DNO ASA - Water Security 2021

W0. Introduction

W0.1

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

Founded in 1971, DNO is Norway's oldest oil company and the first to list on the Oslo Stock Exchange in 1981. Initially a North Sea player, our focus over the past two decades shifted to the Middle East region, home to the world's most prolific oil resources. By tapping into its Norwegian heritage and leveraging our regional footprint, DNO has proven a nimble and successful operator, even in challenging environments. In 2004, DNO was the first international oil company to enter the Kurdistan-region of Iraq (KRI), at a time when the Kurdish region's oil industry was virtually non-existent. We are now the leading international operator in terms of production and reserves in the KRI. At our flagship Tawke oil field, we began production in 2007 – just two years after the start of exploration activities. The neighbouring Peshkabir field was brought on production in 2017. Our operations in the region have among the lowest finding and development costs anywhere in the world. Combined with low lifting costs, this gives us a significant competitive advantage when oil prices are weak and strong cash flow when oil prices are robust.

DNO re-entered the North Sea in 2017, acquiring offshore exploration licenses in Norway and the UK. The company has since expanded to include several producing assets offshore Norway and the UK. Wherever we operate, we look to minimize risk and maximize success through smart exploration, and when a discovery is made, fast-track production. We are committed to safe, environmentally responsible and ethically sound operations.

DNO's Health, Safety, Security and Environment (HSSE) Policy is clear concerning our commitments to all aspects of HSSE including our environmental commitments:

- Minimise undesirable effects on the environment resulting from our activities;

- Promote the reduction of emissions and pollutions from our operations; and

- Contribute to sustainable development of the regions where we operate.

Business Units' (BU) internal assurance processes combined with oversight from the corporate management and the Board of Directors through its HSSE Committee ensure we meet our commitments.

W-OG0.1a

(W-OG0.1a) Which business divisions in the oil & gas sector apply to your organization?

Upstream

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	January 1 2020	December 31 2020

W0.3

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

Iraq
Norway
United Kingdom of Great Britain and Northern Ireland

W0.4

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

USD

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 operational control is exercised

W0.6

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

Yes

W0.6a

(W0.6a) Please report the exclusions.

Exclusion	Please explain
UAE	In 2020, DNO had one office but no field operations in the UAE (Dubai). Water use of the office is not included in this disclosure because it is trivial compared to our water usage at our field operations.
Yemen	In 2020, DNO had one office but no field operations in Yemen (in force majeure). Water use of the office is not included in this disclosure because it is trivial compared to our water usage at our field operations.
DNO's offices water use in the UK	In 2020, DNO had three offices in the UK. Water use of the offices is not included in this disclosure because it is trivial compared to our water usage at our field operations.
DNO's offices water use in Norway	In 2020, DNO had two offices in Norway. Water use of the offices is not included in this disclosure because it is trivial compared to our water usage at our field operations.

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	DNO uses water for a variety of purposes, including for oil and gas drilling operations, for ancillary services needed to process the produced oil and gas before sales (e.g., heat exchangers) and for human consumption at our offices and fields. Availability of good quality water is important for both our operations and wellbeing of our staff. For instance, water quantity and quality are important for effective and safe operations of drilling activities and for reliable performance of heat exchangers at the processing plants. Supplying our field locations with good quality water is important, most of which are situated away from population centers and hence require sourcing non-potable water locally. In our indirect operations, DNO - like any other oil and gas company - relies on a global supply chain to procure the equipment it needs. Building and transporting equipment relies on availability of various quality levels of water, depending on the type of the equipment (e.g., high-grade steel used for drilling and cement used in construction activities). At the same time, relying on a global supply chain allows diversification of supply – when possible – which makes DNO less prone to local shortages of water to our suppliers.
Sufficient amounts of recycled, brackish and/or produced water available for use	Not very important	Not very important	We do not use these types of water and hence their quality and quantity are not relevant to our operations in the foreseeable future.

W1.2

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

	% of sites/facilities/operations	Please explain
Water withdrawals – total volumes	76-99	In Kurdistan region of Iraq, we measure water withdrawals from a nearby river and from the DNO-operated water wells. We also occasionally procure water through third-parties, volumes of which are also measured. We provide some water to select nearby villages, volumes of which are estimated (not measured). In our Kurdistan operations, all drinking water is sourced through bottled water. These volumes are also accounted for in this disclosure. In Norway and the UK, water is supplied to our drilling rigs from the shore through supply vessels. In addition to those volumes, some water is withdrawn from the sea. These volumes are measured. We are working on improving the accuracy of our measurements and reporting of water withdrawals and consumption/discharge through various initiatives including installing additional flowmeters and measurement systems.
Water withdrawals – volumes by source	76-99	In Kurdistan region of Iraq, we measure water withdrawals from a nearby river and from the DNO-operated water wells. We also occasionally procure water through third-parties mainly for operations but also for local villages, volumes of which are also measured. In our Kurdistan operations, all drinking water is sourced through bottled water. These volumes are also accounted for. In Norway and the UK, water is supplied to our drilling rigs from the shore through supply vessels. In addition to those volumes, some water is withdrawn from the sea. These volumes are measured and reported. We are working on improving the accuracy of our measurements and reporting of water withdrawals and consumption/discharge through various initiatives including installing additional flowmeters and measurement systems.
Entrained water associated with your metals & mining sector activities - total volumes [only metals and mining sector]	<Not Applicable>	<Not Applicable>
Produced water associated with your oil & gas sector activities - total volumes [only oil and gas sector]	100%	We measure the quantity of the produced water across our assets.
Water withdrawals quality	76-99	At the Tawke license (Kurdistan). we measure the quality of water supplied from a nearby river. We also measure the quality of water at the outlet of our water supply tanks, which include water supplied from the nearby river, water from DNO-operated water wells and water procured via third party tankers. These measurements are done at least twice a year. At the Baeshiqa license (Kurdistan), we do not measure the quality of water withdrawn from water wells. This was planned for 2020 but delayed due to the impact of COVID-19 and associated travel restrictions for third party contractors. Note that the quality of water used for drilling operations is continuously monitored as per relevant drilling standards and best practices of drilling operations. In Norway and the UK, measurement of the quality of withdrawn water is done when required by the relevant regulations.
Water discharges – total volumes	100%	As per CDP definition of discharge, the only relevant water discharge category to our operations is discharge to the sea in offshore Norway and the UK. Such discharges are subject to regulatory permits. The volumes of any discharge are measured and reported. Sewage is not included in our reported volumes, consistent with CDP guidelines. We are working on improving the accuracy of our measurements and reporting of water withdrawals and consumption/discharge through various initiatives including installing additional flowmeters and measurement systems.
Water discharges – volumes by destination	100%	As per CDP definition of discharge, the only relevant water discharge category to our operations is discharge to the sea in offshore Norway and the UK. Such discharges are subject to regulatory permits. The volumes of any discharge are measured and reported. Sewage is not included in our reported volumes, consistent with CDP guidelines.
Water discharges – volumes by treatment method	Not relevant	Any discharge is regulated under the applicable laws and regulations in addition to DNO's standards and permits. None of our discharge streams are treated, therefore this category does not apply.
Water discharge quality – by standard effluent parameters	100%	As per CDP definition of discharge, the only relevant water discharge category to our operations is discharge to the sea in offshore Norway and the UK. Such discharges (including volumes and quality) are subject to regulatory permits. The quality of such discharges is measured and reported as per relevant regulations and discharge permit issued by the authorities. Sewage is not included in our reported volumes, consistent with CDP guidelines.
Water discharge quality – temperature	Not relevant	As per CDP definition of discharge, the only relevant water discharge category to our operations is discharge to the sea in offshore Norway and the UK. Such discharges (including volumes and quality) are subject to regulatory permits. The quality of such discharges is measured and reported as per relevant regulations and discharge permit issued by the authorities. Also note that our discharge streams do not have a large temperature difference with the ambient. Sewage is not included in our reported volumes, consistent with CDP guidelines.
Water consumption – total volume	76-99	We do not directly measure the volumes of all paths through which water is consumed within our operations. Despite this, total consumption can be calculated: Total Withdrawal-Total Discharge. We are working on improving the accuracy of our measurements and reporting of water withdrawals and consumption/discharge through various initiatives including installing additional flowmeters and measurement systems.
Water recycled/reused	Not relevant	In Kurdistan, there is currently no recycling/ reuse of water in place. DNO is considering a project to build a wastewater processing facility at the Tawke field to reuse wastewater from drilling operations. The assessment of the project was delayed in 2020 due to COVID-19 driven restrictions (supply chain, financial, and travel). In Norway and the UK, DNO did not operate any production hubs or drilling activities in 2020 thus water recycling was not applicable.
The provision of fully-functioning, safely managed WASH services to all workers	100%	DNO has detailed Health, Safety, and Environmental regulations and standards, which cover sanitation, hand washing and hygiene. All facilities are checked on a daily basis to ensure they meet the standards. In 2020, all applicable standards have been revisited to ensure safety and wellbeing of all staff during the COVID-19 pandemic.

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	296.4	About the same	Our water withdrawal in 2020 totalled 296.4 mega liters, compared to 296.7 mega liters in 2019. Due to our efforts to improve measuring and reporting of our water withdrawals, consumption and discharges in 2020, one should note that 2020 numbers are more accurate than 2019 numbers. Note that produced water volumes are excluded from reported numbers here because all of the produced water is injected back into the reservoir.
Total discharges	0	About the same	As per CDP definition of discharge, the only relevant water discharge category to our operations is discharge to the sea in offshore Norway and the UK. Such discharges are subject to regulatory permits. The volumes of any discharge are measured and reported. Sewage is not included in our reported volumes, consistent with CDP guidelines.
Total consumption	296.4	About the same	We do not directly measure the volumes of all paths through which water is consumed within our operations. Despite this, total consumption can be calculated: Total Withdrawal-Total Discharge.

W-OG1.2c

(W-OG1.2c) In your oil & gas sector operations, what are the total volumes of water withdrawn, discharged, and consumed – by business division – and what are the trends compared to the previous reporting year?

	Volume (megaliters/year)	Comparison with previous reporting year %	Please explain
Total withdrawals - upstream	296.4	About the same	DNO has only upstream operations. The answer to this question is therefore identical to the answers provided in section W1.2b.
Total discharges – upstream	0	About the same	DNO has only upstream operations. The answer to this question is therefore identical to the answers provided in section W1.2b.
Total consumption – upstream	296.4	About the same	DNO has only upstream operations. The answer to this question is therefore identical to the answers provided in section W1.2b.
Total withdrawals - midstream/downstream	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total discharges – midstream/downstream	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total consumption – midstream/downstream	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total withdrawals – chemicals	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total discharges – chemicals	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total consumption – chemicals	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total withdrawals – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total discharges – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>
Total consumption – other business division	<Not Applicable>	<Not Applicable>	<Not Applicable>

W1.2d

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

	Withdrawals are from areas with water stress	% withdrawn from areas with water stress	Comparison with previous reporting year	Identification tool	Please explain
Row 1	Yes	76-99	About the same	WRI Aqueduct	The bulk of our water withdrawal (76-99%) occurs in the northern part of the Kurdistan Region of Iraq at the Tawke license, both from a nearby river and multiple water wells. Using the WRI Aqueduct platform and selecting the "Water Stress" criterion, in the two core areas of our operation in Kurdistan (Tawke and Baeshiqa licenses), we are in the “high” risk category (40-80%). Therefore, we have chosen that the "76-99% of withdrawals are from areas with water stress" to answer this question. For DNO’s operations in offshore Norway and the UK, the WRI tool marks both areas as no/little risk which is consistent with our experience. Water is not considered a scarce resource in Norway and the UK. It is of note that we have not experienced any shortage of water impacting our operations in Kurdistan. The volume of water flowing in the river is large and our withdrawn volumes comprise a very small portion of total river volumes. Water wells have also been performing strongly and we do not have concerns over water shortage in the foreseeable future. However, it should be noted that the Kurdistan region as a whole has been experiencing water stress in 2021 (not an issue in year 2020 which is the subject of this disclosure).

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	110	About the same	This relates to water sourced from a nearby river used in our operations in the Kurdistan region of Iraq.
Brackish surface water/Seawater	Relevant	2	About the same	This relates to sea water used for offshore activities in Norway and the UK.
Groundwater – renewable	Relevant	84	About the same	This relates to water withdrawn from DNO-operated water wells for our operations in the Kurdistan region of Iraq. Although a more comprehensive analysis is needed, our current view is that the groundwater is renewable based on historical performance of the water wells and our understanding of the regional aquifer.
Groundwater – non-renewable	Not relevant	<Not Applicable>	<Not Applicable>	As per note above, our current assessment is that our withdrawal from groundwater is from renewable sources.
Produced/Entrained water	Not relevant	<Not Applicable>	<Not Applicable>	All produced water is injected back into the underground oil reservoir. Therefore we do not report the volume of produced water here.
Third party sources	Relevant	101	About the same	Kurdistan (onshore): We procure some water for our operations through third-party road tankers. The UK and Norway (offshore): This includes water supplied to our offshore drilling operations via third-party tanks from onshore or withdrawn from the rig’s water storage tanks.

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	Not relevant	<Not Applicable>	<Not Applicable>	In 2020, we did not discharge any water to fresh surface water.
Brackish surface water/seawater	Relevant	0	About the same	This relates to any water disposed to the sea in our offshore operations in Norway and the UK. Any such discharge is based on the Discharge Permits issued by the relevant regulatory bodies.
Groundwater	Not relevant	<Not Applicable>	<Not Applicable>	In 2020, we did not discharge any water to groundwater.
Third-party destinations	Not relevant	<Not Applicable>	<Not Applicable>	In 2020, we did not discharge any water through third parties. Note as explained earlier, sewage is excluded from this disclosure, consistent with CDP guidelines.

W-OG1.3

(W-OG1.3) Do you calculate water intensity for your activities associated with the oil & gas sector?

Yes

W-OG1.3a

(W-OG1.3a) Provide water intensity information associated with your activities in the oil & gas sector.

Business division

Upstream

Water intensity value (m3)

0.01

Numerator: water aspect

Total water withdrawals

Denominator

Barrel of oil equivalent

Comparison with previous reporting year

About the same

Please explain

Our daily operated production in year 2020 averaged 110,282 barrels of oil equivalent. This corresponds to 40.36 million barrels of oil equivalent over the entire year. Our total water withdrawal in this period was 296.4 mega liters (section W-OG1.2c). Therefore, the water intensity is: 296.4/40.25= 7 liters per barrels of oil equivalent ~ 0.01 m3/boe

W1.4

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

No, we do not engage on water with our value chain

W1.4d

(W1.4d) Why do you not engage with any stages of your value chain on water-related issues and what are your plans?

	Primary reason	Please explain
Row 1	Important but not an immediate business priority	

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?
No

W3. Procedures

W-OG3.1

(W-OG3.1) How does your organization identify and classify potential water pollutants associated with its activities in the oil & gas sector that may have a detrimental impact on water ecosystems or human health?

DNO has a well implemented process for identifying and assessing environmental (including potential water pollutants) risks based on a Risk Assessment Matrix (RAM), which is included in our company-wide risk and opportunity assessment process.

On a quarterly basis, we carry out a "bottom-up" risk identification, assessment and review process in which key risks and opportunities associated with current and potential future environmental matters (including water) are identified and analysed. Mitigations to reduce or eliminate the risks are put in place when deemed required and these are then managed and monitored. All risks are assigned to competent owners who have the responsibility of following the closure of actions to control and/or reduce risk. The results of the process are reviewed by corporate management.

All resulting risks that are considered to have a substantive financial impact are reported to the Board's Audit Committee. Substantive HSSE related risks, including water related issues are also reported to the Board's HSSE Committee.

The protection of oil and gas pipelines in Kurdistan provides an example (case study) of how this process is applied to potential water pollution risks. Sections of the oil pipeline run alongside a river that is important to surrounding communities. This river also feeds into a reservoir for hydro-electric power generation. Failure of the oil pipeline caused by storm flooding of the river either directly or indirectly has long been identified as a risk with high potential consequence, but - until recently – considered low probability. Following severe flooding in the last three winters which resulted in severe erosion of the riverbanks near to the pipelines and transport of a substantial amounts of debris, DNO has re-evaluated trends from recent years and concluded that there is an increasing trend of wetter winters. As a result, the probability of failure of the pipeline (and thus river water pollution) due to storms was increased in the DNO risk identification process to such an extent that it has become a substantive risk (both environmentally, financially and strategically). To mitigate this risk, a multi-million dollar project has been underway since 2020 to ensure adequate protection of the pipeline is in place (Phase 1 of pipeline-river protection project was completed in 2020. Phase 2 of the project is ongoing in 2021). The progress is monitored both at the Business Unit level and Corporate, including by the Board of Directors' HSSE Committee.

W-OG3.1a

(W-OG3.1a) For each business division of your organization, describe how your organization minimizes the adverse impacts on water ecosystems or human health of potential water pollutants associated with your oil & gas sector activities.

Potential water pollutant	Business division	Description of water pollutant and potential impacts	Management procedures	Please explain
Please select	<Not Applicable>	<Not Applicable>	<Not Applicable>	

W3.3

(W3.3) Does your organization undertake a water-related risk assessment?
Yes, water-related risks are assessed

W3.3a

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

Direct operations

Coverage
Full

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

Frequency of assessment
More than once a year

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

Type of tools and methods used
Enterprise Risk Management

Tools and methods used
ISO 31000 Risk Management Standard
Other, please specify (Environmental Impact Assessment (EIA))

Comment
Risk management - DNO's quarterly risk assessment process includes assessment of risk with impact on "Environment and Sustainability", ensuring such risks are identified and mitigated appropriately. In addition, risks due to extreme weather conditions related to water (e.g. floods. landslide, storms) are assessed and mitigated (as relevant) during both the day-to-day operations (e.g. drilling offshore) and business planning (e.g. pipeline integrity at river crossing and impact of possible landslides caused by heavy rain).

Supply chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment
DNO like most oil and gas companies, relies on a global supply chain to procure the equipment it needs. Building and transporting this equipment rely on availability of various quality levels of water, depending on the type of the equipment (e.g. high-grade steel used in drilling operations and cement used in construction activities onsite and offsite). Relying on a global supply chain allows diversification of supply – when possible – which makes DNO less prone to the risk of local shortages of water impacting its geographically diversified suppliers.

Other stages of the value chain

Coverage
None

Risk assessment procedure
<Not Applicable>

Frequency of assessment
<Not Applicable>

How far into the future are risks considered?
<Not Applicable>

Type of tools and methods used
<Not Applicable>

Tools and methods used
<Not Applicable>

Comment
DNO's products, oil and gas, are sold on the international market. DNO has no control over the intermediate customers of its products (e.g. refineries) or final customers. Therefore, assessing water related risks at such stages of value chain is not possible.

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, sometimes included	In areas of our operations (offshore Norway and the UK and onshore in the northern part of the Kurdistan region of Iraq) we have not experienced any material water stress. We continue to monitor water availability for our operations, especially in Kurdistan which is more prone to water stress.
Water quality at a basin/catchment level	Relevant, sometimes included	In areas of our operations (offshore Norway and the UK and onshore in the northern part of the Kurdistan region of Iraq) we have not experienced any material water stress (quantity and quality). We continue to monitor availability of quality water for our operations, especially in Kurdistan which is more prone to water stress.
Stakeholder conflicts concerning water resources at a basin/catchment level	Not relevant, explanation provided	We have not experienced and do not anticipate experiencing any major conflicts with stakeholders concerning water resources in our areas of operations (offshore Norway and the UK and onshore in the northern part of the Kurdistan region of Iraq). We have experienced more enquiries from the authorities in Kurdistan during 2021 regarding our water policies and practices but we do not consider any risk of conflicts as DNO complies with all local regulations and applicable international practices and the authorities have been satisfied with the answers DNO has provided to their enquiries.
Implications of water on your key commodities/raw materials	Not relevant, explanation provided	DNO like most oil and gas companies, relies on a global supply chain to procure the equipment it needs. Building and transporting this equipment rely on availability of various quality levels of water, depending on the type of the equipment (e.g. high-grade steel used in drilling operations and cement used in construction activities). Relying on a global supply chain allows diversification of supply – when possible – which makes DNO less prone to water risks associated commodities and raw materials.
Water-related regulatory frameworks	Relevant, not included	DNO has operations in two geographical areas: offshore Norway and the UK and onshore Kurdistan region of Iraq. In Norway and the UK, there is a comprehensive water related regulatory framework already in place. In Kurdistan, the oil and gas industry and the corresponding water regulatory framework are less mature. We do not however expect that possible changes in the regulatory framework will materially impact our operations as DNO follows internationally recognized principles of prudent operatorship across all of its business units.
Status of ecosystems and habitats	Relevant, sometimes included	DNO has operations in two geographical areas: offshore Norway and the UK and onshore Kurdistan region of Iraq. In Norway and the UK (offshore), there is a comprehensive water related regulatory framework already in place which deals with status of marine ecosystems where applicable. Such risks are included in DNO's risk matrixes where relevant. In Kurdistan (onshore), our operations have had minimal impacts on the local ecosystems so far and expected to remain the same. Our Environmental Impact Assessments (EIA) which are required for all major activities (e.g., drilling and seismic) take into account local ecosystems and inhabitants when applicable.
Access to fully-functioning, safely managed WASH services for all employees	Relevant, always included	DNO has detailed Health, Safety, and Environmental regulations and standards which cover sanitation, hand washing and hygiene. All applicable standards have been revisited and additional measures applied to ensure safety and wellbeing of all staff during the COVID-19 pandemic.
Other contextual issues, please specify	Not considered	

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 considered	DNO's products, oil and gas, are sold on the international market. DNO has no control over the intermediate customers of its products (e.g. refineries) or final customers. Therefore, assessing risks related to such stakeholders is not possible.
Employees	Relevant, always included	The main way through which our employees may be impacted by water-related issues is access to safe drinking water and for hygiene purposes.
Investors	Relevant, always included	Investors are indirectly considered throughout the entire risk assessment process because they are the owners of (or lenders to) of the company. Any water related risks, if not properly mitigated, can impact the investors and return on their investments in the company.
Local communities	Relevant, always included	This is relevant to our onshore operations in the Kurdistan region of Iraq. Local communities can be impacted in two main ways in the context of water issues: withdrawal of water by DNO from wells and rivers as well as possible contamination of water sources of local communities (during normal operations and possible incidents). DNO takes into account possible impacts on local communities in all of its operations and in risk assessment process.
NGOs	Not relevant, explanation provided	We have not experienced involvement of any NGOs on the water related issues in our areas of operations.
Other water users at a basin/catchment level	Not relevant, explanation provided	We take into consideration feedback from stakeholder which may be impacted by our water use. These are listed above.
Regulators	Relevant, always included	DNO has operations in two geographical areas: offshore Norway and the UK and onshore Kurdistan region of Iraq. In Norway and the UK, there is a comprehensive water related regulatory framework already in place. Any relevant regulations and regulators are complied with and taken into account in our risk assessment process, when applicable. In Kurdistan, our main regulatory stakeholder is the Ministry of Natural Resources (MNR). Relevant departments within MNR - both on the technical and environmental areas - are regularly informed/consulted with regarding our operations (including water related matters). DNO considers these stakeholders in its risk assessment when relevant.
River basin management authorities	Not relevant, explanation provided	This is relevant only to our onshore operations in the Kurdistan region of Iraq. Our main regulatory stakeholder is the Ministry of Natural Resources (MNR). Relevant departments within MNR - both on the technical and environmental areas - are regularly informed/consulted with regarding our operations (including water related matters). DNO considers these stakeholders in its risk assessment when relevant.
Statutory special interest groups at a local level	Not relevant, explanation provided	We have not experienced involvement of any statutory special interest groups at a local level in our areas of operations.
Suppliers	Not relevant, explanation provided	DNO like most oil and gas companies relies on a global supply chain to procure the equipment it needs. Building and transporting this equipment rely on availability of various quality levels of water, depending on the type of the equipment (e.g. high-grade steel used in drilling operations and cement used in construction activities onsite and offsite). Relying on a global supply chain allows diversification of supply – when possible – which makes DNO less prone to the risk of local shortages of water impacting its geographically diversified suppliers.
Water utilities at a local level	Not relevant, explanation provided	We have not experienced involvement of or engagement by any water utilities at the local levels in our areas of operations. This is mainly because we do not rely on local water utilities to supply water to our operations and DNO has not caused any contamination of water used by water utilities.
Other stakeholder, please specify	Relevant, sometimes included	Other stakeholders, such as local mayors in Kurdistan are engaged and included in our risk assessment on a case by case basis.

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.

DNO has a well implemented process for identifying, assessing and responding to various risks (including water-related) within our direct operations based on a Risk Assessment Matrix (RAM), which is included in our company-wide risk and opportunity assessment process. As discussed earlier, assessing water-related risks across our value chain is not considered a business priority at the moment (and we do not have full insight into our global supply chain).

On a quarterly basis, we carry out a "bottom-up" risk identification, assessment and review process in which key risks and opportunities are identified and analysed. Mitigations are put in place and these are then managed and monitored at both the Business Unit (BU) level and the Corporate level. All risks are assigned to competent owners who have the responsibility of following the closure of actions to control and/or reduce risk. The results of the process are reviewed by corporate management.

All resulting business risks that are considered to have a substantive financial impact are reported to the Board's Audit Committee. Substantive HSSE related risks, including water related issues are also reported to the Board's HSSE Committee.

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, only within our direct operations

W4.1a

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

DNO defines financial impact in terms of both probability of occurrence and consequence should it occur. Substantive financial risks are those that have either (a) significant consequences which are considered to have a very likely probability or (b) major consequences with likely or higher probability, or (c) catastrophic consequences with unlikely or higher probability. In financial terms, these risks translate to either

(a) A risk which is very likely to occur which has the potential to create damage and disruption to operations leading to losses between 1-10 million dollars; or

(b) A risk which is likely to occur which has the potential to create damage and disruption to operations leading to losses between 10-100 million dollars; or

(c) A risk which is unlikely to occur which has the potential to create damage and disruption to operations leading to losses of more than 100 million dollars.

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		Please select	

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?

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

Iraq	Tigris & Euphrates

Type of risk & Primary risk driver

Physical	Flooding

Primary potential impact
Disruption to sales

Company-specific description
In Kurdistan, recent winters have been wetter than the historical average. According to IPCC, Iraq is considered one of the Arab region's most vulnerable to climate change and impacts of changing weather patterns have already made themselves felt in recent years, with a higher frequency and intensity of extreme weather events. More heavy rainfalls during winter have resulted in more transported river debris and much faster flow of the river adjacent to DNO's oil and gas pipelines. Severe and rapid erosion of the riverbanks and/or riverbed has been experienced the past three winters during storms and it is expected that this will continue. In the worst-case scenario, such rapid erosion and storm debris could lead to damage to one or both pipelines, potentially leading to pollution and the need to halt production and financial losses.

Timeframe
1-3 years

Magnitude of potential impact
High

Likelihood
Likely

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

Potential financial impact figure (currency)
17500000

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

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

Explanation of financial impact
The potential financial impact figure is calculated from having to shut down operations for up to a week if pipelines are damaged. A halt in production from the Tawke field in Kurdistan, which currently runs at approximately 50,000 barrels per day, would result in a loss in production of 350,000 barrels in one week. At realized oil prices of USD 50 per barrel the lost production is valued at approximately 350,000*50= USD 17,500,000. If the damage to the pipelines also resulted in pollution, the financial and reputational impact would be much higher. However, this figure is extremely difficult to estimate as it depends on many factors including the exact location that the damage occurred at, the speed of response, the extent of damage, etc.

Primary response to risk
Develop flood emergency plans

Description of response
To mitigate the risk of having to halt production in Kurdistan due to more extreme weather, DNO has initiated a major upgrade to the physical storm protection measures for its pipelines (reinforcement of riverbank and riverbed at river crossing of our pipelines in Kurdistan).

Cost of response
2500000

Explanation of cost of response
The cost of responding to the risk of more extreme weather is an estimate for the storm protection measures (both along the riverbanks and at the river crossing of pipelines) and any possible free spanning of pipelines at the bottom of the river due to faster-than- normal river flows that are being implemented (in 2020 and 2021). Example of mitigation measures are stabilizing the riverbed and reinforcing pipelines' supports in the riverbed as well as protecting riverbanks from erosion. DNO is also assessing the possibility of building a pipeline bridge over the river. The cost estimate is based on conceptual engineering studies, experience from similar projects (including phase 1 of the project already completed in 2020) and DNO's internal cost database. DNO has also received quotes from third-parties for engineering and construction of a bridge for the pipelines. These quotes, benchmarked to DNO's inhouse cost estimates, are the basis for the USD 3 million estimate provided here. This is split into USD 1.5 million for engineering, procurement and construction of the pipeline bridge and USD 1.0 million for engineering, procurement, and construction of the riverbank and riverbed reinforcement.

W4.2c

(W4.2c) Why does your organization not consider itself exposed to water risks in its value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact?

	Primary reason	Please explain
Row 1	Risks exist, but no substantive impact anticipated	DNO like many oil and gas companies, relies on a global supply chain to procure the equipment it needs. Building and transporting this equipment rely on availability of various quality levels of water, depending on the type of the equipment (e.g. high-grade steel used in drilling operations and cement used in construction activities onsite and offsite). Relying on a global supply chain allows diversification of supply – when possible – which makes DNO less prone to the risk of local shortages of water impacting its geographically diversified suppliers.

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?

No

W4.3b

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

	Primary reason	Please explain
Row 1	Not yet evaluated	We plan to do a more extensive water risk and opportunities assessment in the next three years.

W6. Governance

W6.1

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

No, but we plan to develop one within the next 2 years

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 Deputy Chairman of the company's Board of Directors chairs the Board HSSE Committee (HSSE: Health, Safety, Security and Environment). In addition to the Deputy Chairman, a second Director from the company's Board of Directors is a member of the Board HSSE committee. Senior executives and managers from the company participate in the HSSE Committee meetings, they include the Managing Director (MD) and the Chief Operating Officer (COO) of DNO ASA plus General Managers and HSSE Managers of our two Business Units of Kurdistan Region of Iraq and North Sea (covering operations in Norway and the UK). This is a forum in which forward strategies related to health, safety, security and environment - including water related issues - are discussed and the company's HSSE policy is adjusted, if necessary. The Chairman of the HSSE Committee takes key recommendations of the Committee to the Board of Directors for discussion and final decisions, If necessary. Material presented includes water use and disposal data (quantity and quality) as well as policies which are discussed by the Committee at appropriate intervals to review performance and enable forward strategy setting. An example of a recent topic/project discussed with the Board's HSSE Committee is more heavy rainfalls during the past three winters in Kurdistan which have resulted in more transported river debris and much faster flow of the river adjacent to DNO's oil and gas pipelines. Severe and rapid erosion of the riverbanks and/or riverbed has been experienced and is expected that this trend will continue. With support of the Board Committee, DNO initiated a major upgrade to the physical storm protection measures for its pipelines. The first phase of pipeline protection project was completed in 2020 with the second phase ongoing in 2021.

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 - some meetings	Monitoring implementation and performance Reviewing and guiding annual budgets Reviewing and guiding business plans Reviewing and guiding major plans of action Reviewing and guiding risk management policies	The Deputy Chairman of the Board chairs the Board HSSE Committee. In addition to the Deputy Chairman, a second Director from the company's Board of Directors is a member of the Board HSSE committee. Senior executives and managers from the company participate in the HSSE Committee meetings including the Managing Director (MD) and the COO of DNO ASA plus General Managers and HSSE Managers of our two Business Units of Kurdistan Region of Iraq and North Sea (covering Norway and the UK). This is a forum in which major performance indicators, forward strategies, annual budgets, major business plans and risk management policies (including water related matters) are discussed. The Chairman of the HSSE Committee takes key recommendations of the Committee to the Board of Directors for discussion and final decisions, if necessary.

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 Operating Officer (COO)

Responsibility
Both assessing and managing water-related risks and opportunities

Frequency of reporting to the board on water-related issues
Quarterly

Please explain
The CEO (in DNO terminology, the Managing Director) has delegated management responsibility for HSSE including water related issues to the COO, within the policy framework set by HSSE and risk management policies. DNO believes that primary responsibility for all HSSE matters, including water related issues, should be with line management. As the two Business Units' (BU) General Managers report directly to the COO, this set-up provides for clear accountability and quick decision making. In turn, operational management of water related issues is the responsibility of each BU General Manager who must ensure compliance with DNO's HSSE Policy Statement. The COO chairs a quarterly HSSE review, at which the BU managers report their HSSE performance including any water related topics. Where necessary, actions are agreed to improve performance and/or proposals to adjust strategy are formulated for discussion with the Board HSSE Committee.

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, and we do not plan to introduce them in the next two years	

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?
No

W6.6

(W6.6) Did your organization include information about its response to water-related risks in its most recent mainstream financial report?
No, but we plan to do so in the next two years

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 not yet reviewed, but there are plans to do so in the next two years	<Not Applicable>	Water related matters are important to DNO. However, the areas in which we operate have not been experiencing water stress and therefore, we have not integrated water related issues in our long-term business objectives yet. However, as water issues such as its use and discharge volumes, qualities, standards and practices become more important globally and regionally , DNO continues to monitor developments in this field and will integrate water related issues more specifically in its long-term business objectives (5 years plus time horizon) should needs arise.
Strategy for achieving long-term objectives	No, water-related issues not yet reviewed, but there are plans to do so in the next two years	<Not Applicable>	We currently do not have long-term business objectives related to water issues as discussed above. We continue to monitor the developments and adjust our long-term objectives and strategies to achieve those objectives if needed.
Financial planning	No, water-related issues were reviewed but not considered as strategically relevant/significant	5-10	DNO's operations are not in areas where we have felt any material water stress issues so far. However, we have experienced some extreme weather conditions related to water (e.g., riverbank erosion with negative impact on the integrity of the support system of oil and gas pipelines at river crossings). These risks are thoroughly assessed and mitigated. Therefore, at this stage our main focus is on water-related extreme weather conditions and their possible impacts on our operations. Such risks and mitigation measures are included in 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)

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

Water-related OPEX (+/- % change)

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

Please explain

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	No, but we anticipate doing so within the next two years	

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 we do not have an internal price on water, water costs are part of our operational expenses. Economic analyses for our investment decisions take into account price of water as part of the operations costs.

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	Our company sets no targets or goals	<Not Applicable>	<Not Applicable>

W8.1c

(W8.1c) Why do you not have water target(s) or goal(s) and what are your plans to develop these in the future?

	Primary reason	Please explain
Row 1	Important but not an immediate business priority	All aspects of water use (including targets and goals) are important to DNO. However, the areas in which we operate have not been experiencing water stress and therefore, we have not yet set any specific goals or targets. We continue to monitor the situation and adapt if necessary. It is however of note that DNO has goals, policies and practices in place to ensure appropriate levels of monitoring of the nearby water sources to ensure no water contamination occurs due to its operations.

W9. Verification

W9.1

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

No, we do not currently verify any other water information reported in our CDP disclosure

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 Operating Officer (COO)	Chief Operating Officer (COO)

W10.2

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

Yes

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

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

Please confirm below

I have read and accept the applicable Terms