

# Welcome to your CDP Water Security Questionnaire 2019

## W0. Introduction

### W0.1

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

GAR is one of the leading palm oil plantation companies located in Indonesia with Integrated operations focused on the production of palm-based edible oils, fats, and fuels. GAR is focused on sustainable palm oil production and its primary activities range from cultivating and harvesting oil palm trees, processing fresh fruit bunches (FFB) into crude palm oil (CPO) and palm kernel (PK), to refining CPO into industrial and consumer products such as cooking oil, margarine, shortening, and specialty fats, as well as merchandising palm products throughout the world.

GAR aims to be the leader in sustainable palm oil production by adopting the best industry practices and standards, managing the environment responsibly and empowering the communities where we operate while delivering shareholder value. Our sustainability strategy is based on implementing best practices holistically in all dimensions of sustainability (the environment, community, work environment, supply chain and marketplace); benchmarking our practices against the Roundtable on Sustainable Palm Oil (RSPO) Principles and Criteria and the core principles of the United Nations Global Compact (UNGC); and engaging stakeholders.

### W-FB0.1a

**(W-FB0.1a) Which activities in the food, beverage, and tobacco sector does your organization engage in?**

- Agriculture
- Processing/Manufacturing
- Distribution

### 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, 2018	December 31, 2018

### W0.3

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

- Indonesia

## 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
Plantations	Plantations are rainfed and not irrigated and we do not measure water consumption/discharge data in plantations.
Indirect operations/operations not owned by us	We only report on water data from our wholly-owned direct operations.
Operations outside Indonesia	All our palm oil operations are based in Indonesia (contributing 99% of revenue) and this represents the area where we have the biggest environmental footprint and impact – we have therefore focused on reporting water data from our Indonesian 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	Water is the main supplementary component in Crude Palm Oil processing and refining in our operations as well as those of our third-party supplier mills. Significant amounts of freshwater that have been treated to meet the required quality is used during the process. We have ranked water issues as 'important' to our mill and refinery operations and to our third-party supplier mills. We expect this dependency on treated freshwater to continue for the foreseeable future.
Sufficient amounts of recycled, brackish and/or produced water available for use	Neutral	Neutral	We require water of a certain quality for CPO processing in our mills and refineries. This also applies to our third-party supplier mills. While we aim to reuse and recycle, recycled or brackish water is not suitable for use in mill and refinery processes. We do reuse treated wastewater known as POME (palm Oil Mill Effluent) which is treated either in open or closed ponds. The treated POME consists of water mixed with solids and is reused as fertilizer through Land Application in our own plantation. We have therefore ranked recycled/brackish water's importance as neutral. We do not foresee this dependency changing in the foreseeable future.

## W-FB1.1a

**(W-FB1.1a) Which water-intensive agricultural commodities that your organization produces and/or sources are the most significant to your business by revenue? Select up to five.**

Agricultural commodities	% of revenue dependent on these agricultural commodities	Produced and/or sourced	Please explain
Palm oil	More than 80%	Both	The company's primary activities are located in Indonesia and range from cultivating and harvesting oil palm trees, processing fresh fruit bunches (FFB) into crude palm oil (CPO) and palm kernel (PK), to refining CPO into industrial and consumer products. Palm oil is the main source of revenue for the company and we do not have any other water-

			intensive agricultural commodities. Water is required during all stages of the palm oil growth and production process for us and our third-party supplier mills. We measure and monitor water data at all our owned mills and refineries. All our plantations are rainfed and not irrigated and we do not measure water consumption/withdrawal or discharge at the plantation.
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## 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	The total volume of water withdrawals is measured and monitored regularly in all our mills and refineries facilities. (Note: we operate 46 mills and 6 refineries throughout Indonesia). All our plantations are rainfed and not irrigated and we do not measure water withdrawals at the plantation.
Water withdrawals – volumes from water stressed areas	Not relevant	Palm oil trees require a constant, abundant supply of water. Hence, palm oil plantations are only viable in and around tropical regions where there is fairly constant and abundant rainfall throughout the year. Plantations are therefore not opened/developed in any water scarce or stressed areas and our plantations are all rainfed and not irrigated. As part of our Environmental Impact Assessment we assess water risks prior to any new development. In addition, we have stopped opening any new plantations since 2014.
Water withdrawals – volumes by source	26-50	The total volume of water withdrawals from different sources is measured and monitored regularly in all our mills and refineries. The water sources recorded include surface water, ground water, sea water, public utility, and recycle water. Our plantations are rainfed and not irrigated and we do not measure water withdrawal by source at the plantation.

Water withdrawals quality	76-99	The raw water quality is monitored regularly according to quality parameters such as pH, TDS, silica and turbidity.
Water discharges – total volumes	76-99	We measure the quality and quantity of Palm Oil Mill Effluent (POME) which consists of liquids mixed with solids discharged from our palm oil mills. POME is treated in a wastewater treatment facility. Discharged treated POME is not separated into solids and liquids and is reused as fertilizer in our plantations. In our refineries, wastewater is discharged to third parties (municipal facilities). Our plantations are rainfed and not irrigated, and we do not measure discharge at the plantation.
Water discharges – volumes by destination	76-99	We measure the volumes of Palm Oil Mill Effluent (POME) which consists of liquids mixed with solids discharged from our palm oil mills. POME is treated in a wastewater treatment facility. Discharged treated POME is not separated into solids and liquids and is reused as fertilizer in our plantations. In our refineries, we measure volumes of wastewater discharged to third parties (municipal facilities). Our plantations are rainfed and not irrigated, and we do not measure discharge at the plantation.
Water discharges – volumes by treatment method	76-99	We measure the volumes of treated Palm Oil Mill Effluent (POME) which consists of liquids mixed with solids discharged from our palm oil mills. POME is treated in a wastewater treatment facility. Discharged treated POME is not separated into solids and liquids and is reused as fertilizer in our plantations. In our refineries, we measure volumes of wastewater discharged to third parties (municipal facilities). Our plantations are rainfed and not irrigated, and we do not measure discharge at the plantation.

Water discharge quality – by standard effluent parameters	100%	We monitor the quality of POME discharge from palm oils mills to ensure the quality complies with standard effluent parameters set by the government. We also monitor the quality of wastewater from the refineries according to a set of standard effluent parameters set by the government. Our plantations are rainfed and not irrigated, and we do not measure discharge at the plantation.
Water discharge quality – temperature	100%	We monitor the quality of POME discharge from palm oils mills including the temperature to ensure the quality complies with standard effluent parameters set by the government. We also monitor the quality (including the temperature) of wastewater from the refineries according to a set of standard effluent parameters set by the government. Our plantations are rainfed and not irrigated, and we do not measure discharge at the plantation.
Water consumption – total volume	76-99	The total volume of water consumption is measured and monitored regularly in all our owned mills and refineries. Our plantations are rainfed and not irrigated, and we do not measure discharge at the plantation.
Water recycled/reused	76-99	We measure the percentage of water that is recycled back to the system. We also measure our reuse of treated POME – a mixture of liquids and solids as fertilizer on our plantations.
The provision of fully-functioning, safely managed WASH services to all workers	100%	The company monitors all WASH services provided for employees at all our operational areas as well as the quality of WASH services and utilities provided at employee housing facilities.

## 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	17,426.55	Higher	We have expanded our water data reporting to include withdrawal data from both mills and refineries. This volume includes water withdrawal by these sources (measured by flowmeters): ground water and rivers (stored at reservoir) for mill, domestic/laboratory/office use, and refinery use. The volume is therefore higher than last year.
Total discharges	7,504.29	Higher	We have expanded our reporting of water data this year to include the discharge of treated POME (palm oil mill effluent) which is reused as fertilizer in our plantations. We have also included the volume of discharge to third parties (municipal facilities) from our refineries.
Total consumption	18,832.21	Lower	We have increased usage of recycled/reused water

## W-FB1.2e

**(W-FB1.2e) For each commodity reported in question W-FB1.1a, do you know the proportion that is produced/sourced from water stressed areas?**

Agricultural commodities	The proportion of this commodity produced in water stressed basins is known	The proportion of this commodity sourced from water stressed basins is known	Please explain
Palm oil	Not applicable	Not applicable	Palm oil trees require a constant, abundant supply of water. Hence, palm oil plantations are only viable in and around tropical regions where there is fairly constant and abundant rainfall throughout the year. Plantations are therefore not opened/developed in any water scarce or stressed areas and our plantations are all rainfed and not

			irrigated. As part of our Environmental Impact Assessment we assess water risks prior to any new development. In addition, we have stopped opening any new plantations since 2014.
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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	13,584.15	Higher	We have expanded our water data reporting to include withdrawal data from both mills and refineries. This volume includes water withdrawal by these sources (measured by flowmeters): rainwater and rivers (stored at the reservoir) for the mill, domestic/laboratory/office use, and lake water for refinery use.
Brackish surface water/Seawater	Relevant	2,495.49	Higher	The data for brackish surface water/seawater usage is also expanded to include seawater and seawater reverse osmosis (SWRO). We strive to meet all our water needs through surface water that is processed to meet the quality standards required for the production process and use seawater only in very limited quantities in refinery locations where no surface water is available. We continue to improve our water efficiency by recycling and reusing where appropriate.
Groundwater – renewable	Relevant	302.34	Lower	We have expanded our water data reporting to include data from refineries, which



				includes water withdrawals from deep wells.
Groundwater – non-renewable	Not relevant			We do not use non-renewables groundwater - we only use renewable groundwater, and we use it only in minimal quantities in locations where no surface water is available.
Produced/Entrained water	Relevant	9.56	This is our first year of measurement	We have expanded our water data reporting to include data from refineries, which include water withdrawals from condensate water.
Third party sources	Relevant	1,035	Higher	We have expanded our water data reporting to include withdrawal data from refineries.

## 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			The wastewater produced from our palm oil mill is treated in an open or closed wastewater treatment system to render the chemical and physical characteristics compliant with national regulations. 100% of the treated wastewater is applied in the field as organic fertiliser.
Brackish surface water/seawater	Not relevant			The wastewater produced from our palm oil mill is treated in an open or closed wastewater treatment system to render the chemical and physical characteristics compliant with national regulations. 100% of the treated wastewater is applied in the field as organic fertiliser.

Groundwater	Not relevant			The wastewater produced from our palm oil mill is treated in an open or closed wastewater treatment system to render the chemical and physical characteristics compliant with national regulations. 100% of the treated wastewater is applied in the field as organic fertiliser.
Third-party destinations	Relevant	5,526.48	Higher	We have expanded our water data reporting to include discharge data from refineries.

## W1.2j

**(W1.2j) What proportion of your total water use do you recycle or reuse?**

	% recycled and reused	Comparison with previous reporting year	Please explain
Row 1	1-10	Higher	We have expanded our recycled water reporting to include upstream and downstream data. We use CDP formula to calculate the percentage of water recycled. Based on the calculation, the amount of water recycled from consumption is 9.10% in our upstream and downstream operation.

## W-FB1.3

**(W-FB1.3) Do you collect/calculate water intensity for each commodity reported in question W-FB1.1a?**

Agricultural commodities	Water intensity information for this produced commodity is collected/calculated	Water intensity information for this sourced commodity is collected/calculated	Please explain
Palm oil	Yes	No, not currently and we have no plans to collect/calculate this data within the next two years	For our suppliers, we are currently focused on managing the most material and urgent issues including no deforestation, no development on peat and protection of biodiversity. Palm oil plantations are not developed in water-stressed areas as the trees need abundant rainfall to grow. They are also rainfed

			and not irrigated. While we recognise that water issues are becoming more important, we have chosen to focus on the more urgent issues in our supply chain as listed above.
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## W-FB1.3a

**(W-FB1.3a) Provide water intensity information for each of the agricultural commodities identified in W-FB1.3 that you produce.**

**Agricultural commodity**

Palm oil

**Water intensity value (m3)**

3.46

**Numerator: water aspect**

Total water consumption

**Denominator: unit of production**

Tons

**Comparison with previous reporting year**

Higher

**Please explain**

The water intensity is increasing from last year, due to the larger coverage of water source being measured. (Water intensity is 3.46m3 for each tonne of Crude Palm Oil produced. )

## 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
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Row 1	Important but not an immediate business priority	<p>Our critical supply chain consists of third-party suppliers of palm oil fresh fruit bunches, crude palm oil and palm kernel. Their most material environmentally-related issues are therefore similar to ours, and include no deforestation, forest conservation, no development on peat and conservation of biodiversity. We are therefore focused on ensuring that our supply chain is compliant with these environmental management commitments in the GAR Social and Environmental Policy. Through our efforts to transform our supply chain, we are supporting the conservation of 65,000 hectares of forests by our suppliers which helps to maintain freshwater resources.</p> <p>Palm oil trees require a constant, abundant supply of water. Hence, palm oil plantations are only viable in and around tropical regions where there is fairly constant and abundant rainfall throughout the year. Plantations are therefore not opened/developed in any water scarce or stressed areas and plantations are rainfed and not irrigated.</p> <p>Nevertheless we recognize the growing importance of water-related issues and risks and we are at the initial stages of gauging awareness of water-related issues in our supply chain.</p>
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## 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-FB3.1

**(W-FB3.1) How does your organization identify and classify potential water pollutants associated with its food, beverage, and tobacco sector activities that could have a detrimental impact on water ecosystems or human health?**

Regular monitoring of water and wastewater is carried out and reported to the government's environmental agency. We submit water sample analyses to the environmental agencies at least twice yearly. This allows us to monitor and determine the presence of water pollutants.

We also take steps to minimize risk of pollution of surface and ground water and we follow strict land management practices that are designed to reduce these risks. This is monitored and supervised by our in-house research facility – SMART Research Institute. These include NOT applying herbicides or chemicals near and around riparian areas; restricting the application of treated liquid waste (POME) which is used as fertilizer to 50 meters from riparian areas; and planting vetiver grass to minimize soil erosion at riparian areas. On the plantations we also have sensors to monitor the impact of fertilizer and other chemical use on water quality.

## W-FB3.1a

**(W-FB3.1a) Describe how your organization minimizes the adverse impacts of potential water pollutants on water ecosystems or human health associated with your food, beverage, and tobacco sector activities.**

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### Potential water pollutant

Fertilizers

### Activity/value chain stage

Agriculture – direct operations

Agriculture – supply chain

### Description of water pollutant and potential impacts

The use of fertilizers can contribute to water pollution if not properly managed.

Fertilizers, which are both rich in nitrogen and phosphorus, are the primary sources of nutrient pollution from agricultural sources. Excess nutrients can impact water quality when it rains or when water and soil containing nitrogen and phosphorus wash into nearby waters or leach into ground water.

### Management procedures

Fertilizer management

Follow regulation standards

### Please explain

We employ strict guidelines and standard operational procedures in the application of fertilizer.

These guidelines are monitored, supervised and updated by our in-house research facility – SMART Research Institute.

Proper fertilizer management includes applying fertilizers in the proper amount, at the right time of year and with the right methods. This can significantly reduce the potential for pollution.

We practice this on our own plantations as well as share the best practices with plasma and independent smallholders.

We use sensors in the plantations to actively monitor the impact of fertilizers on the environment including water quality.

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**Potential water pollutant**

Pesticides and other agrochemical products

**Activity/value chain stage**

Agriculture – direct operations

Agriculture – supply chain

**Description of water pollutant and potential impacts**

The use of chemicals such as pesticides and herbicides can contribute to water pollution if not properly managed.

Pesticides and herbicides can reach surface water through runoff from treated plants and soils. The impact of excessive pesticide application is water contamination and disturbance of ecosystem balance and detrimental impacts on human health.

**Management procedures**

Pesticide management

Substitution of pesticides for less toxic or environmentally hazardous alternatives

Product innovation

Follow regulation standards

**Please explain**

We employ strict guidelines and standard operational procedures in pesticide and herbicide application. These guidelines are monitored, supervised and updated by our in-house research facility – SMART Research Institute.

Our usage of agrochemicals is low and we continue to minimise this through Integrated Pest Management methods. This includes using biological controls such as barn owls and leopard cats to control rats, pheromones to control beetles, and the use of parasitoids to control caterpillars. We also use biopesticides to further minimise dependence on chemical pesticides.

We practice this on our own plantations as well as share the best practices with plasma and independent smallholders.

## **W3.3**

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

No, water risks-related are not assessed

### W3.3e

**(W3.3e) Why does your organization not undertake a water-related risk assessment?**

	Primary reason	Please explain
Row 1	Important but not an immediate business priority	<p>We are currently focused on managing and mitigating risks related to our most material (environmentally-related) issues which include: no deforestation, forest conservation, no development on peat and conservation of biodiversity. We also focus on riparian zone conservation and rehabilitation and the conservation of water catchment areas. These are also priorities for our key stakeholders such as customers and third-party suppliers. Palm oil trees require a constant, abundant supply of water. Hence, palm oil plantations are only viable in and around tropical regions where there is fairly constant and abundant rainfall throughout the year. Plantations are therefore not opened/developed in any water scarce or stressed areas, and plantations are rainfed and not irrigated.</p> <p>Nevertheless we recognise the growing importance of water-related issues. We have begun a pilot project to assess our water footprint based on Life Cycle Assessment (LCA) Methodology, in accordance with ISO 14046 to understand the impact of water consumption in our operational activities. The assessment is done within the cradle-to-gate system boundary to calculate the water consumption of seed production, nursery, estate, palm oil mill, kernel crushing plant, bulking stations and refineries. As we are at the initial stages of assessing our water footprint, we have not yet done a full water-related risk assessment.</p>

## 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?**

No

### W4.1a

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

Our organisation defines substantive impact as an impact that has a significant or important effect to our business, which affects a large proportion of our business units, creates further impacts on those business units, and potentially becomes a real concern for our stakeholders.

These impacts occur due to risks such as extreme weather events, forest fires, declining ecosystem services, changes to national legislation, changes to international law and bilateral

agreements, changes in land tenure regulations, conflicts of land ownership and occupancy rights, negative media coverage, local community opposition, as well as uncertainty about product origin and legality.

Those risks create substantive impacts on our business, which are:

- a. Reduction or disruption in production capacity (in tonnes): production capacity is calculated as the sum of fresh fruit bunch output and palm product output.
- b. Increased operational costs: operational cost consists of selling expenses, general and administrative expenses such as export tax and levy, transportation and delivery, export administration, salaries, wages, and employees' benefits, as well as advertising and promotions. General and administrative expenses comprise of salaries, wages and employees' benefits, rent, taxes and licenses, depreciation and amortisation, repairs and maintenance, travelling, and professional fees.
- c. Disruption in product supply (in million MT)
- d. Reduced demand for products and services (in million MT)
- e. Disruption to sales: Our sales mostly comprise Crude Palm Oil (CPO) and Palm Kernel (PK) including their derivative products, such as cooking oil, margarine, shortening and biodiesel.
- f. Brand damage

## W4.2b

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

	Primary reason	Please explain
Row 1	Evaluation in progress	<p>We are currently focused on managing and mitigating substantive risks related to our most material (environmentally-related) issues. These include no deforestation, forest conservation, no development on peat and high biodiversity conservation value area. We also focus on riparian zone conservation and rehabilitation and the conservation of water catchment areas. Our efforts in forest conservation also contribute to maintaining the health of freshwater resources.</p> <p>Palm oil trees require a constant, abundant supply of water. Hence, palm oil plantations are only viable in and around tropical regions, where there is relatively consistent and abundant rainfall throughout the year. Plantations are therefore not opened/developed in any water scarce or stressed areas, and are rainfed and not irrigated.</p> <p>Nevertheless, we recognise the growing importance of water-related issues. Due to increasing recurrence of extreme weather phenomena like El Nino, we are aware that water deficits can develop in certain areas in Indonesia. We are exploring the use of advanced technology such as AI and developing fertigation (fertiliser-irrigation) systems in our nurseries that optimises the use of water and</p>



		<p>fertiliser.</p> <p>We have also begun a pilot project to assess our water footprint based on Life Cycle Assessment (LCA) Methodology, in accordance with ISO 14046 to understand the impact of water consumed in our operational activities. We are in the process of evaluating potential future substantive impacts stemming from water-related issues.</p>
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## 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	Not yet evaluated	<p>Our critical supply chain consists of third-party suppliers of palm oil fresh fruit bunches, crude palm oil and palm kernel. Their most material environmentally-related issues are therefore similar to ours, and include no deforestation, forest conservation, no development on peat and conservation of biodiversity. We are therefore focused on ensuring that our supply chain is compliant with these environmental management commitments in the GAR Social and Environmental Policy. Through our efforts to transform our supply chain, we are supporting the conservation of 65,000 hectares of forests by our suppliers which helps to maintain freshwater resources.</p> <p>Palm oil trees require a constant, abundant supply of water. Hence, palm oil plantations are only viable in and around tropical regions where there is fairly constant and abundant rainfall throughout the year. Plantations are therefore not opened/developed in any water scarce or stressed areas and plantations are rainfed and not irrigated.</p> <p>Nevertheless we recognize the growing importance of water-related issues and risks and we are at the initial stages of gauging awareness of water-related issues in our supply chain.</p>

## 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	<p>We are currently focused on managing and mitigating substantive risks related to our most material (environmentally-related) issues. Based on our latest materiality assessment these include no deforestation, forest conservation, no development on peat and high biodiversity conservation value area. We also focus on riparian zone conservation and rehabilitation and the conservation of water catchment areas. As of 2018, we have secured an agreement with local communities in 13 villages to set aside over 7,700 hectares of HCS forests for conservation (This is in addition to the 72,000 hectares of the conservation area in our concessions). Our efforts in forest conservation also contributes to maintaining the health of freshwater resources.</p> <p>Palm oil trees require a constant, abundant supply of water. Hence, palm oil plantations are only viable in and around tropical regions, where there is relatively consistent and abundant rainfall throughout the year. Plantations are therefore not opened/developed in any water scarce or stressed areas, and plantations are rainfed and not irrigated.</p> <p>Nevertheless, we recognise the growing importance of water-related issues. We have begun a pilot project to assess our water footprint based on Life Cycle Assessment (LCA) Methodology, in accordance with ISO 14046 to understand the impact of water consumed in our operational activities. The assessment is done within the cradle-to-gate system boundary to calculate the water consumption of seed production, nursery, estate, palm oil mill, kernel crushing plant, bulking stations and refineries. As we are at the initial stages of assessing our water footprint, we have not yet thoroughly evaluated our water-related opportunities, although we have already implemented water recycling and reuse including the reuse of 100% POME discharge as fertiliser in our plantations.</p>

## W6. Governance

### W6.1


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


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

#### W6.1a

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

	Scope	Content	Please explain
Row 1	Company-wide	Recognition of environmental	As part of our environmental management commitments under the GAR Social and Environmental Policy (GSEP),

	linkages, for example, due to climate change	we are committed to protecting riparian zones and water catchment areas. As of 2018, we have secured agreement with local communities in 13 villages to set aside over 7,700 hectares of HCS forests for conservation (This is in addition to the 72,000 hectares of the conservation area in our concessions). Our efforts in forest conservation also contributes to maintaining the health of freshwater resources. We are currently carrying out rehabilitation of riparian zones – as of 2018 we have rehabilitated over 2,700 hectares. This is an ongoing process. Our policy also applies to all our operations as well as our supply chain and we are at the initial stages of assessing our suppliers' awareness of water-related issues.  1
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## W6.2

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

Yes

### W6.2a

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

Position of individual	Please explain
Chief Executive Officer (CEO)	The Board and Senior Management are fully involved in and supports GAR's sustainability efforts and commitments under the GSEP. A Sustainability Committee (SC), which is chaired by GAR Corporate Strategy and Business Development Director, oversees all matters related to responsible palm oil. The SC comprises the senior leadership team from the upstream, downstream, and corporate business units, as well as the Head of the Sustainability and Strategic Stakeholder Engagement Directorate and other staff members from the department. It reports directly to the Chairman and CEO of GAR, and the Board, and meets regularly to oversee the development and implementation of the GSEP and the monitoring of performance across all our business operations.

### W6.2b

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

Frequency that water-related issues	Governance mechanisms into which	Please explain
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	are a scheduled agenda item	water-related issues are integrated	
Row 1	Sporadic - as important matters arise	Reviewing and guiding strategy Reviewing innovation/R&D priorities	Water-related issues which come under the GAR Social and Environmental Policy are reviewed by the Sustainability Committee and reported to CEO and Chairman and the Board.

## 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)

Facilities manager

### Responsibility

Other, please specify

Implementing/monitoring water SOP

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

As important matters arise

### Please explain

Implementation and monitoring of operational standard and policy in operational units are carried out by Senior Managers, including water standards and policy. Should an important issue arise, the Senior Manager will report to Vice President and Management Committee.

## W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4

**(W-FB6.4/W-CH6.4/W-EU6.4/W-OG6.4/W-MM6.4) Do you provide incentives to C-suite employees or board members for the management of water-related issues?**

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?	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	We have not seen any substantive impacts from water-related issues on our business. Nevertheless, we recognise the growing importance of water-related issues, and we are at the initial phase of conducting a water footprint assessment before evaluating the future impacts on our business.
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	We have not seen any substantive impacts from water-related issues on our business. Nevertheless, we recognise the growing importance of water-related issues, and we are at the initial phase of conducting a water footprint assessment before evaluating future impacts on our business and subsequently setting goals and strategy.
Financial planning	No, water-related issues not yet reviewed, but there are plans to do so in the next two years	We have not seen any substantive impacts from water-related issues on our business. Nevertheless, we recognise the growing importance of water-related issues, and we are at the initial phase of conducting a water footprint assessment before evaluating future impacts on our business and subsequently setting goals and strategy, including 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**

These are considered as operational costs of the individual business units, and currently, we do not have a separate overall water CAPEX/OPEX figure.

### 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 plans for the next two years	We do not yet have the climate modelling to enable us to complete climate-related scenario analysis. We need to explore the possibility of commissioning climate modelling before being able to carry out a climate-related scenario analysis in the future.

### 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**

We are currently at the initial phase of carrying out a water footprint assessment and do not yet have the full data and methodology to calculate an internal price for 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	Company-wide targets and goals	Targets are monitored at the corporate level	We set targets based on our commitments in the GAR Social and Environmental Policy (GSEP). Under the GSEP, we are committed to conserving and restoring riparian zones and water catchment areas. Our targets include analysis of riparian zones and water catchment areas and subsequent restoration and conservation. As of 2018, we have rehabilitated over 2,700 hectares of riparian zones. Our water consumption has not decreased in the last 3 years. Our targets in this area include carrying out a water footprint assessment to understand and better manage water consumption and exploring the use of advanced technology such as AI to maximise efficient use of water and fertiliser. Our targets and progress are monitored and reported publicly in our annual Sustainability Report.

## W8.1a

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

### Target reference number

Target 1

### Category of target

Watershed remediation and habitat restoration, ecosystem preservation

### Level

Company-wide

### Primary motivation

Reduced environmental impact

### Description of target

Under the GSEP, our management of High Conservation Value areas also involves the rehabilitation of riparian zones that have previously been cleared or planted. These riparian buffer zones have particular ecological importance, providing specific wildlife habitats and playing a key role in water systems.

### Quantitative metric

Total number of watershed remediation and habitat restoration, ecosystem preservation activities

**Baseline year**

2015

**Start year**

2015

**Target year**

2018

**% achieved**

100

**Please explain**

Since 2015, GAR has been implementing a riparian rehabilitation programme in its 18 concessions. As of end 2018, we have rehabilitated over 2,700 hectares, and the riparian zones have been replanted with native trees and vegetation. We are also participating in research with Cambridge University on riparian zone rehabilitation. For more information see the RERTA Project: <http://oilpalmbiodiversity.com/research/rerta-project/>

## W9. Linkages and trade-offs

### W9.1

**(W9.1) Has your organization identified any linkages or tradeoffs between water and other environmental issues in its direct operations and/or other parts of its value chain?**

Yes

### W9.1a

**(W9.1a) Describe the linkages or tradeoffs and the related management policy or action.**

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**Linkage or tradeoff**

Linkage

**Type of linkage/tradeoff**

Improved levels of ecosystem services

**Description of linkage/tradeoff**

Through our commitment to conserve riparian zones and water catchment areas, as well as our efforts to minimise water pollution, we seek to maintain ecosystem services including maintaining the health of freshwater resources which are needed for community and operational use. Our forest conservation efforts (we are currently conserving 72,000 hectares of High Carbon Stock and High Conservation Value areas)



also contribute to improved ecosystem services such as the maintenance of freshwater resources.

### **Policy or action**

We are committed to conserving and protecting riparian zones and water catchment areas. As of end 2018, we have rehabilitated over 2700 hectares of riparian zones. We are also collaborating with Cambridge University on a riparian zone restoration project. We also seek to minimise water pollution through best practices in fertilizer application – ie. through precise dosage and at optimum periods, as well as avoiding application during heavy rains for example.

We also employ Integrated Pest Management by deploying biological controls to minimise chemical use and minimise the risk of water pollution.

## **W10. Verification**

### **W10.1**

**(W10.1) Do you verify any other water information reported in your CDP disclosure (not already covered by W5.1d)?**

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

## **W11. Sign off**

### **W-FI**

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

### **W11.1**

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

	<b>Job title</b>	<b>Corresponding job category</b>
Row 1	Managing Director Sustainability and Strategic Stakeholder Engagement	Chief Sustainability Officer (CSO)

### **W11.2**

**(W11.2) Please indicate whether your organization agrees for CDP to transfer your publicly disclosed data on your impact and risk response strategies to the CEO Water**

**Mandate's Water Action Hub [applies only to W2.1a (response to impacts), W4.2 and W4.2a (response to risks)].**

No

## Submit your response

**In which language are you submitting your response?**

English

**Please confirm how your response should be handled by CDP**

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

**Please confirm below**

I have read and accept the applicable Terms