water-related issues are integrated	5-10	We have pursued a strategy of countercyclical investment in both acquisitions and organic growth. In formulating our strategy and determining our strategic priorities, we continue to consider those issues that are most material to the business and stakeholders, influence the sustainability of our business and the social, economic, and physical environments in which we operate, and which fundamentally influence the assessments and decisions of stakeholders. Water supply is a principal business risk to Northam. Operating in water-stressed regions, Northam recognizes the importance of optimizing its water usage through reuse and recycling processes. In FY2022, we reduced freshwater consumption by maximizing water recycling. We recycled 84% of water through the storage and reuse of industrial water in its processes. We have a target to keep group water usage above 75% recycled water. The year prior, we installed new electronic flowmeters across some of our operations. We have also added scenario analysis module at Zondereinde mine to identify opportunities for improvement and efficiency A shaft-based hydromining system at the Zondereinde mine uses water as its primary source of energy for its underground mining operations. Northam recognizes the importance of optimizing its water usage through reuse and recycling processes and operates on a zero-discharge policy. The vital role water plays is highlighted in regular water awareness campaigns across our operations.
Financial planning	Yes, water-related issues are integrated	5-10	As part of our integrated risk management process, we consider the financial implications of water-related risks and opportunities and their impact on our financial objectives and performance. Capital expenditure on water-related infrastructure also forms a key part of our long-term strategic financial planning to ensure the sustainability of our operations. In FY2022 our Zondereide operations, we recycled 90% of the water used, compared to an 88% recycling rate in FY2021. Zondereinde operations rely on hydropower to drive underground mining equipment and assist with cooling. The site takes potable water from the Magalies Water Board but operates a virtually closed-loop water system, which keeps withdrawals to a minimum. At all our operations to aim to minimize our reliance on potable and bulk water supply from external sources through water optimization and recycling initiatives. At some of our operations water withdrawals include the abstraction from boreholes and fissure water. For the community water supply, Northam also invests in water supply and sanitation projects for local communities through its community investment programmes and social and labour plans.

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)

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

Water-related OPEX (+/- % change)

22

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

20

Please explain

For FY22, Zondereinde (ZE) implemented effluent and stormwater control at the smelter (R108m since 2019), stormwater control at the concentrator, the desilting of the evaporation and TSF return water dam and an RO plant (R18m). At Booysendal (BD), two RO plants were installed and more flow meters were fitted. The construction of more stormwater containment facilities will continue in FY23 and, at ZE, a pilot system to reduce freshwater use / improve water recovery will be implemented. At Eland, we plan to install an RO system on the existing water treatment plant. At BD South, the tailings dam is being expanded. BD's water separation system is also being improved. Across all sites, there was OpEx related to bulk raw, potable water projects, piping and update of water balances. The 20% increase in OpEx spend between FY21/FY22 was due to planned increases in production, particularly BD and Eland. BD water costs also included costs associated with the Lebalelo Water Use Association.

W7.3

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

	Use of scenario analysis	Comment
Row 1	Yes	To improve water conservation and management, Northam has improved monitoring and metering to produce more dynamic modelling to optimize water containment, re-circulation, and free board control challenges. We have added a scenario analysis module to the model at Zondereinde mine to identify opportunities for improvements and to assist with the planning and execution of mining and processing projects, the modelling includes water variables.

W7.3a

(W7.3a) Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced your organization's business strategy.

	Type of scenario analysis used	Parameters, assumptions, analytical choices	Description of possible water-related outcomes	Influence on business strategy
Row 1	Climate-related	Northam conducted a climate-related scenarios analysis in 2020 for the Booysendal and Zondereinde operations. The analysis used timeframes from a present-day baseline until 2050. The emission scenario RCP 8.5 was utilized to represent the worst case 'business as usual' situation with high emissions throughout the 21st century. The analysis was extended to cover Eland in 2023 for the same time period under SSP 8.5 (the equivalent scenario using newer climate models). The scenario analysis was carried out with the objective to examine the effects of the changing climate on the company's operations and to establish effective solutions (climate adaptation). The analysis sought to determine which risks climate change would pose to Northam's sites over various timeframes, assuming a 'business-as-usual' scenario. Additionally, within FY 2022, our Zondereinde tailings facility included a scenario analysis module.	By 2050, for all operations, the water-related analysis showed a significant increase in water stress and drought, and a moderate increase in heavy rainfall storm events, heavy precipitation, and flooding. The potential impacts could include physical damage to infrastructure, a disruption in operations and maintenance, reduced operational capacity of site equipment, increased expenditure on water and electricity, tailings dam breaches, ground and water pollution and increased frequency of safety incidents, and ultimately losses in revenue and compromised profitability. Site specific vulnerabilities were also identified. For example, Zondereinde is particularly vulnerable to the impacts of flooding given its deep underground operations, and ecological impacts are relevant to the biodiversity offset/conservation area adjacent to the Booysendal mine. Various adaptation and general risk mitigation measures were identified as part of the analysis and are in the process of being financially quantified and scheduled.	Northam has identified water supply as a principal risk due to the potential of significant increase in drought projected by the scenario analysis. As a result, water supply is being managed as part of the company's risk management process. Northam's primary aim of its water conservation and demand programs is to reduce freshwater consumption by maximizing water recycling. This includes conducting water balance updates to identify short and long-term water conservation and demand management projects, the results of which will be considered in the next reporting year. To support its medium-term strategic growth target for Eland and Zondereinde, Northam has commissioned a new water purification plant to supply potable drinking water and top-up water for production. Managing the climate-related increase in water scarcity is viewed as critical to achieving Northam's long-term strategic objectives, which extend beyond five years. Moreover, for FY 2022, Northam has launched a new responsible sourcing standard applicable to all Northam suppliers outlining requirements and legal compliance and suppliers' management of ESG issues, including climate change management, and water monitoring and usage efficiencies.

W7.4

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

Row 1

Does your company use an internal price on water?

No, and we do not anticipate doing so within the next two years

Please explain

Northam has not yet set an internal price on water. Northam considers our existing and ongoing water management systems to be sufficient for our business without the need for setting an internal price on water. Northam has robust water management systems; high water recycling rates (84% in 2022); low direct and indirect water supply costs; access to onsite boreholes and the fact that Eland remains a water positive mine. The Eland mine is a water positive operation with an agreement in place with the Hartbeespoort Irrigation Scheme for bulk water to supplement Eland's water requirements. There is currently no strategic, operational, or financial imperative to assess an internal price on water.

W7.5

(W7.5) Do you classify any of your current products and/or services as low water impact?

	Products and/or services classified as low water impact	Definition used to classify low water impact	Primary reason for not classifying any of your current products and/or services as low water impact	Please explain
Row 1	No, and we do not plan to address this within the next two years	<Not Applicable>	Important but not an immediate business priority	Northam produces platinum group metals (PGMs), mining operations use large amounts of water especially for extraction activities. We have a target to recycle at least 75% of all water usage. In FY2022, we surpassed this target by using 84% recycled water. However, Northam does not yet have a criterion in place which can classify their PGMs as having low water impact.

W8. Targets

W8.1

(W8.1) Do you have any water-related targets?

Yes

W8.1a

(W8.1a) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

	Target set in this category	Please explain
Water pollution	No, and we do not plan to within the next two years	Northam recognizes the vital importance of efficiently managing and controlling stormwater, wastewater, and tailings to safeguard the integrity of surface water and groundwater in the vicinity of our operations. Our operational practices include robust stormwater controls that ensure the segregation of clean and contaminated water, effectively containing any potential pollutants. While our Integrated Water Use Licenses (IWULs) permit specific volumes and quality of wastewater discharge, our overarching objective is to achieve zero discharges into the environment.
Water withdrawals	No, and we do not plan to within the next two years	At all our operations we aim to minimize our reliance on potable and bulk water supply from external sources through improved water optimization. At some of our operations water withdrawals include the abstraction from boreholes and fissure water. In FY22 we withdrew minimal potable water from local sources minimizing our potential impact on local communities and other water users.
Water, Sanitation, and Hygiene (WASH) services	No, and we do not plan to within the next two years	Northam has a goal in place to provide access to water in the local communities neighbouring our operations. Northam has Social and Labour Plans (SLPs) in place at each of our operations which include specific projects for development of the surrounding communities. Eland is currently formulating a supply agreement with the MLM to ensure water is provided to local community projects through a new water treatment facility, a reservoir and a pipeline that will connect with existing infrastructure supplying the community. Booysendal also provided financial contributions towards the feasibility phase of the Lebalelo water project and has been involved in drilling new boreholes and refurbishing existing ones and installing water distribution infrastructure. Additionally, pre-paid water meters have been installed in Northam town, the main settlement serving the Zondereinde mine and, as a result, the Local Municipality plans to install similar meters to other communities close to the mine.
Other	Please select	<Not Applicable>

W8.1b

(W8.1b) Provide details of your water-related targets and the progress made.

Target reference number

Target 1

Category of target
<Not Applicable>

Target coverage
Company-wide (direct operations only)

Quantitative metric
Other, please specify (% increase in water use met through recycling/reuse))

Year target was set
2020

Base year
2019

Base year figure
28979

Target year
2030

Target year figure
7245

Reporting year figure
32114

% of target achieved relative to base year
-14.4244041593816

Target status in reporting year
Achieved

Please explain
The primary aim of our water conservation and demand programmes is to reduce freshwater consumption by maximizing water recycling. We aim to recycle at least 75% of all water used in our operations. In F2022, we recycled 84%.

Target reference number
Target 2

Category of target
<Not Applicable>

Target coverage
Company-wide (direct operations only)

Quantitative metric
Other, please specify (Zero discharge)

Year target was set
2020

Base year
2019

Base year figure
0

Target year
2030

Target year figure
0

Reporting year figure
0

% of target achieved relative to base year
<Calculated field>

Target status in reporting year
Achieved

Please explain
All of Northam's operations have a zero-discharge policy. Performance against this target of zero discharge is monitored at all operations. In FY2022, we reported one incident of accidental discharge of water at our Booysendal operation.

Target reference number
Target 3

Category of target
<Not Applicable>

Target coverage
Company-wide (direct operations only)

Quantitative metric
Other, please specify (Constant water intensity in kl of water consumption per tonne milled)

Year target was set

2020

Base year
2019

Base year figure
6.9

Target year
2030

Target year figure
10

Reporting year figure
4.4

% of target achieved relative to base year
-80.6451612903226

Target status in reporting year
Achieved

Please explain
Given the fact that Northam is ramping up its operations, its aims to reduce the amount of water consumed per tonne of ore milled as opposed to absolute water consumption, by creating efficiencies in its processes and improving recycling rates.

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	Group percentage of water recycled	ISAE 3000	Independent limited assurance was provided for the indicator 'Percentage of water recycled at operations' at Northam Platinum Holdings limited for the period ended on 30 June 2022. More specifically, assurance was provided for water that is recycled and reused at Northam's operations as a result of processing to produce its primary products and has to consequently been managed by the operation, as a percentage of total water use. Recycled water must be reported separately to avoid double counting. For Northam, the three important streams of recycled water are 1) Water recycled back in the refrigeration cooling process; 2) Industrial wastewater recycled through the sewage treatment facility; and 3) Water recycled through the dirty water circuit.

W10. Plastics

W10.1

(W10.1) Have you mapped where in your value chain plastics are used and/or produced?

	Plastics mapping	Value chain stage	Please explain
Row 1	Not mapped – and we do not plan to within the next two years	<Not Applicable>	Plastic is not currently a material issue for Northam.

W10.2

(W10.2) Across your value chain, have you assessed the potential environmental and human health impacts of your use and/or production of plastics?

	Impact assessment	Value chain stage	Please explain
Row 1	Not assessed – and we do not plan to within the next two years	<Not Applicable>	Plastic is not currently a material issue for Northam.

W10.3

(W10.3) Across your value chain, are you exposed to plastics-related risks with the potential to have a substantive financial or strategic impact on your business? If so, provide details.

	Risk exposure	Value chain stage	Type of risk	Please explain
Row 1	Not assessed – and we do not plan to within the next two years	<Not Applicable>	<Not Applicable>	Plastic is not currently a material issue for Northam.

W10.4

(W10.4) Do you have plastics-related targets, and if so what type?

	Targets in place	Target type	Target metric	Please explain
Row 1	No – and we do not plan to within the next two years	<Not Applicable>	<Not Applicable>	Plastic is not currently a material issue for Northam.

W10.5

(W10.5) Indicate whether your organization engages in the following activities.

	Activity applies	Comment
Production of plastic polymers	No	
Production of durable plastic components	No	
Production / commercialization of durable plastic goods (including mixed materials)	No	
Production / commercialization of plastic packaging	No	
Production of goods packaged in plastics	No	
Provision / commercialization of services or goods that use plastic packaging (e.g., retail and food services)	No	

W11. Sign off

W-FI

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

W11.1

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

	Job title	Corresponding job category
Row 1	Executive: Sustainability	Other, please specify (C-Suite Officer)

Submit your response

In which language are you submitting your response?
English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please indicate your consent for CDP to share contact details with the Pacific Institute to support content for its Water Action Hub website.
Yes, CDP may share our Main User contact details with the Pacific Institute

Please confirm below
I have read and accept the applicable Terms