Setting Enterprise Water Targets:

A Guide for Companies





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GLOSSARY

Catchment: The geographical zone where surface or groundwater flows, is captured, and eventually is discharged at one or more points. A surface water catchment includes the area where precipitation collects, enters streams and rivers, and flows toward the mouth of a single river, whether this empties into a larger river, a lake, or the sea. A groundwater catchment is defined by the geology of an aquifer and groundwater flow paths (Alliance for Water Stewardship 2019). "Catchment" is used interchangeably with "basin" and "watershed" in this document.

Catchment context: The varying physical, regulatory, and social aspects of a catchment and how a company's water impacts and dependencies intersect. Decision-making in a catchment context responds to the complex, dynamic, and unique nature of shared water challenges and opportunities in any given location (Beverage Industry Environmental Roundtable 2017).

Desired (catchment) conditions: The strategic goal of reducing or eliminating a water challenge as circumstances are altered by factors such as changes in climate, land use, infrastructure, population, and government policies (UN Global Compact CEO Water Mandate et al. 2019).

Enterprise water target: An expected result that describes a company's contributions to improving water resources management across locations where it operates, sources from, or provides goods and services.

Materiality: Material topics are those that have a direct or indirect impact on an organization's ability to create, preserve, or erode economic, environmental, and social value for itself, its stakeholders, and society at large (GRI 2020).

Shared water challenge: A water-related issue, concern, or threat shared by the company site and one or more stakeholders within the catchment. Examples include physical water scarcity, deteriorating water quality, and regulatory restrictions on water allocation (Alliance for Water Stewardship 2019).

Site: The physical area over which the company owns or manages land or facilities and carries out its principal activities (Alliance for Water Stewardship 2019).

Site water target: An expected result from a site's contributions to addressing a catchment condition to meet a water challenge. The established target enables the site to define what actions are required to reach the catchment condition desired (UN Global Compact CEO Water Mandate et al. 2019).

Value chain: The activities involved in delivering value to customers, including direct operations and both upstream (e.g., raw material suppliers, manufacturers) and downstream (e.g., distributors, end users) activities (Science Based Targets Network 2020).

Water risk: The possibility of a company experiencing a water-related challenge (e.g., water scarcity, water stress, flooding, infrastructure decay, drought, weak water governance). Risk reflects both the likelihood of a specific challenge occurring and the severity of its impact. The severity depends on both the intensity of the challenge and the vulnerability of the company (UN Global Compact CEO Water Mandate et al. 2019).

Watershed: See catchment.

EXECUTIVE SUMMARY

Setting water targets at the enterprise level that respond to local contexts has proved challenging because water is not an equally material issue across corporate value chains. Environmental, social, governance, and economic conditions can also vary widely across catchments, and water risks result from shared water challenges.

The purpose of this working paper is to help companies do their part to address shared water challenges—and to focus their efforts in the right high-priority places. By setting enterprise water targets, companies can make changes in the ways and in the places that matter most across their value chains, ranging from how they source inputs to how they operate or provide goods. There will be continuing efforts, such as the need to update enterprise water targets over time as company and catchment conditions change, to engage in collective action, and to sustain benefits over time to deliver value and reduce shared water challenges. Companies can determine what specific actions are needed, and where, to meet sustainable catchment thresholds and to tackle shared water challenges with ambition proportionate to the company's role in creating them. Crafting and meeting enterprise water targets can increase business resilience and inform long-term business objectives and financial planning.

Informed by practitioner experience and stakeholder consultation, as well as existing water stewardship guidance and resources, this working paper introduces a three-step process for how companies can set water targets at the enterprise level that address the most material water-related risks in the places that matter the most across a company's value chain.

Step	Step 1: Assess water materiality and prioritize sections of the value chain.	Step 2: Assess water-related risks and prioritize locations.	Step 3: Set and disclose enterprise water targets.
Recommended	1.1. Map company impacts and dependencies on water across the value chain.	2.1. Screen for water- related risk across locations in sections of value chain identified in Step 1.	3.1. Set targets that drive actions at the local level with ambition at least proportional to the company's contribution to the shared water challenge.
Action	1.2. Identify sections of the value chain for setting water targets.	2.2. If required, prioritize locations on the basis of their business relevance or exposure to water-related risks.	3.2. Develop implementation strategies and measure and report progress toward the targets.
Output	List of sections of the value chain for target-setting	List of priority locations and water-related risks	List of water targets that respond to water-related risks in the places that matter the most across the value chain

THREE STEPS for setting enterprise water targets informed by the catchment context

The three-step process can help practitioners drive continuous improvement, mitigate risk, strengthen the social and legal license to operate at a site, and align corporate action with public policy priorities for water. These actions can contribute to reaching the five water stewardship outcomes identified by the Alliance for Water Stewardship and to meeting the Sustainable Development Goals (SDGs) (Appendix A).

The steps outlined offer two specific ways in which companies can set enterprise targets. Regardless of the path chosen, practitioners should always aim to link enterprise water targets to site targets and action plans that respond to the shared water challenges and stakeholder priorities, engage stakeholders at all stages of setting targets, view target-setting as an iterative process, and use the best available information to guide the targets' implementation.



INTRODUCTION

Companies, like other water users, need a reliable supply of water of adequate quality. Yet the world's water resources are under growing pressure from rising water consumption, pollution, weak governance, and climate change, exposing companies to increased water-related risks (World Economic Forum 2019; CDP 2021). Out of almost 3,000 companies surveyed, 44 percent reported water-related risks, with the total potential financial impacts reaching US\$301 billion (CDP 2021).

Because water risks stem not only from a company's own water dependencies and impacts, but also from the catchment context in which the company operates, a growing number of companies are engaging in water stewardship and developing strategies to help reduce their exposure to water risks. Water-related risks to a company may manifest anywhere across its value chain and be a function of a suite of shared water challenges (Appendix B).

A company adopting a water stewardship approach will have to expand its focus on water beyond direct operations, across the value chain, to the catchments the company depends on. In doing so, companies can understand the factors affecting water resources in the regions where they operate, where they source from, and where they provide goods and services, and can then take steps to address the associated risks.

PROBLEM STATEMENT

A critical aspect of engaging in water stewardship is setting water targets that address the shared water challenges a company faces in the catchments where it operates, sources, and provides goods and services, and that enable actions that reduce or eliminate the associated water risks. Further, water targets aligned with the shared water challenges a company faces are critical to future-proofing corporate value chains and building greater overall resilience in an ever-changing landscape of water-related risks.

Guidance is available on how a site can better manage water resources in response to the local catchment context (Beverage Industry Environmental Roundtable 2017, International Council on Mining and Metals 2015). Furthermore, guidance was recently developed and pilot tested to help sites set water targets to address shared water challenges and the associated water risks at the catchment level (UN Global Compact CEO Water Mandate et al. 2019; Abraham et al. 2020; Kammeyer et al. 2019; Baleta and Shiao 2020). The Science Based Target Network has adopted this guidance on setting contextual water targets as the interim target for fresh water until the methodology for science-based targets for water is developed (Science Based Target Network 2020).

Although water-related risks and impacts are local in nature, companies with direct operations that are spread across many sites, and with hundreds, sometimes thousands, of suppliers from around the world, often require targets and goals at the enterprise level. These enterprise water targets should

- establish the company's overall ambition as it relates to water, to help guide and inform interventions across the organization that optimize the likelihood of directing action on the right water risks in the right places; and
- publicly communicate to shareholders and other stakeholders how the company is responding to emerging water-related challenges.

Until now, companies have lacked clear guidance on how to set enterprise water targets. Setting such targets proved to be challenging, for many reasons. Perhaps most important are these:

- Water is not an equally material issue across corporate value chains, requiring different levels of ambition in different sections of the value chain. For example, a textile company may be able to maximize outcomes by focusing targets on their suppliers and processors, to whom water is more material than it is to retail stores.
- The **high variability in environmental**, **social**, **governance**, **and economic conditions across catchments** requires a different response at each location to address both chronic and acute physical, regulatory, and reputational water risks. For example, a food manufacturer seeking to reduce its nutrient effluent could consider the current physical water quality status and any voluntary or regulatory efforts that offer an opportunity for collective action in achieving a common goal in catchments across its value chain.
- Companies set targets across a range of material issues (e.g., greenhouse gases, waste, health and safety, diversity) that often require a single target and a comparable metric per issue to help track progress at the enterprise level. Because water risks are a function of a suite of different shared water challenges (e.g., quantity, quality, accessibility, governance), companies struggle to set a single target that is relevant to the sections of the value chain for which water is most material, responds to the location-specific water-related risks the company faces, and can be aggregated across locations and tracked at the enterprise level.



APPROACH

This paper provides guidance, for the first time, on how to set enterprise water targets. The guidance was designed to meet the following criteria:

- **Applicability.** A successful approach to setting water targets at the enterprise level should be applicable to companies and value chains of any size; to companies in any sector; to companies with different types of sites (e.g., manufacturing, farms, and retail space); and to companies with different levels of maturity in water management.
- **Relevance**. Water targets at the enterprise level should help reduce exposure to water risks in the sections of the value chain for which water is most material, drive internal and collective actions that contribute to solving shared water challenges, and enable credible measurement and reporting practices at the enterprise level.
- **Credibility.** The approach, targets, and desired outcomes should deliver value to the company and be trusted and deemed credible by stakeholders.
- Adaptability. Target-setting should be seen as an iterative process, given the changing nature of the catchment context and the value chain's size and impact. Companies will have to revisit water targets over time to ensure they reflect the company's priorities, local policies, and changes in catchment conditions.

This working paper is intended for companies, particularly those with many sites in their direct operations or in the broader value chain, that require a robust and credible water target at the enterprise level to help set and publicly communicate a meaningful and credible ambition for water stewardship. It will be most valuable for practitioners with technical or functional responsibility for management of water issues at the enterprise level. The paper introduces a three-step process for setting water targets at the enterprise level (Table 1) informed by

- practitioner experience with guidance meant to help sites set water targets informed by catchment context (UN Global Compact CEO Water Mandate et al. 2019);
- practitioner experience in setting enterprise water targets (Cargill 2020; Mars, Inc. 2019; Putt del Pino et al. 2016; Tyson Foods Inc. 2019);
- input from Stockholm International Water Institute World Water Week participants attending the session titled "Setting Contextual Water Targets: Concept and Application" on Wednesday, August 28, 2019 (SIWI 2019); and
- consultation and review with an expert advisory group (Appendix C).

Each step can be met through a series of actions to ensure that the water targets drive value across any section of a company's value chain. These steps provide companies with a process for setting and updating targets in response to internal changes across the value chain (e.g., driven by company growth, mergers and acquisitions, divestments, or changes in procurement) and external changes in the catchment context (e.g., driven by changes in the social, environmental, or economic landscape).

TABLE 1. Three steps for setting enterprise water targets informed by the catchment context

Step	Step 1: Assess water materiality and prioritize sections of the value chain.	Step 2: Assess water-related risks and prioritize locations.	Step 3: Set and disclose enterprise water targets.
Recommended	1.1. Map company impacts and dependencies on water across the value chain.	2.1. Screen for water- related risk across locations in sections of value chain identified in Step 1.	3.1. Set targets that drive actions at the local level with ambition at least proportional to the company's contribution to the shared water challenge.
Action	1.2. Identify sections of the value chain for setting water targets.	2.2. If required, prioritize locations on the basis of their business relevance or exposure to water-related risks.	3.2. Develop implementation strategies and measure and report progress toward the targets.
Output List of sections of the value chain for target-setting		List of priority locations and water-related risks	List of water targets that respond to water-related risks in the places that matter the most across the value chain

Building on the strong business case for action on water, and leveraging existing resources (Beverage Industry Environmental Roundtable 2017; International Council on Mining and Metals 2015; UN Global Compact CEO Water Mandate et al. 2019; Reig et al. 2019), this working paper aims to help practitioners align with the five water stewardship outcomes identified by the Alliance for Water Stewardship (Alliance for Water Stewardship 2019) to further strengthen corporate contributions to meeting the SDGs (Appendix A). By applying the guidance outlined herein, companies can become more responsive to local issues, which in turn can help

- drive continuous improvement across the value chain,
- mitigate risk,
- strengthen the social and legal license to operate,
- ensure business continuity, and
- align corporate action with public policy priorities for water.

Although this working paper does not recommend new disclosure or reporting requirements, it does complement existing efforts (e.g., those by CDP, the Task Force on Climate-related Financial Disclosures, and the Sustainability Accounting Standards Board) by providing companies with a step-by-step approach to set targets that respond to the most material water risks across a company's value chain. The following sections describe the process for setting effective enterprise water targets.

STEP 1: ASSESS WATER MATERIALITY AND PRIORITIZE SECTIONS OF THE VALUE CHAIN

This step helps ensure that enterprise water targets address water-related risks in the places that matter the most. This can be achieved through a number of actions.

Action 1.1. Map company impacts and dependencies on water across the value chain.

Material issues are those that have a direct or indirect impact on an organization's ability to create, preserve, or erode economic, environmental, and social value for itself, its stakeholders, and society at large (GRI 2020).

To determine if water is a material issue, companies should evaluate the impacts and dependencies on water resources across the value chain. Different sections of the value chain may have different impacts and dependencies. Examples are available on how water's potential impacts and water dependency are distributed across a company's value chain (McKinsey & Company, Inc. 2009; Nike Inc. 2015; SABMiller and WWF-UK 2009).

For each section of the value chain, a company can ask two questions to assess water materiality:

- **Dependencies on water resources**: to what extent is this section of the value chain likely to be affected by water challenges because of its dependencies on water quantity or quality?
- **Impacts on water resources**: to what extent do the activities in this section of the value chain contribute to shared water challenges?

Water materiality will be high in those sections with high dependencies or impacts on water resources. Companies should prioritize those sections of the value chain when setting water targets. For example, a manufacturing plant may have limited dependency on water quality but a significant impact on the quality of the water body to which the plant discharges wastewater. Conversely, a food processing plant that returns more than 95 percent of its water withdrawals will have limited impact on local water availability but will have a very high dependency on water resources. In both cases, the company should prioritize setting targets at those locations.

Companies can estimate dependencies and impacts on water resources across a value chain using water withdrawals and water quality requirements as a proxy for water dependencies and water consumption and water pollution as a proxy for impacts. This can be done using reported values (e.g., from the company's sites and its suppliers or customers) or estimated values (e.g., water footprint statistics or life cycle assessments of the company's products and services) (Table 2).

TABLE 2. Examples of open-source resources for estimating dependencies and impacts on water resources across the value chain

Open-source tool	Link
GeoFootprint (Quantis 2020)	https://geofootprint.com/
WaterStat (Water Footprint Network 2019a)	https://waterfootprint.org/en/resources/waterstat/
Water Footprint Assessment Tool (Water Footprint Network 2019b)	https://waterfootprint.org/en/resources/intertactive-tools/
Water Footprint Assessment Manual (Hoekstra et al. 2011)	https://waterfootprint.org/media/downloads/ TheWaterFootprintAssessmentManual_2.pdf
EarthStat (EarthStat 2020)	http://www.earthstat.org/

Action 1.2. Identify sections of the value chain for setting water targets.

A company should prioritize the sections of the value chain for which water is most material to set water targets. These targets should reduce risk and ultimately eliminate a company's contributions to shared water challenges. The outcomes of this prioritization will vary by industry and hinge on how dependencies and impacts on water resources are distributed across the value chain (Table 3).

TABLE 3. Examples of how dependency and impacts on water resources can be used to assess water materiality and target priority

yes/high priority no/low priority					
Sample sections of Value Chain A	Dependency on water resources	Impacts on water resources	Water materiality	Prioritize for water targets	
Agricultural raw material sourcing (e.g., crops with high water withdrawals, consumption, and nonpoint source pollution)	HIGH	HIGH	HIGH	•	
Suppliers/distributors	LOW	LOW	LOW	•	
Operations (e.g., processing plants with high volume of water withdrawals and wastewater discharge)	HIGH	HIGH	HIGH	•	
Consumer product use	LOW	LOW	LOW	•	
Sample sections of Value Chain B	Dependency on water resources	Impacts on water resources	Water materiality	Prioritize for water targets	
Suppliers/distributors	LOW	LOW	LOW		
Operations (e.g., manufacturing plants requiring low volumes of high-quality influent water and discharging high-quality water)	HIGH	LOW	HIGH	•	
Consumer product use (e.g., product requiring water but not polluting)	HIGH	LOW	HIGH		

Assigning priorities to sections of the value chain may require an iterative process with internal consultation. For example, in consulting with internal stakeholders across business units and functions, a company may learn that certain supply chains require critical water inputs or that certain products have higher-than-expected impacts on water supplies or quality.

A company may want to set water targets more broadly, for all sections of the value chain, to help catalyze action by others to eliminate shared water challenges or contribute specific solutions to help drive more sustainable water management. However, it is best to prioritize sections of the value chain for which water is most material, and where impacts on water resources are greatest, first.

STEP 2: ASSESS WATER-RELATED RISKS AND PRIORITIZE LOCATIONS

Companies should screen for water-related risks and shared water challenges at each location in the sections of the value chain selected in Step 1. This will help prioritize locations for companies to set water targets that can reduce risk, contribute to eliminating a company's impact on water resources, and ultimately reduce shared water challenges.

Gaining access to location information outside a company's direct operations, upstream in the supply chain and downstream in consumer markets, can be very challenging. It is sometimes infeasible in the short term, hindered by limited visibility into complex supply chains and distribution networks. Because of this, companies are encouraged to consider the following before starting Step 2:

- Begin with what is known (e.g., locations of facilities within the company's direct operations or suppliers that the company has a direct relationship with).
- Focus on what is most important to accelerate action where it matters most (e.g., start by focusing on high-volume, high-impact, or high-expenditure items in your value chain).
- Engage with actors across the value chain to obtain missing information.
- Be pragmatic. Leverage what is known to close information gaps; for example, consider using proxy locations (e.g., mills are often in close proximity to where raw materials are grown, and subnational crop area and trade information can be used to locate sourcing areas) or third-party data (e.g., from universities or nongovernmental organizations).
- Consult and engage peer organizations, industry associations, or third-party experts to build on what has already been done and leverage existing best practice.

Action 2.1. Screen for water-related risk across locations in the sections of value chain identified in Step 1.

Companies should screen for the water-related risks that are most material to the company within the sections of the value chain identified in Step 1. Materiality is a threshold at which certain topics become relevant enough for a company to have to report on them to stakeholders, including governments, shareholders, and communities. Major disclosure services, such as the Sustainability Accounting Standards Board and the Task Force on Climate-related Financial Disclosures, anchor their disclosure recommendations in materiality.

Water-related risk can originate from company dependencies on water resources (driven by the likelihood of shared water challenges undermining business viability) or impacts on water resources (driven by the likelihood of company activities contributing to shared water challenges).

Because of this, to determine if water-related risks have reached a material threshold and should be prioritized for setting targets, a company must first determine:

- Which shared water challenges threaten a company's access to needed water resources most? For example, a bottling company may identify both water availability and water quality as important shared water challenges because both are critical for providing its product to consumers.
- Which shared water challenges are driven by a company's impact on water resources? For example, a crop producer using groundwater for irrigation may identify groundwater depletion as the most pressing shared water challenge to which the company contributes.

Companies can then determine which of its locations should be prioritized for setting water targets. Existing open-source tools can help by mapping sourcing regions, suppliers, manufacturing facilities, and markets against globally comparable information on shared water challenges (Table 4).

TABLE 4. Examples of open-source tools for screening shared water challenges across locations

Open-source tool	Link
Aqueduct Water Risk Atlas, World Resources Institute (2019)	https://www.wri.org/aqueduct/
Water Risk Filter, WWF (2019)	https://waterriskfilter.panda.org/

Source: Authors.

Publicly available global tools for screening shared water challenges across large areas have significant limitations (Hofste et al. 2019). They may not provide the spatial, temporal, and thematic accuracy and granularity needed to understand shared water challenges. So companies may have to conduct some internal validation before confirming the high-priority shared water challenges at each location. Companies should also identify locations that face shared water challenges but have not been identified by the screening tool, as well as locations where global data does not point to such challenges but where the company relies on important value chains or catchment areas.

Identifying the right issues, in the right places, may require an iterative process. For example, in consulting with each of its business units, a company may discover specific shared water challenges that affect certain sites but were not originally apparent.

Action 2.2. If required, prioritize locations on the basis of their business relevance and exposure to water-related risks.

Companies with very large portfolios of locations may benefit from establishing criteria to help categorize and group locations on the basis of their business relevance and exposure to water-related risks. This process can help distinguish between sites and set water targets of varying ambition and scope across locations (Table 5). For example, a more ambitious target may be warranted for locations that face multiple shared water challenges or that are significant for revenue generation.

TABLE 5. Exam	ale of location cated	porization across a	portfolio of 95 locations
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Location category	Number of locations	Categorization criteria
Tier 1	21	Water withdrawals > 100,000 m³/year and exposure to shared water challenges in both quantity and quality
Tier 2	14	Water withdrawals > 100,000 m³/year or exposure to shared water challenges in quantity or quality
Tier 3	60	Water withdrawals < 100,000 m³/year

Because the degree of categorization can vary from very simple to extremely complex, each company should decide how best to categorize its locations on the basis of its industry, portfolio footprint, and geographic distribution. However, it is important to establish criteria that relate to the catchment's shared water challenges and the company's dependencies and impacts on water resources.

STEP 3: SET AND DISCLOSE ENTERPRISE WATER TARGETS

Set water targets for the sections of the value chain identified in Step 1 to address the water-related risks and shared water challenges at the locations identified in Step 2. This will help targets deliver both business value by reducing risk and social value by reducing shared water challenges.

Action 3.1. Set targets that drive actions at the local level with ambition at least proportional to the company's contribution to shared water challenges.

A review of current practice indicates that that there are two main ways companies go about setting such proportional targets. First, companies can set outcome-oriented targets that specify, either quantitatively or qualitatively, what the company aims to achieve. Second, companies can specify the processes they intend to use to reduce risk and address shared water challenges. Both outcome- and process-oriented enterprise water targets are applicable to any section of a corporate value chain (Table 6). And both process- and outcome-oriented water targets can effectively reduce water-related risk if they drive actions that respond to the local watershed context in ways that are at least proportional to a company's contributions to the local shared water challenges.

TABLE 6. Types of enterprise water targets that can reduce water-related risk and address shared water challenges.

Type of enterprise target	Description
Process-oriented enterprise water targets	Targets that drive a process that can meaningfully reduce risk and address shared water challenges
Outcome-oriented enterprise water targets	Targets that aim to deliver outcomes that meaningfully reduce risk and address shared water challenges

What type of enterprise water target to set can depend on the company culture, and can vary along different sections of the value chain. For one shared water challenge or section of the value chain, a company might set an outcome-oriented target; for another, a process-oriented target might be more feasible or suitable. The choice may hinge on the company's industry, access to information, stakeholders' opinions, geographic distribution, company size, and risk profile, to name a few factors.

Depending on the type of enterprise water target, companies will undertake different steps to determine how ambitious a target to set. The level of ambition should reflect the company's desire to reduce risk and its sense of responsibility toward addressing shared water challenges. Further, when setting enterprise water targets, companies should assess opportunities to contribute to, or align with, existing corporate and public sector efforts and initiatives driving collective action. This can help reduce the overall cost and effort required of each participant.

In all cases, enterprise water targets should drive measurable improvements at the local level. They should also

- be specific, measurable, achievable, relevant and time-bound;
- maintain accountability, internally and externally;
- encourage others to set similarly ambitious targets;
- attract broad external and internal support;
- undergo internal and external review with stakeholders to ensure credibility and transparency before finalizing; and
- be understandable to internal and external stakeholders.

PROCESS-ORIENTED ENTERPRISE WATER TARGETS

Setting process-oriented enterprise water targets involves committing to adopting and using specific processes that in turn will drive actions and interventions by the company that reduce risk and contribute to addressing shared water challenges in the local catchment (Table 7). These targets are only as robust as the processes adopted. Whenever possible, companies should consider committing to processes that

- are owned by senior management and integrated into operations;
- establish baseline conditions and institutions, are time limited, and have a scheduled deadline to set appropriately ambitious targets;
- have been developed and reviewed by subject-matter experts (e.g., water stewardship plans developed by water stewardship practitioners);
- ensure a level of ambition that is aligned with the magnitude of the problem (e.g., watershed targets informed by catchment context and stakeholder consultation); and
- will be trusted by both internal and external stakeholders (e.g., standard processes that can be certified by an independent third party).

Because the commitment is to implementing a process, not to delivering an outcome, process-oriented enterprise water targets offer companies the ability to set a target that can respond to all shared water challenges and are adaptable to a wide range of catchment contexts. However, the limitations of this approach include difficulty in tracking and communicating progress and the effort needed to ensure that the actions taken as a result of the implemented processes actually work as intended. Targets must be aligned with the catchment context and magnitude of shared water challenges and lead to meaningful reductions in risk. Companies can optimize their chances of success by following best practice guidance for setting water targets informed by catchment context (UN Global Compact CEO Water Mandate et al. 2019).

TABLE 7. Examples of process-oriented enterprise water targets

Industry	Company	Priority section of the value chain	Priority locations	
Beverages	Nestlé Waters	Operations	All locations	Certify all sites to the Alliance for Water Stewardship Standard by 2025
Metals and mining	South32	Operations	Locations with water-related material risk	Set contextual water targets at operations with water-related material risk

Source: Based on information from Nestlé Waters North America (2019) and South32 (2019), aggregated by the authors.

OUTCOME-ORIENTED ENTERPRISE WATER TARGETS

The outcome-oriented approach entails committing to delivering an outcome that contributes to reducing risk and shared water challenges in the local catchment in ways that are at least proportional to a company's contributions to the shared water challenges. Outcome-oriented enterprise water targets can be quantitative or qualitative.

Quantitative Outcome-oriented Target

Companies can quantify their contributions to shared water challenges using information provided by organizations that manage water resources, such as a catchment commission, water utility, surface water or groundwater board, or water regulatory agency. That may be challenging or impossible to do across an entire portfolio of locations, so companies can also estimate their contributions to the local shared water challenges by using global data sets (Hofste et al. 2019). Once companies estimate how much the current conditions in each catchment will have to change to address the shared water challenge, and how much their own operations have contributed to this challenge, they can arrive at targets.

In the context of enterprise water targets, "desired conditions" refers to reducing or eliminating a water challenge within a predefined geographic area, for example, a catchment or area of influence (UN Global Compact CEO Water Mandate et al. 2019). Clarifying what the desired conditions are helps to answer the question: what would success look like for that shared water challenge? The desired conditions can be defined generically by aligning with international commitments, such as the targets underpinning SDG 6 for water (United Nations 2015), or with agreed-upon outcomes, such as the Alliance for Water Stewardship water stewardship outcomes (Alliance for Water Stewardship 2019). Desired conditions can also be defined locally by using approaches such as basin report cards (Costanzo et al. 2017).

The percentage change in current conditions required to address the shared water challenge and meet the desired conditions can be estimated using the following equation:

% Change in Current Conditions Required = Current Conditions - Desired Conditions Current Conditions

Once known, the required percentage change in conditions can be used to set quantitative outcome-oriented enterprise water targets. Companies can apply the required percentage change to their activities to estimate what their contribution to meeting the desired conditions should be at each location. Those targets can then be compiled to track progress across the enterprise (Table 8).

TABLE 8. Example of using required percentage change in current conditions to determine a company's proportional responsibility for meeting desired conditions

Shared water challenge = water stress						
Location	Current catchment condition = high water stress	Desired catchment condition = low water stress	Change required	Current company contribution = water withdrawals	Water withdrawal reduction required	
Location 1	Withdrawals/ supply = 80%	Withdrawals/ supply = 40%	$\frac{(80-40)}{80} = 50\%$	Withdrawals = 100,000 m³/year	100,000 x 0.5 = 50,000 m³/year	
Location 2	Withdrawals/ supply = 60%	Withdrawals/ supply = 40%	$\frac{(60-40)}{60} = 33\%$	Withdrawals = 80,000 m³/year	80,000 x 0.33 = 26,666 m³/year	
Location 3	Withdrawals/ supply = 95%	Withdrawals/ supply = 40%	$\frac{(95-40)}{95} = 58\%$	Withdrawals = 225,000 m³/year	225,000 x 0.58 = 130,500 m³/year	
Enterprise water withdrawal reduction target					207,166 m³/year	

The company's contribution toward meeting desired conditions across the value chain can be estimated with information procured locally and aggregated up, from observations taken at each location, or globally, by applying estimates from global data sets across the priority locations and value chain sections (Table 9). This will help the company understand both the magnitude of the problem and the required target ambition to close the gap between the current and desired conditions.

TABLE 9. Examples of quantitative outcome-oriented enterprise water targets

Industry	Company	Priority section of the value chain	Priority locations	Enterprise water targets with ambition at least proportional to company's contribution to shared water challenge
Food products	Mars, Inc.	Agricultural supply chain	Irrigated agriculture in water-stressed regions	Halve the gap to sustainable water usage levels by 2025 from 2015 levels by reducing water usage in priority locations by the same proportion that all water users in the watershed must achieve.
Food products	Cargill	Agricultural supply chain and operations	Watersheds in which desired conditions are not met and Cargill has a material footprint	By 2030, reduce 5 million kg of water pollutants in priority watersheds.
Food products	Cargill	Agricultural supply chain and operations	Watersheds in which desired conditions are not met and Cargill has a material footprint	By 2030, restore 600 billion liters of water in priority watersheds.

Source: Based on information from Mars Inc. (2019) and Cargill (2020), aggregated by the authors.

Qualitative Outcome-oriented Target

Companies may also choose to set qualitative outcome-oriented targets. In this approach, instead of estimating their contribution to meeting the desired conditions at each location, companies provide a description of the outcome they aim to achieve (Table 10).

Industry	Company	Priority section of the value chain	Priority locations	Enterprise water targets with ambition at least proportional to company's contribution to shared water challenge
Materials	Ecolab Inc.	Operations	Locations in at- risk watersheds	By 2030, achieve a positive water impact by restoring water withdrawal and protecting at-risk watersheds where we operate.
Information technology	Microsoft	Operations	Water-stressed basins	By 2030, be water positive, meaning company will replenish more water than it uses.
Beverages	AB InBev	Operations	Locations in high-risk watersheds	By 2025, 100% of company's communities in high- stress areas will have measurably improved water availability and quality.

Source: Based on information from AB InBev (2020), Microsoft (2020), and Ecolab (2020), aggregated by the authors.

Outcome-oriented enterprise water targets allow companies to specify targets at both the enterprise and site levels and thus provide a goal for practitioners across the value chain. One strength of this approach is the scalability of the method across large portfolios of locations using global data sets that are readily available in the public domain.

The disadvantages of this approach include the need for multiple targets to address the shared water challenges at each location and the need to know all the locations included in the target. Another difficulty is that if the targets are applied on the basis of global data sets, it can be difficult to build trust and ownership at the site level across large portfolios of locations without prior engagement or consultation with local stakeholders.

These limitations can be overcome by procuring site data to inform outcome-oriented water targets that can be aggregated across sites up to the enterprise level, following guidance for setting site water targets informed by catchment context (UN Global Compact CEO Water Mandate et al. 2019). Not relying on global data sets gives the company's sites an opportunity to contribute and build ownership of the commitment to the targets. However, procuring data from sites is far more time intensive than using available data sets and it requires direct access to each location, something that can be very challenging when setting targets in supply chains or across large portfolios of sites.

Action 3.2. Develop implementation strategies and measure and report progress toward the targets.

Companies should develop an implementation strategy and a plan to identify, assign metrics to, and secure the required resources to meet the enterprise water targets.

To measure progress toward achieving targets, companies should define and use specific metrics that are linked to a detailed plan of actions to be taken, with buy-in from internal and external stakeholders. Each company has its own methods of monitoring and evaluation. These should be integrated into the company's performance evaluation process. They should also reflect leading practice and align with each company's reporting and disclosure requirements to drive meaningful action at the catchment scale.

If enterprise water targets are to deliver meaningful actions at the catchment level, companies should

- meet targets by collaborating with other stakeholders to accelerate the achievement of desired conditions (UN Global Compact CEO Water Mandate 2013);
- deliver co-benefits through water-related interventions that contribute to meeting other priorities, such as economic needs (e.g., new revenue streams), social needs (e.g., new jobs), or environmental priorities (e.g., climate initiatives);
- revisit targets and the implementation strategy periodically to ensure both remain relevant to addressing the most critical challenges, especially as more information and data become available and changes in companies' business practices and in water resources inevitably occur; and
- account for and communicate progress toward meeting the targets using credible methods (Reig et al. 2019).



CONCLUSION

Enterprise water targets can provide several benefits to companies. They can help a company engage the interest of senior decision makers (e.g., board members, shareholders), identify priority locations and shared water challenges across the value chain, prioritize opportunities to engage in water stewardship, and contribute to meaningful risk reduction and collective action where it matters the most. However, in setting and using enterprise water targets, several difficulties do have to be confronted.

The shared nature of water challenges will require others to set targets informed by catchment context, and all targets—the company's own targets and the targets set by those who share the water challenge—will have to be updated as the company's value chain configuration and each catchment's conditions change. Local interventions and actions, too, will be needed to meet targets that respond to local shared water challenges and stakeholder priorities. Over time, enterprise water targets will have to be seen to deliver sustained benefits—to deliver value and reduce shared water challenges.

The steps outlined here offer many entry points and two specific ways for companies to set enterprise targets, depending on their resources, capacity, and expertise: outcome-oriented water targets and process-oriented water targets. Regardless of the pathway chosen, companies should always

- focus on the shared water challenges of greatest relevance to the company and its stakeholders;
- engage stakeholders at all stages during target-setting, from identification of shared water challenges to agreement on metrics and appropriate targets;
- link enterprise water targets to site targets and action plans that respond to local water risks and shared water challenges;
- view target-setting as an iterative process, both when working through each of the steps outlined in this working paper and once targets are set; and
- use the best available science, policy objectives, and leading practices to guide the implementation of interventions to meet the targets.

Given the shared nature of water challenges, it is likely that other stakeholders in priority sections of the value chain may have targets similar to companies' targets. Stakeholder engagement is therefore a crucial part of all the steps—it is critical to the proposed target-setting process. Companies should leverage stakeholders' knowledge of stakeholders when determining priority water challenges, agreeing on the desired conditions, understanding a company's contribution to the challenges, identifying existing collaborative efforts, setting targets, determining implementation strategies, and measuring progress.

Like enterprise water targets, this working paper is meant to be updated over time on the basis of feedback from companies and other stakeholders. This guidance will maintain alignment with other initiatives and guidance for setting water targets informed by catchment context.

APPENDICES

APPENDIX A. SUSTAINABLE DEVELOPMENT GOALS ASSOCIATED WITH SHARED WATER CHALLENGES

Shared water challenges	SDG Targets			
Water, sanitation, and hygiene	SDG 6.1: By 2030, achieve universal and equitable access to safe and affordable drinking water for all SDG 6.2: By 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations			
Water quality	SDG 6.3: By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally			
Water quantity	SDG 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity			
Water governance	SDG 6.5: By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate SDG 6A: By 2030, expand international cooperation and capacity-building support to developing countries in water- and sanitation-related activities and programs, including water harvesting, desalination, water efficiency, wastewater treatment, recycling and reuse technologies SDG 6B: Support and strengthen the participation of local communities in improving water and sanitation management			
Important water- related ecosystems	SDG 6.6: By 2020, protect and restore water-related ecosystems, including mountains, forests wetlands, rivers, aquifers, and lakes SDG15.1: By 2020, ensure the conservation, restoration, and sustainable use of terrestrial and inland freshwater ecosystems and their services, in particular forests, wetlands, mountains, a drylands, in line with obligations under international agreements			
Extreme weather events	SDG 11.5: By 2030, significantly reduce the number of deaths and the number of people affected and substantially decrease the direct economic losses relative to global gross domestic product caused by disasters, including water-related disasters, with a focus on protecting the poor and people in vulnerable situations SDG 13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters			

Source: Based on information from United Nations (2015), aggregated by the authors.

APPENDIX B. EXAMPLES OF SHARED WATER CHALLENGES THAT LEAD TO INCREASED WATER-RELATED RISKS TO A COMPANY'S VALUE CHAIN

Shared water	Water-related risks	Potential financial impacts from water-related risks across company value chain			
challenges		Raw material sourcing and supply chain	Direct operations	Product use	
Access to safe water, sanitation, and hygiene;	Physical risks	Drought or flood- induced power outages, commodity price spikes or delays	Increased capital expenditure for water treatment and extraction	Drop in sales driven by lower availability of water required for using consumer products	
water quality; water quantity; water governance; important water-related	Regulatory risks	Increased supplier costs due to changing water and wastewater regulation	Reduced water allocation during drought disrupts operations	Consumer demands drive new product standards that raise costs	
ecosystems; extreme weather events	Reputational risks	Violations of the human right to water by suppliers	Loss of social license to operate due to competition for water with local communities	Public outcry regarding water intensity of product damages brand	

APPENDIX C. EXPERT ADVISORY GROUP

Organization	Name		
Alliance for Water Stewardship	Ed Pinero and Matt Howard		
Antea Group	Nick Martin		
Australian National University	Jamie Pittock		
Cargill	Truke Smoor		
Facebook	Sylvia Lee		
Finnish Environment Institute	Suvi Sojamo		
Good Stuff International	Derk Kuiper		
GreenCape	Claire Pengelly		
GRI	Anna Krotova		
International Council on Mining and Metals	Hayley Zipp		
IPIECA	Madeleine Gray		
LimnoTech	Paul Freedman and Wendy Larson		
Mars Inc.	Ian Knight		
Massachusetts Institute of Technology	Jason Jay		
Nature's Pride	Coen Van Iwaarden		
Nestlé S.A.	Carlo Galli		
Quantis	Jean-Baptiste Bayart		
Sasol Limited	Rivash Panday		
World Resources Institute	Giulia Christenson, Kevin Moss and Tianyi Luo		
WWF US	Michele Thieme, Monica McBride and Enrique Prunes		

REFERENCES

- AB InBev. 2020. "Water Stewardship." https://www.ab-inbev.com/sustainability/2025-sustainability-goals/water-stewardship.html.
- Abraham, Sonali, Tien Shiao, and Abigail Warner. 2020. "Setting Site Water Targets Informed by Catchment Context— Case Study: Noyyal-Bhavani River Basin, South India." United Nations Global Compact CEO Water Mandate and Pacific Institute. https://ceowatermandate.org/site-targets-guide/.
- Alliance for Water Stewardship. 2019. "The AWS Standard 2.0" https://a4ws.org/the-aws-standard-2-0/. Accessed November 20, 2019.
- Baleta, Hannah, and Tien Shiao. 2020. "Setting Site Water Targets Informed by Catchment Context—Case Study: Upper Vaal River Basin and Berg and Breede River Basins, South Africa." UN Global Compact CEO Water Mandate and Pacific Institute. https://ceowatermandate.org/site-targets-guide/.
- Beverage Industry Environmental Roundtable. 2017. "Insights and Opportunities: Performance in Watershed Context." https://www.bieroundtable.com/publication/performance-in-watershed-context-insights-paper/.
- Cargill. 2020. "Cargill's Context-Based Water Target-Setting Methodology." https://www.cargill.com/ doc/1432167967669/cargill-context-based-water-target-setting-methodology.pdf
- CDP. 2021. CDP Global Water Report 2020. https://www.cdp.net/en/research/global-reports/global-water-report-2020.
- Costanzo, S.D., C. Blancard, S. Davidson, W.C. Dennison, J. Escurra, S. Freeman, A. Fries, R.H. Kelsey, K. Krchnak, J. Sherman, M. Thieme, and V. Vargas-Nguyen. 2017. Practitioner's Guide to Developing River Basin Report Cards. IAN Press. Cambridge, MD: IAN Press. https://ian.umces.edu/pdfs/ian_report_562.pdf.

EarthStat. 2020. "Crop Allocation to Food, Feed, Nonfood." http://www.earthstat.org/.

- Ecolab. 2020. "Ecolab's 2030 Impact Goals Advance Sustainable and Productive Operations to Help Industry Achieve Greater Purpose." https://www.ecolab.com/news/2020/07/ecolab-s-2030-impact-goals-advance-sustainableand-productive-operations-to-help-industry-achieve-g.
- GRI (Global Reporting Initiative). 2020. "GRI Standards Glossary." https://www.globalreporting.org/how-to-use-thegri-standards/resource-center/?g=6083a53c-c53e-47f7-9a35-c85243f5b811.
- Hoekstra, A.Y., A.K. Chapagain, M.M. Aldaya, and M.M. Mekonnen. 2011. The Water Footprint Assessment Manual: Setting the Global Standard. Oxford, UK, and New York: Earthscan.

- Hofste, R., S. Kuzma, S. Walker, E.H. Sutanudjaja, M.F.P. Bierkens, M.J.M. Kuijper, M.F. Sanchez, R. Van Beek, Y. Wada, S.G. Rodríguez, and P. Reig. 2019. "Aqueduct 3.0: Updated Decision Relevant Global Water Risk Indicators." Technical Note. Washington, DC: World Resources Institute. https://www.wri.org/publication/aqueduct-30.
- International Council on Mining and Metals. 2015. "A Practical Guide to Catchment-based Water Management for the Mining and Metals Industry." https://www.icmm.com/guide-to-catchment-based-water-management.
- Kammeyer, Cora, Sonali Abraham, and Tien Shiao. 2019. "Setting Site Water Targets Informed by Catchment Context— Case Study: Santa Ana River Watershed, California." UN Global Compact CEO Water Mandate and Pacific Institute. www.ceowatermandate.org/site-water-targets/tools/.
- Mars, Inc. 2019. "Water Stewardship Position Statement." https://www.mars.com/about/policies-and-practices/waterstewardship. Accessed November 21, 2019.
- McKinsey & Company, Inc. 2009. "The Global Corporate Water Footprint: Risks, Opportunities, and Management Options." CCSI Water & Adaptation Service Line. October. https://www.mckinsey.com/~/media/mckinsey/ dotcom/client_service/Sustainability/PDFs/Report_Large_Water_Users.aspx.
- Microsoft. 2020. "Microsoft Will Replenish More Water than It Consumes by 2030." https://blogs.microsoft.com/ blog/2020/09/21/microsoft-will-replenish-more-water-than-it-consumes-by-2030/.
- Nestlé Waters North America. 2019. "Alliance for Water Stewardship" https://www.nestle-watersna.com/en/planet/ water-stewardship/alliance-for-water-stewardship.
- Nike Inc. 2015. "Sustainable Innovation Is a Powerful Engine for Growth: FY14/15 Nike, Inc. Sustainable Business Report." https://purpose-cms-production01.s3.amazonaws.com/wp-content/uploads/2018/05/14214951/NIKE_FY14-15_Sustainable_Business_Report.pdf.
- Putt del Pino, S., C. Cummis, S. Lake, K. Rabinovitch, and P. Reig. 2016. "From Doing Better to Doing Enough: Anchoring Corporate Sustainability Targets in Science." Working Paper. Washington, DC: World Resources Institute and Mars Incorporated. Available online at http://www.wri.org/publications/doing-enough-corporate-targets.

Quantis. 2020. GeoFootprint https://geofootprint.com/. Accessed January 22, 2021.

- Reig, P., W. Larson, S. Vionnet, and J.B. Bayart. 2019. "Volumetric Water Benefit Accounting (VWBA): A Method for Implementing and Valuing Water Stewardship Activities." Working Paper. Washington, DC: World Resources Institute. www.wri.org/publication/volumetricwater-benefit-accounting.
- SABMiller and WWF-UK. 2009. Water Footprinting: Identifying & Addressing Water Risks in the Value Chain. Woking, UK: SABMiller and Godalming, UK: WWF.

- Science Based Targets Network. 2020. "Science-Based Targets for Nature: Initial Guidance for Business." Global Commons Alliance. https://sciencebasedtargetsnetwork.org/wp-content/uploads/2021/03/SBTN-Initial-Guidance-executive-summary.pdf.
- SIWI (Stockholm International Water Institute). 2019. "Setting Contextual Water Targets: Concept and Application." https://www.worldwaterweek.org/event/8430-setting-contextual-water-targets-concept-and-application.
- South32. 2019. "Our Approach to Water Stewardship." https://www.south32.net/docs/default-source/sustainability-reporting/fy2019-sustainability-reporting/s320034-our-approach-to-water-stewardship-2019-d7. pdf?sfvrsn=81fbfbe6_6http://.

Tyson Foods Inc. 2019. 2018 Sustainability Report, Water. https://www.tysonsustainability.com/environment/water. United Nations. 2015. "Sustainable Development Goal 6." https://sustainabledevelopment.un.org/sdg6.

- UN Global Compact CEO Water Mandate. 2013. "Guide to Water-Related Collective Action." https://www.unglobalcompact.org/docs/issues_doc/Environment/ceo_water_mandate/Water_Guide_ Collective_Action.pdf
- UN Global Compact CEO Water Mandate, Pacific Institute, CDP, The Nature Conservancy, World Resources Institute, WWF, UNEPDHI Partnership Centre for Water and Environment. 2019. "Setting Site Water Targets Informed by Catchment Context: A Guide for Companies." www.ceowatermandate.org/site-water-targets.
- Water Footprint Network. 2019a. "WaterStat."https://waterfootprint.org/en/resources/waterstat/. Accessed November 25, 2019.
- Water Footprint Network. 2019b. "Water Footprint Assessment Tool." http://www.waterfootprintassessmenttool.org/. Accessed November 25, 2019.
- World Economic Forum. 2019. The Global Risks Report 2019. http://www3.weforum.org/docs/WEF_Global_Risks_ Report_2019.pdf.
- World Resources Institute. 2019. "Aqueduct Water Risk Atlas." https://www.wri.org/aqueduct/. Accessed November 21, 2019.
- WWF (World Wildlife Fund). 2019. "Water Risk Filter." https://waterriskfilter.panda.org/. Accessed November 21, 2019.

THE CEO WATER MANDATE'S SIX CORE ELEMENTS:

DIRECT OPERATIONS

Mandate endorsers measure and reduce their water use and wastewater discharge and develop strategies for eliminating their impacts on communities and ecosystems.

SUPPLY CHAIN AND WATERSHED MANAGEMENT

Mandate endorsers seek avenues through which to encourage improved water management among their suppliers and public water managers alike.

COLLECTIVE ACTION

Mandate endorsers look to participate in collective efforts with civil society, intergovernmental organizations, affected communities, and other businesses to advance water sustainability.

PUBLIC POLICY

Mandate endorsers seek ways to facilitate the development and implementation of sustainable, equitable, and coherent water policy and regulatory frameworks.

COMMUNITY ENGAGEMENT

Mandate endorsers seek ways to improve community water efficiency, protect watersheds, and increase access to water services as a way of promoting sustainable water management and reducing risks.

TRANSPARENCY

Mandate endorsers are committed to transparency and disclosure in order to hold themselves accountable and meet the expectations of their stakeholders.