

Welcome to your CDP Water Security Questionnaire 2020

W0. Introduction

W0.1

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

Johnson Matthey is a leader in sustainable technologies. Today, some 87% of the group's sales represent products and services which provide sustainability benefits through their positive impact on the environment, resource efficiency or our health, as determined by their alignment with the UN SDGs.

Our business is divided into four sectors for reporting purposes, based around the four different applications of our products:

1. Clean Air Sector - catalysts for gasoline and diesel powered vehicles, including hybrids, trucks buses, non-road machinery and stationary equipment
2. Efficient Natural Resources Sector - Catalyst Technologies and additives, licenses process technology and services to the chemical and oil & gas industry; precious metal marketing, distribution, refining and recycling services to a wide variety sectors from chemicals to jewellery; Advanced Glass pastes and enamels primarily for the automotive industry
3. Health Sector - Leading provider of complex chemistry solutions to generic and innovator pharmaceutical companies; develops and manufactures active pharmaceutical ingredients (APIs) for a variety of treatments
4. New Markets Sector - provides battery materials for automotive applications and battery systems for a range of non automotive applications; fuel cell technologies for automotive and stationary applications; Medical Device Components and advanced catalysts derived from precious metals to the pharmaceutical and agricultural chemicals markets

We have operations in over 30 countries and employ around 15,000 people worldwide.

Our latest annual integrated report can be found at <https://matthey.com/investors/report-archive/annual-report-2020>

For more information about Johnson Matthey, see our corporate website : www.matthey.com

W-CH0.1a

(W-CH0.1a) Which activities in the chemical sector does your organization engage in?

Specialty inorganic chemicals

Other, please specify

catalysts for the chemicals industry

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	April 1, 2019	March 31, 2020

W0.3

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

Argentina
Australia
Brazil
Canada
China
China, Hong Kong Special Administrative Region
Finland
Germany
India
Israel
Japan
Malaysia
Mexico
Netherlands
Poland
Republic of Korea
South Africa
Sweden
Switzerland
Thailand
United Kingdom of Great Britain and Northern Ireland
United States of America

W0.4

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

GBP

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

W1. Current state

W1.1

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

	Direct use importance rating	Indirect use importance rating	Please explain
Sufficient amounts of good quality freshwater available for use	Important	Important	All our manufacturing operations require a supply of clean water. In many cases we can, and do, use recycled water and perform the final purification step on site. All our strategic suppliers use water to perform their own mining or manufacturing operations to produce our raw materials; Some of our customers require large volumes of water for their manufacturing or processing operations using our products
Sufficient amounts of recycled, brackish and/or produced water available for use	Vital	Vital	All our manufacturing operations require a supply of clean water. In many cases we can, and do, use recycled water and perform the final purification step on site. All our strategic suppliers use water to perform their own mining or manufacturing operations to produce our raw materials; Some of our customers require large volumes of water for their manufacturing or processing operations using our products

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	100%	All sites operated by Johnson Matthey are required to report their total water withdrawals to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water withdrawals – volumes by source	100%	All sites operated by Johnson Matthey are required to report their total water withdrawals by source to JM Group annually, These data

		are typically collected from meter readings and then verified against water billing information.
Water withdrawals quality	100%	All sites monitor the quality of their incoming water to ensure it is fit for purpose. However, we do not collate information on water withdrawal quality at Group level, as it is not a useful KPI. All sites locally determine whether the water they are withdrawing of adequate quality to use for the purpose they require
Water discharges – total volumes	100%	All sites operated by Johnson Matthey are required to report their total water discharges to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water discharges – volumes by destination	100%	All sites operated by Johnson Matthey are required to report their total water discharges by destination to JM Group annually, These data are typically collected from meter readings and then verified against water billing information
Water discharges – volumes by treatment method	100%	All sites operated by Johnson Matthey are required to report their total water discharges to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water discharge quality – by standard effluent parameters	76-99	The majority of our manufacturing sites monitor water discharge quality using the COD method . Our sites manufacturing active pharmaceutical ingredients perform more detailed speciation analysis of wastewater on discharge.
Water discharge quality – temperature	Not monitored	This occurs at some manufacturing sites according to local permit requirements, but we do not collate information about it at Group level.
Water consumption – total volume	100%	All sites operated by Johnson Matthey are required to report their total water consumption to JM Group annually, These data are typically collected from meter readings and then verified against water billing information.
Water recycled/reused	100%	We monitor the recycling of water on our manufacturing sites, where the water passes through one of our on-site wastewater

		treatment facilities. We do not monitor re-use of water on a plant where there is no water treatment step necessary between uses.
The provision of fully-functioning, safely managed WASH services to all workers	100%	All JM manufacturing sites offer fully-functioning, safely managed WASH services to all workers. In most of our facilities which handle chemicals, changing, washing and showering is a mandatory requirement for all workers before leaving a facility.

W1.2b

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

	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Total withdrawals	2,430	Lower	total withdrawals dropped by 7% since last year. This was due to a drop in JM production output reduced during 2019/20 and the installation of a new water ring main at one of its biggest production facilities, to reduce leakage on the freshwater supply side.
Total discharges	1,679	About the same	Water discharged was broadly unchanged from previous year.
Total consumption	751	Lower	JM output reduced during 2019/20 and as a result less water was consumed across the business

W1.2d

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	51-75	About the same	Other, please specify WBCSD Global Water Tool	This includes all JM sites that are "water stressed" as defined using the WBCSD Water stress tool 2015. All JM

					manufacturing sites where the annual renewable water supply in 1995 was less than 1,700 m3 per person per year are included.
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W1.2h

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water, including rainwater, water from wetlands, rivers, and lakes	Relevant	64	Higher	More water extracted and used for process cooling at one of JM's sites. This is small increase relative to overall water usage.
Brackish surface water/Seawater	Not relevant			We don't use any brackish surface water/seawater
Groundwater – renewable	Relevant	53	Lower	One of our pharmaceutical plants stopped using renewable ground water to make its purified water switching to mains water instead as the source for the water purification plant
Groundwater – non-renewable	Relevant	55	Lower	One of our large plants in India increased water recycling and reuse on site and withdrew less non renewable groundwater.
Produced/Entrained water	Not relevant			We do not produce any water according to CDP definition..
Third party sources	Relevant	2,258	Lower	This is clean water purchased from municipal authorities. It has decreased by 6% this year.

W1.2i

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

	Relevance	Volume (megaliters/year)	Comparison with previous reporting year	Please explain
Fresh surface water	Relevant	118	Lower	Improvement in accuracy of measuring quantities sent to fresh surface water at a large UK site contributed to drop from the previous year.
Brackish surface water/seawater	Relevant	14	Lower	Reduction as UK site sent wastewater by tanker to treatment instead of discharging from site into Brackish water.
Groundwater	Not relevant			We do not discharge any water to ground water
Third-party destinations	Relevant	1,547	Higher	As a result of less wastewater being sent to Brackish water led to small increase in waste water sent to third party.

W-CH1.3

(W-CH1.3) Do you calculate water intensity for your activities in the chemical sector?

Yes

W-CH1.3a

(W-CH1.3a) For your top five products by production weight/volume, provide the following water intensity information associated with your activities in the chemical sector.

Product type

Specialty inorganic chemicals

Product name

vehicle emissions exhaust catalysts

Water intensity value (m3)

6.4

Numerator: water aspect

Total water withdrawals

Denominator

Ton

Comparison with previous reporting year

Much higher

Please explain

Intensity increased due to a reduction in global output that was higher as a percentage than the reduction in overall water usage.

Product type

Specialty inorganic chemicals

Product name

catalysts for the bulk chemicals industry

Water intensity value (m3)

38.2

Numerator: water aspect

Total water withdrawals

Denominator

Ton

Comparison with previous reporting year

Higher

Please explain

Intensity increased due to a reduction in global output that was higher as a percentage than the reduction in overall water usage.

W1.4

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

Yes, our suppliers

W1.4a

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

Row 1

% of suppliers by number

None currently, but we plan to request this within the next two years

Rationale for this coverage

It is early days in our supplier sustainability development program. We have a public target to have 100% of our strategic suppliers compliant with our code of conduct by 2025.

During FY2019/20 we committed to rolling out a revised Supplier Code of Conduct in 2020 which will include much enhanced environmental criteria on our suppliers, included the need to disclose water their use to us.

Water risks will then form part of our standard supplier environmental sustainability assessment process good forward.

Comment

W1.4b

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

Type of engagement

Onboarding & compliance

Details of engagement

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

% of suppliers by number

Unknown

% of total procurement spend

Unknown

Rationale for the coverage of your engagement

In 2018/19, 78 supplier sustainability assessments were undertaken across our sectors. These comprised formal on-site audits, desktop assessments and supplier self-assessments.

It is early days in our supplier sustainability development program and we have not yet reached all our suppliers with it. We have a public target is to have 100% of our strategic suppliers compliant with our code of conduct by 2025.

Impact of the engagement and measures of success

Measure of success is that we do not suffer an issues with product quality or supply due to water-related issues at the supplier's manufacturing facilities. We also do not suffer

any negative reputational impact from being associated with a supplier that does not manage its water activities to be benefit of its local communities.

Comment

W2. Business impacts

W2.1

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

Yes

W2.1a

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

Country/Area & River basin

China
Yangtze River (Chang Jiang)

Type of impact driver & Primary impact driver

Regulatory
Increased difficulty in obtaining withdrawals/operations permit

Primary impact

Diminished ability to reduce GHG emissions

Description of impact

Increased use of electricity to run a new on-site water treatment facility which reduces the salt content and eliminates chloride ions from the site's wastewater, before discharge to municipal sewer. Renewable electricity supplied from the grid is not available in this region of China

Primary response

Increase capital expenditure

Total financial impact

0

Description of response

During FY2018/19 we installed new waste water treatment at our Shanghai, China sites. Mechanical vapour recompression systems have been installed to reduce the salt content and eliminate chloride ions in the sites' waste water. The capital cost of this

equipment is confidential, but it is not material in our total CAPEX expenditure across Johnson Matthey. Annual Report 2019 page 59

W2.2

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

No

W3. Procedures

W-CH3.1

(W-CH3.1) How does your organization identify and classify potential water pollutants associated with its activities in the chemical sector that could have a detrimental impact on water ecosystems or human health?

JM manufactures and trades in chemicals and finished products into a number of sectors, e.g. pharmaceuticals, catalysis, precious metals, automotive, medical devices etc. Our manufacturing operations around the world are ISO14001 certified, or are working towards achieving certification following acquisition.

JM has corporate policies that require operations to actively manage discharges to surface and ground waters, minimising polluting releases. This requires maintaining an inventory of actual and potential discharges, developing an understanding of their toxicity and potential impacts, and establishment of targets for improvement. Our corporate EHS assurance team undertakes comprehensive audits of our site's compliance with these policy requirements and associated procedures on a regular basis (sites are generally audited every 2-3 years depending on size and type of operation, risk profile etc.). Audit findings are reported via our Group EHS Leadership Committee (Chaired by a JM Board Member) into the Group Management Committee.

Sites will specifically target substances identified on the basis of toxicity, persistence and bioaccumulation, also taking into account specific criteria and substances laid down in applicable legislation, e.g. Water Framework Directive in the EU and site permits. Again, we have corporate policies (which are subject to regular audit), e.g. New Product Introduction – Product Stewardship, which require sites to review toxicity of raw materials, intermediates and finished products as part of the product development process. Materials are classified, by experienced toxicology and regulatory affairs teams, according to the prevailing hazard classification system in the country of operation, which is generally to UN-GHS. As products move to commercial scale, (eco)toxicity data will be generated according to applicable test guidelines in support of chemical notifications/registrations such as EU-REACH. In addition, these data and the associated chemical safety assessments will directly impact the guidance (safety data sheets) issued to customers on how to minimise impacts of potential water pollutants from our products during their use-phase.

Given the nature of our business, it is inorganic and heavy metal substances that constitute the predominant potential water pollutants on our sites. Through our memberships at trade

associations such as Eurometaux and Cefic, we are able to monitor developments in regulations, hazard characterisation methodologies e.g. HERAG and MERAG, and risk management measures across relevant sectors to JM.

In 2016/17 we introduced a more detailed reporting system for waste disposal across the group, allowing us the better track and report the considerable efforts our sites are making in minimising their waste streams and disposing of waste in the most responsible way. These data are also helping to highlight areas where additional focus is required, e.g. it has led to the drive to reduce the amount of dilute aqueous hazardous waste from one of our refineries requiring third-party (off-site) treatment.

In 2017 we implemented a programme to review chemistries relevant to JM that may be considered high hazard, or potentially facing regulatory or stakeholder pressures, with an aim of developing a list of substances that require prior approval from senior management before entering into new product R&D with that substance. Potential water pollutants would be candidates for review by the Prior Approval Required Substances (PARS) List Committee, and in fact Chromium compounds were recently reviewed and included on the PARS List.

W-CH3.1a

(W-CH3.1a) Describe how your organization minimizes adverse impacts of potential water pollutants on water ecosystems or human health. Report up to ten potential pollutants associated with your activities in the chemical sector.

Potential water pollutant	Value chain stage	Description of water pollutant and potential impacts	Management procedures	Please explain
COD	Direct operations	COD = Indirect measure of organic compounds in aqueous effluent & is a useful measure of water quality.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	There are regulated local emission limits at each facility. We ensure that we comply with our legal obligations and (as a minimum) meet or (preferred) surpass the required standards.
Chromium and its compounds	Direct operations Supply chain	Listed under e.g. EU Water Framework Directive, based on toxicological properties.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use	Compliance with permits and effluent quality standards. Materials are shipped in compliant packaging as appropriate. Ensuring customers receive robust guidance on product use. Listing of chromium(VI) on our Prior Approval Required Substances list to ensure senior

			R&D into less harmful alternative products	management approve development of any new products involving this substance
mercury	Direct operations	Listed under e.g. EU Water Framework Directive, based on PBT properties. Mercury can be a component of some pgm refinery feedstocks and will be part of our refinery wastestreams. We also utilised mercury in quality control tests in some parts of JM	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Compliance with permits and effluent quality standards. Materials are shipped in compliant packaging as appropriate. Ensuring customers receive robust guidance on product use.
lead	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Lead can be a component of some pgm refinery feedstocks and will form part of the refinery process waste. Lead is also a constituent of one JM product.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
cobalt	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Also subject to regulatory scrutiny under EU-REACH etc. Cobalt compounds feature in our product portfolio, for use in catalytic applications under controlled conditions.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.

			R&D into less harmful alternative products	
silver	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Silver products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
nickel	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. nickel products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
copper	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. copper products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the

			Providing best practices instructions on product use R&D into less harmful alternative products	hazards and how best to mitigate these.
zinc	Direct operations Supply chain Product use	Listed under e.g. EU Water Framework Directive, based on toxicological properties. Zinc products for part of our product portfolio.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages Providing best practices instructions on product use R&D into less harmful alternative products	Site permits and quality standards are in place to minimise the impacts from our direct operations. Safety data sheets provide clear information to customers on the hazards and how best to mitigate these.
chlorine	Direct operations Supply chain	Listed under e.g. EU Water Framework Directive, based on PBT properties. Chlorine can be a component of some pgm refinery feedstocks and will be part of our refinery waste streams.	Compliance with effluent quality standards Measures to prevent spillage, leaching, and leakages	Compliance with permits and effluent quality standards. Materials are shipped in compliant packaging as appropriate. Ensuring customers receive robust guidance on product use.

W3.3

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

Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage

Full

Risk assessment procedure

Water risks are assessed as a standalone issue

Frequency of assessment

Every three years or more

How far into the future are risks considered?

More than 6 years

Type of tools and methods used

Tools on the market

Tools and methods used

WRI Aqueduct

Comment

In 2016 we did our last Water Stress assessment of our manufacturing sites using the WBCSD Water stress tool version 1.3. This incorporates information from the WRI Aqueduct tool. As of June 2019, WBCSD announced the decommissioning of the Global Water Tool and recommended users switch to either WWF Water Risk Filter or WRI Aqueduct. We plan to make this switch in the coming year.

Supply chain

Coverage

None

Comment

We have not yet assessed water risks as a standalone issue in our supply chains. Availability of a secure supply of sufficient freshwater may be assessed as part of our normal due diligence processes with strategic suppliers on a case by case basis.

Other stages of the value chain

Coverage

None

Comment

We have not yet assessed water risks as a standalone issue in our any parts of our value chain beyond our own operations.

W3.3b

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

	Relevance & inclusion	Please explain
Water availability at a basin/catchment level	Relevant, always included	We use the World Business Council for Sustainable Development's Global Water Tool version 1.3, to identify which Johnson Matthey sites are located in areas of high baseline water stress as defined by the World Resources Institute (WRI) model and those that are located in areas of extreme water scarcity as defined by their annual renewable water supply per head of population.
Water quality at a basin/catchment level	Not relevant, included	Local water quality is not a significant issue for our business as 91% of all the water we purchase is domestic grade tap water from local municipal supply.
Stakeholder conflicts concerning water resources at a basin/catchment level	Not relevant, included	Risk assessment for stakeholder conflicts is ongoing at a local site level. Each site has a locally based EHS manager responsible for tracking local issues with water availability and quality and will engage local stakeholders if appropriate. Any issues will be presented to the quarterly meeting of the Group global EHS leadership committee by the local management. They will also be included in the 6-monthly general site risk assessment review. He/she will report any significant issues to the local site manager on an ad hoc basis. We do not have any sites where we are involved in stakeholder conflicts at the moment. As we don't use significant quantities of water at any of our locations, this is a low risk topic for us.
Implications of water on your key commodities/raw materials	Relevant, always included	Strategic suppliers are identified as those who supply us with an ingredient critical to the functional performance of our products, and one not readily available from alternative sources and/or derived from natural resources in conflict-prone regions of the world, All strategic suppliers have a dedicated supply chain manager responsible for monitoring and discussing all risks relevant to maintaining security of supply, including water risks.
Water-related regulatory frameworks	Relevant, always included	Risk assessment is ongoing at a local site level. Each site has a locally based EHS manager responsible for tracking national / local regulatory matters and will report any significant issues to the Global EHS Leadership Committee on an ad hoc basis.
Status of ecosystems and habitats	Not relevant, included	All sites, as part of their ISO 14001 registration must include an assessment of biodiversity. This has also been assessed using the World Business Council of Sustainable Development's Global Water Tool version 3.1. We only

		manage one small site of high biodiversity interest globally; it is adjacent to our plant in Billingham UK.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	We offer fully functioning WASH facilities at all our manufacturing sites. These are always factored into Risk assessment as they have a substantial impact on our total water usage.
Other contextual issues, please specify	Not considered	We don't believe there are any specific contextual issues relevant to our industry.

W3.3c

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

	Relevance & inclusion	Please explain
Customers	Not relevant, explanation provided	We do not manufacturing any products that have a significant impact on our customers use of water. Most of our products are components for the automotive industry and are assembled into vehicles.
Employees	Relevant, always included	We provide fully functioning WASH facilities to all our employees and they represent a significant proportion of our total water usage. Our employees needs are always included in water risk assessment. JM employees are made aware of water-based issues as part of their awareness training on broader sustainability issues.
Investors	Not relevant, included	We have never had any questions directly from investors about our water risk assessment. Nevertheless, we provide information through CDP and through our company Annual Report to shareholders. see page 55 of https://matthey.com/investors/report-archive/annual-report-2019
Local communities	Not relevant, explanation provided	We are not a significant water user in any of the communities where we operate.
NGOs	Not relevant, explanation provided	We have not received any requests or comments from NGOs about our water risks. We would include them if we did receive any specific, relevant requests to do so.
Other water users at a basin/catchment level	Relevant, sometimes included	We consider the impact our water use or discharge has on our neighbours, where we believe any reputational risk could arise.

Regulators	Relevant, always included	Water supply and discharge is always regulated by local environment agencies, and is part of our license to Operate. We always consider the impact change in local regulation could have on our license to operate as well as on our operating costs.
River basin management authorities	Not relevant, explanation provided	We are not a large user of water in any river basin and so do not have any direct interaction with river basin management authorities. Any interaction would be indirect and come through the local regulators e.g. The UK Environment Agency or the EPA.
Statutory special interest groups at a local level	Not relevant, explanation provided	We are not a large water user in any location and have not received any requests to join or engage with statutory special interest groups. We would include them if we did receive any specific, relevant requests to do so.
Suppliers	Relevant, always included	When we assess the sustainability of any of our suppliers, we always consider water risks on product quality and security of supply. This is described in more detail in our Supplier Code of Conduct, which can be downloaded from matthey.com.
Water utilities at a local level	Relevant, always included	We purchase water from local water utilities at all our sites, so they are always included in our risk assessments. 92% of all our water purchases and 86% of our effluent discharges are with water utility companies.
Other stakeholder, please specify	Not considered	We don't believe we have any other relevant stakeholders.

W3.3d

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

We assess water risks using two independent processes: 1. water risk assessment is fully integrated into multi-disciplinary company-wide risk identification, assessment, and management processes. At site level we continually review the level of risk throughout the business and complete a formal submission every six months for reporting purposes. Our Risk process is described in full on pages 67-75 of our 2020 Annual Report <https://matthey.com/investors/report-archive/annual-report-2020>

2. We also perform a separate regular assessment (every 3-5 years) of longer-term water related risks through in-house analysis using open source evaluation tools principally the WBCSD global water tool. This is done for all our manufacturing sites based on their geographical location and current water usage. The findings are then communicated to our business sectors and sites so they can be integrated into the multi-disciplinary company-wide risk assessment process that occurs every 6 months. This was last performed in 2016. It will be performed again when an updated version of the tool is launched by WBCSD or when we

have a substantial change in our portfolio of manufacturing operations, whichever happens sooner.

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?

All risks are scored using a standardised scoring methodology (1-5), which operates on two levels:

1. Principal risk level
2. Operational business risk level

Both of these methodologies require risk to be scored on both financial and strategic level.

Water availability or cost is not a principal business risks to our company. as we are relatively low user of water in all the regions in which we operate, and none of our products requires large amounts for production (see responses elsewhere in disclosure for evidence) in our own operations.

Water risks are only identified at the Operational risk level. Therefore, operational risks identified at strategic sites are the only ones that meet the criteria to be included in response to W1.4.

We have 8 (out of 53) sites that are classified as "strategic " because their failure could have a substantive financial impact on the business.

These substantive sites are comprised of :

1. our platinum group metal refineries, which are strategic because they supply precious metal (as a critical raw material) to the rest of our global manufacturing facilities;
2. our global research centre because of its importance to our long term profitability
3. those manufacturing facilities that are our largest individual contributors to our revenues/profits (as a percentage of total profits) . The individual financial contributions to the Group profits for each of these manufacturing sites is commercially sensitive and thus confidential.

We define strategic suppliers as those suppliers of raw material that are critical to the operation of our strategic products. We assess them for water risk as we do our own operations.

W4.1b

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

	Total number of facilities exposed to water risk	% company-wide facilities this represents	Comment
Row 1	1	1-25	Only one of our Strategic sites is situated in a region of extreme water stress, as defined by the WBCSD risk assessment tool.

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

United Kingdom of Great Britain and Northern Ireland
Thames

Number of facilities exposed to water risk

1

% company-wide facilities this represents

1-25

% company's total global revenue that could be affected

Unknown

Comment

The answer to the "% company's total global revenue" is known but it is commercially sensitive information, so I am not prepared to include it in this public disclosure to the level of accuracy required by the drop down boxes.

W4.2

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

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland
Thames

Type of risk & Primary risk driver

Physical
Drought

Primary potential impact

Disruption to sales

Company-specific description

WBCSD Global Water Tool identifies sites in the Greater London Area as in a region of extreme water scarcity (<500 m³ renewable water available per person per year). However, the water network in the UK is very advanced and so the risk of disruption to supply due to prolonged drought is extremely low. In the event of site failure due to water supply restrictions, production would cease and this would have a knock on effect on other JM sites, which use precious metals from our Brimsdown refinery as part of their supply chain. At a local level this risk is extremely low, but the impact would be severe due strategic nature of the site.

Timeframe

1-3 years

Magnitude of potential impact

High

Likelihood

Exceptionally unlikely

Are you able to provide a potential financial impact figure?

Yes, a single figure estimate

Potential financial impact figure (currency)

50,000,000

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

The estimated financial implication given in answer to this question is the highest estimated annual loss of sales due to an unexpected failure of any one of our largest manufacturing facilities before any mitigation plan is put in place. It does not refer to any particular site.

Primary response to risk

Amend the Business Continuity Plan

Description of response

The Business Continuity plans are our principal management tool to reduce the risk of "Failure of a significant site", along with annual testing of the plan. They includes a plan to transfer operations to one of our other refineries in the event of a long shut down due to lack of water availability. Other Johnson Matthey sites that use precious metals from our Brimsdown refinery as an input raw material also take this risk into account in their Business Continuity plans. The risk of failure of the refinery is taken into account when deciding how much reserves of precious metal to hold in reserve stock, both physically and on accounts. We also insure our strategic sites against a wide variety of failures.

Cost of response

15,000,000

Explanation of cost of response

We have insurance to cover short term interruptions to production due to drought or flood and most of our manufacturing facilities are duplicated in more than one country of the world and so in the short term production could be moved to other sites to meet essential demand.

For permanent loss of a facility, we would look to replace the capacity elsewhere by re-building over 3 years, with an associated £50M loss of operating profit and the requirement to work through a working capital uplift.

This annual insurance cover is what is included in the "cost of management" given in this answer

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

Supply chain

Type of risk & Primary risk driver

Regulatory
Increased difficulty in supplier obtaining withdrawals/operations permit

Primary potential impact

Disruption to sales due to value chain disrruption

Company-specific description

Virgin precious metals from South African platinum group metal mining companies are a strategic raw material for Johnson Matthey. If mining operations were disrupted for a long period due to lack of water, it would have an impact on our ability to procure raw materials for our own manufacturing processes. More likely is that a short disruption would cause the metal price to rise on global markets.

Timeframe

1-3 years

Magnitude of potential impact

Medium-low

Likelihood

Unlikely

Are you able to provide a potential financial impact figure?

No, we do not have this figure

Potential financial impact figure (currency)

Potential financial impact figure - minimum (currency)

Potential financial impact figure - maximum (currency)

Explanation of financial impact

We have this number but financial impact is commercially sensitive and thus cannot be included in this public disclosure.

Disruption to supply of virgin platinum from South Africa is most likely to impact Johnson Matthey via the metals trading price on global markets. Johnson Matthey, through its metal trading activities is well placed to manage the impact of fluctuating metal prices on its revenues. High metal prices generally increases JM revenues.

Primary response to risk

Direct operations
Include in Business Continuity Plan

Description of response

- > Ongoing market research to understand and monitor the impact of short term events on longer term supply of metal
- > Supplier relationship management through formalisation of regular reviews to discuss their constraints and quality management processes.
- > Where deemed appropriate, we carry strategic stocks of raw materials and monitor those levels regularly

- in the context of the external environment.
- > Regular investigation of alternative materials as part of research and development.
- > Continued investment in our pgm refining business to ensure access to recycled precious metal
- > Continued Investment in our Precious metals marketing (PMM) subsidiary to ensure we manage financial risk of any disruption to pgm supply globally

Cost of response

0

Explanation of cost of response

This is part of normal business, and is not assigned a specific cost.

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 but are unable to realize them

W4.3b

(W4.3b) Why does your organization not consider itself to have water-related opportunities?

	Primary reason	Please explain
Row 1	Judged to be unimportant	We had a small business selling water purification technology, which we sold during 2018 - after a management review which indicated it did not have the potential to have a substantive positive impact on our business profits.

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)

Brimsdown

Country/Area & River basin

United Kingdom of Great Britain and Northern Ireland
Thames

Latitude

51.65

Longitude

-0.03

Located in area with water stress

Yes

Total water withdrawals at this facility (megaliters/year)

168.8

Comparison of total withdrawals with previous reporting year

Much lower

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

0

Withdrawals from brackish surface water/seawater

0

Withdrawals from groundwater - renewable

0

Withdrawals from groundwater - non-renewable

0

Withdrawals from produced/entrained water

0

Withdrawals from third party sources

168.8

Total water discharges at this facility (megaliters/year)

96

Comparison of total discharges with previous reporting year

Lower

Discharges to fresh surface water

0

Discharges to brackish surface water/seawater

0

Discharges to groundwater

0

Discharges to third party destinations

96

Total water consumption at this facility (megaliters/year)

72.8

Comparison of total consumption with previous reporting year

Much lower

Please explain

The total water withdrawal at the site was reduced by 48% which is considered "much lower". Our threshold for this category is a change of more than 20%.

The reason for the big drop was the installation of a new water ring main on the site, to reduce the amount of underground freshwater leakage from the incoming pipe network connected to the municipal supply. The new ring main became operational in February 2019.

W5.1a

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

Water withdrawals – total volumes

% verified

76-100

What standard and methodology was used?

Johnson Matthey's water disclosures have been externally assured by Avieco Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles

Water withdrawals – volume by source

% verified

76-100

What standard and methodology was used?

Johnson Matthey's water disclosures by source have been externally assured by Avieco Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles.

Water withdrawals – quality

% verified

Not verified

Water discharges – total volumes

% verified

76-100

What standard and methodology was used?

Johnson Matthey's water disclosures have been externally assured by Avieco Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles

Water discharges – volume by destination

% verified

76-100

What standard and methodology was used?

Johnson Matthey's water disclosures have been externally assured by Avieco Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles

Water discharges – volume by treatment method

% verified

Not verified

Water discharge quality – quality by standard effluent parameters

% verified

Not verified

Water discharge quality – temperature

% verified

Not verified

Water consumption – total volume

% verified

76-100

What standard and methodology was used?

Johnson Matthey’s water disclosures have been externally assured by Carbon Smart Ltd using ISAE 3000. It has been completed in accordance with the WRI best practice reporting principles of relevance, completeness, consistency, transparency, accuracy and the subject matter adheres to the ISAE 3410 principles

Water recycled/reused

% verified

Not verified

W6. Governance

W6.1

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

Yes, we have a documented water policy, but it is not publicly available

W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Description of business dependency on water Description of water-related performance standards for direct operations	We have a waste water management policy, which is attached here.

W6.2

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

Yes

W6.2a

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

Position of individual	Please explain
Director on board	The EHS Leadership Committee is chaired by the CEO who is a member of the Board. They oversee all aspects of water management within the company. Annual Report 2020 page 87.

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	Sporadic - as important matters arise	Monitoring implementation and performance Overseeing major capital expenditures Reviewing and guiding business plans Reviewing and guiding strategy Reviewing and guiding corporate responsibility strategy	Water-related issues are reviewed at the quarterly EHS Leadership Committee meeting. Any issues that representative a substantive risk to the company are also reviewed by Audit Committee when they review the Risk register twice a year. Any water risks requiring significant capital investment would be reviewed by the Board as part of the capital investment due diligence process.

W6.3

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

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

Chief Executive Officer (CEO)

Responsibility

Assessing water-related risks and opportunities

Frequency of reporting to the board on water-related issues

Annually

Please explain

The CEO chairs the JM Group Management Committee (GMC) - the highest governance body below the board as well as the EHS Leadership Committee. The EHS committee has responsibility for operational water-related issues.

The Chief Procurement Officer has responsibility for water-related risks in our supply chain. The the CPO reports directly to the Chief Financial Officer who is owner of "Supply Failure" risk Annual Report 2020 page 72.

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	No, not currently but we plan to introduce them in the next two years	Our Water Risks are embedded in our Principal Risks and senior executives are incentivised to managed those risks. The 2 principal risks that are relevant to Water Risk are (i) Failure of Operations #9 and "Supply Failure" #5 Annual Report 2020 page 72-73

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, 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?

A company expert is assigned to manage our relationship with each trade Association to which we subscribe. It is their responsibility to monitor and participate in consultations on policy with the Trade Association and to highlight to the JM's EHS leadership committee if the Trade Association is carrying out activities that contravene JM's internal policy and values. We review our membership of all trade associations on an annual basis when the membership fee is due.

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)

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	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	Although water-related issues have the potential to impact the performance of individual manufacturing sites, it is not considered a substantive risk to our ability to achieve our long-term business objectives.
Strategy for achieving long-term objectives	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	Although water-related issues have the potential to impact the performance of individual manufacturing sites, it is not considered a substantive risk to our ability to achieve our long-term business objectives.
Financial planning	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	Although water-related issues have the potential to impact the performance of individual manufacturing sites and require some capital investment to mitigate from time to time, they do not have a substantive impact on our financial planning.

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)

0

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

0

Water-related OPEX (+/- % change)

0

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

0

Please explain

Expenditure on water procurement or disposal is not a material component of our OPEX budget. Mitigating water risks is not a substantive component of our CAPEX budget and we do not expect it to become some in the next 5 years.

W7.3

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

	Use of climate-related scenario analysis	Comment
Row 1	Yes	We use 2DS scenario analysis tools to inform our business strategy. Johnson Matthey runs a detailed, yearly planning and budgeting process for management purposes. As part of this process we explore the evolution of our major markets. We consider potential pathways to meet the 1.5-2C climate change target, netzero legislation and specific country / city restrictions. As an organisation whose activities span automotive, chemicals and raw materials we believe we are well placed to understand legislative evolution and its impact on technology, customer demand and the timing of market evolution (incl., the introduction of disruptive technology). For JM we use these pathways to consider how our own products and services into these markets will need to evolve along with the investments required to meet future customer demand. Our insights also inform customer and legislator discussions around what transitions and scale of change may be possible and over what timeframes

W7.3a

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

No

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

Although availability of sufficient freshwater supplies is critical to maintaining operations in all our factories, we are not considered large users of water in any of local communities where operate. Cost of water is not a material issue to our operations

either. Therefore, we don't anticipate a benefit from the administrative burden of introducing an internal price of water.

W8. Targets

W8.1

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

	Levels for targets and/or goals	Monitoring at corporate level	Approach to setting and monitoring targets and/or goals
Row 1	Site/facility specific targets and/or goals	Goals are monitored at the corporate level	In 2017 we completed a 10 year program to halve our water usage per unit sales. We successfully reached this target in 2017. We continue our ambition to use water as efficiently as possible but have not set a new company-wide water reudction target. All business and sites are being encouraged to set their own targets for water efficiency locally. As our businesses are very diverse the level of opportunity for reduction is also varied. We continue to monitor and publicly report water use at the corporate level.

W8.1b

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

Goal

Other, please specify

Maximise water efficiency per mass of manufactured product sold

Level

Company-wide

Motivation

Water stewardship

Description of goal

Our goal is to minimise the amount of water withdrawn from the environmental by our operations per unit production. We understand that freshwater is a valuable and often scarce resource that we need to use wisely. Whilst it is not material compared to many of our other production costs, we recognise our role as a responsible corporate citizens in safeguarding it for future generations.

Baseline year

2017

Start year

2017

End year

2025

Progress

In FY2019/20 our water efficiency was 19.7 18.6 m3/tonnes manufactured product sold. This was 5.9% increased on the previous year.

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

 Johnson Matthey - EHS assurance statement FY201920 (full) vAV v2.pdf

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	Total water withdrawal	ISAE 3000	Our Total water withdrawals were third party verified by AviecoLtd. The verification statement can be found on our website, as well as attached to question 9.1.
W1 Current state	Net fresh water consumption. This is the water withdrawals minus freshwater discharges back to rivers and water courses	ISAE 3000	This is better measure of our total impact on local water availability and environment. It excludes all freshwater withdrawals that are immediately returned to the same source at equal or cleaner quality that they were withdrawal.

W10. Sign off

W-FI

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

W10.1

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

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