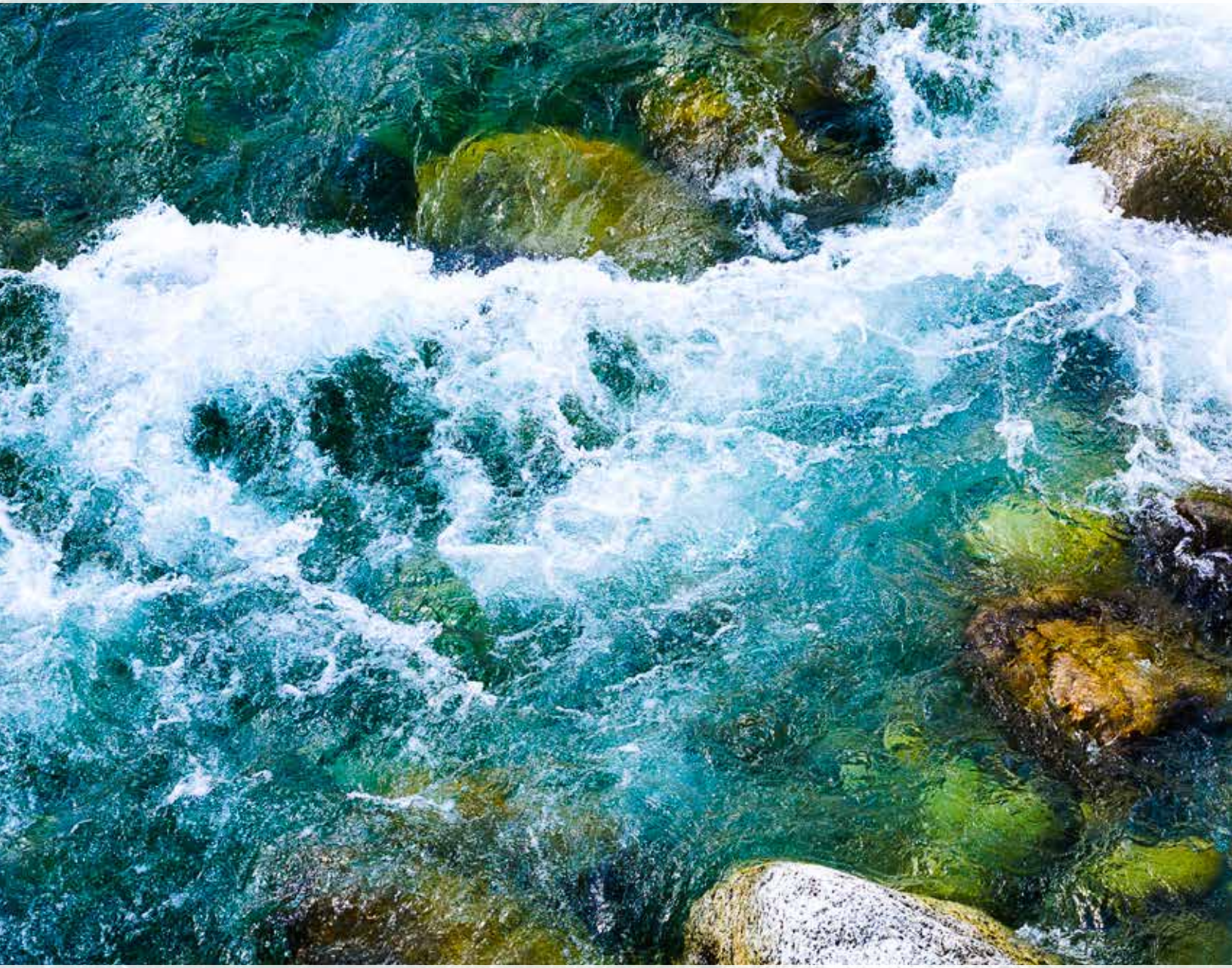
The CEO Water Mandate

# CORPORATE WATER DISCLOSURE GUIDELINES

## Toward a Common Approach to Reporting Water Issues

August 2012



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# CORPORATE WATER DISCLOSURE GUIDELINES

## Toward a Common Approach to Reporting Water Issues

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# Foreword

Companies are fundamentally changing the way they address water. Increasingly, they are investing in water-efficient technologies, working with suppliers to encourage more responsible water use, introducing cleaner and more efficient products, and seeking to advance sustainable water management outside their fencelines as a way to mitigate water-related risks and impacts. At the same time, corporate water disclosure—the act of collecting data on the current state of a company's water management, assessing the implications of this information for the business, developing responses, and ultimately reporting to stakeholders all of this information—has emerged as a key component of corporate water management practice.

In response to the growing importance to businesses of both water use and disclosure, a proliferation of initiatives are seeking to provide guidance on how companies can measure their water performance, assess conditions in the river basins where they operate, understand their water-related challenges and opportunities, develop effective water management strategies, and communicate these issues to stakeholders. These initiatives have catalyzed significant progress toward more sustainable corporate water management. However, the proliferation of water assessment and disclosure tools and methodologies has also led to

- Companies diverting important resources to complete multiple water or sustainability surveys of varying content
- Companies using a variety of different metrics that are not easily comparable, therefore weakening the value of disclosure offerings

Beyond this, current practice in corporate water disclosure (even among the most robust reporters) typically does not adequately capture the incredibly complex and location-specific nature of water resource dynamics and corporate action on this topic. Many companies are therefore looking for detailed guidance on how to more effectively disclose the many elements of corporate water management.

The CEO Water Mandate's Corporate Water Disclosure Guidelines offer a common approach to disclosure. They put forward metrics that can begin to harmonize practice and also provide guidance for defining report content. It is our hope these Guidelines drive convergence and harmonization with respect to how companies report their water management while helping to minimize reporting burdens, thus allowing companies to allocate more time and resources to actively managing water.

The Pacific Institute (representing the Mandate Secretariat) led the development of the Guidelines, seeking input from organizations and initiatives with expertise in this area. PricewaterhouseCoopers LLP served as a strategic adviser and provided input throughout this process. The Carbon Disclosure Project (CDP), World Resources Institute (WRI), and Global Reporting Initiative (GRI) were project partners, offering insight regarding water disclosure practices and helping to ensure that the Guidelines build on existing approaches where possible and appropriate.

The project team regularly consulted with the Mandate's Water Disclosure Working Group (WDWG)—comprising representatives from many Mandate-endorsing companies—as well as with the Corporate Water Disclosure Stakeholder Advisory Group (CWDSAG), which included a variety of representatives from civil society groups, water-related tool developers, trade associations, government, and intergovernmental organizations. A complete list of WDWG and CWDSAG members can be found in Appendix A. Consultation with these individuals was geared toward making sure that the Guidelines remained user friendly while addressing the wide array of company and stakeholder interests in corporate water disclosure. The contents of these draft Guidelines do not necessarily represent the views of WDWG or CWDSAG members.

This document is the Public Exposure Draft of the Guidelines. We hope that companies will put it to use in the coming months and provide feedback on its usefulness and clarity. In 2013, we plan to amend this draft based on feedback from companies, their stakeholders, and others, in order to offer the final draft of the Guidelines. Given that corporate water management and disclosure practice are rapidly evolving, the CEO Water Mandate plans to revisit and amend the Guidelines and issue an updated version within the next three-to-five years.

# Table of Contents

# Executive Summary

## What is corporate water disclosure? Why is it important?

Corporate water disclosure—the act of collecting data on the current state of a company's water management, assessing the implications of this information for the business, developing a strategic response, and ultimately reporting this information to stakeholders (investors, NGOs, consumers, communities, suppliers, employees, and others)—is a critical component of a company's water management efforts and water-related sustainability more generally.

Disclosure supports more sustainable and equitable management of water resources by improving the ability of stakeholder audiences to evaluate a company's water practices, make comparisons across companies, and thus foster greater corporate accountability. Disclosure can support business viability in many ways, including:

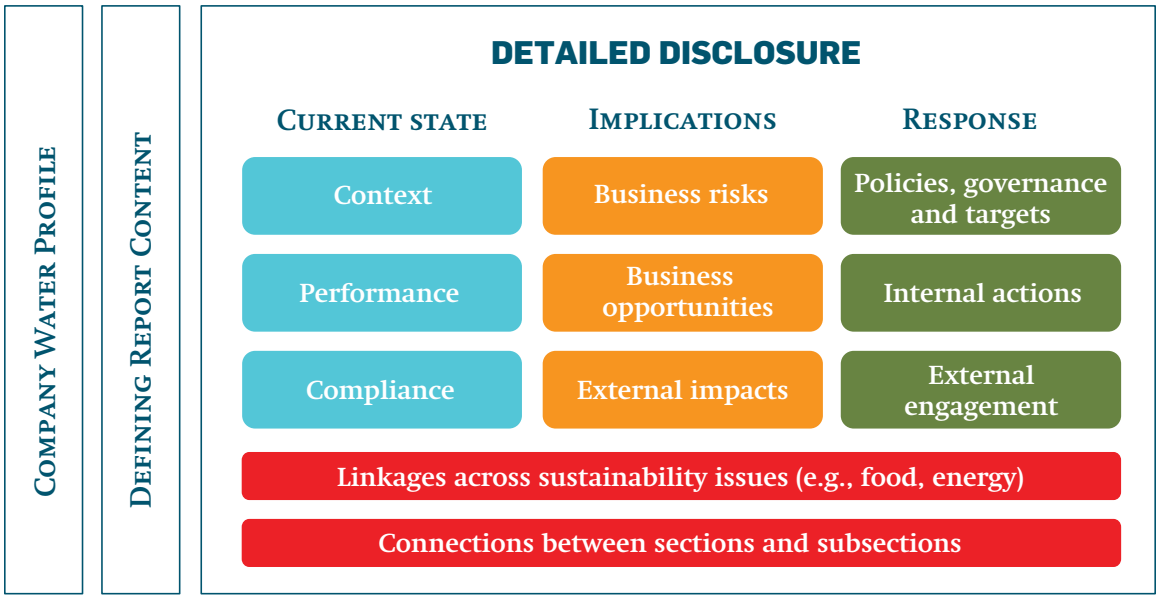
- Improving a company's understanding of its water challenges and effectiveness of its responses
- Providing an opportunity to demonstrate progress and good practice to external stakeholders, thereby improving the company's reputation and building investor confidence
- Establishing a dialogue and building credibility with key stakeholders, paving the way for future partnerships to advanced shared water-related goals

Water disclosure can be applied in a number of ways. It can act as the foundation of a standalone report on the company's water management activities, serve as a component of broader sustainability reports, inform company financial filings, augment information on company websites, and be a starting point for dialogue with company stakeholders.

## What water-related information do companies ideally report?

These Corporate Water Disclosure Guidelines seek to advance a common approach to corporate water disclosure that addresses the complexity of water resources in a comprehensive yet concise manner. They suggest that companies provide several types of water-related information, summarized in the Corporate Water Disclosure Framework (Figure ES-1) and described further below.

## **FIGURE ES-1:** Corporate Water Disclosure Framework




Comprehensive corporate water disclosure is built on three broad pillars of information:

### 1. Company Water Profile

The first pillar (outlined in Section 3 of these Guidelines) is an overview of the company's relationship with water resources, offering a snapshot of water performance, risks, impacts, and response strategies that nontechnical audiences can easily understand. Profiles include the following information:

1) The company's interactions with water

2) The company's water challenges and opportunities

3) The company's commitment and response

4) Profile metrics: A summary of companywide water performance and risk

- Percentage of withdrawals located in water-stressed areas
- Average withdrawal intensity in water-stressed areas
- Number of significant water-related compliance violations

5) List of "hot spot" basins where risks and impacts are most likely

## 2. Defining Report Content

The second pillar (explained in Section 4 of these Guidelines) is a description of the process by which a company determines which water-related content to include in its report. The company assesses 1) the significance of different water topics to the company and its stakeholders and 2) the extent to which those topics cause, or may in the future cause, adverse impacts to ecosystems and communities.

## 3. Detailed Disclosure

Finally, the company provides specific, detailed metrics and qualitative information related to its water management, as well as to the specific water management programs and projects it implements. The Detailed Disclosure pillar (described in Section 5) is divided into sections and subsections that illustrate the different types of water-related information that companies are expected to report:

### Current State

This information focuses on the status of the company's operations and the basins in which it operates with respect to water. It is broken down into three subsections:

- *Context.* What water-related conditions and trends—at the global and basin levels—are relevant to the company and its stakeholders?
- *Performance*. How does the company use and affect water resources? In what ways has performance changed over time?
- *Compliance*. Do company operations comply with applicable regulations, benchmarks, and standards?

### Implications

This area of disclosure consists of interpreting the current-state information to better understand the consequences to the business and its stakeholders. It is broken down into three subsections:

- *Business risks*. How do company and supplier water performance and basin conditions affect the business with respect to profitability, productivity, regulatory pressure, and reputation?
- *Business opportunities*. How do global water trends and challenges create opportunities for the company to expand and improve its business?
- *External impacts*. Do company operations or products create adverse environmental and social impacts due to their water use and wastewater discharge?

### Response

This information covers the response strategies that a company may take to address the risks, opportunities, and impacts identified in the previous section. It comprises three subsections:

- *Policies, governance, and targets*. Has the company created systems and developed plans designed to improve its water performance and reduce water-related risks and impacts?
- *Internal action*. Does the company effectively respond to and manage specific risks and impacts by making changes to its production processes, procurement practices, and product design?
- *External engagement*. Does the company attempt to respond to specific risks and impacts by advancing the sustainable management of the basins in which it operates?

Companies also seek to explore two cross-cutting themes that are applicable across these different information areas. First, they make connections among the sections, explaining how, for example, business risks and impacts result from specific basin conditions and how response strategies address and mitigate specific risks and impacts. Second, where possible, companies make linkages among water and other sustainability topics, shedding light on how water management contributes to other sustainability concerns and how other issues (e.g., climate change, energy use) may contribute to water-related challenges.

## How does corporate water disclosure vary depending on the maturity of water management practice?

The maturity and sophistication of water disclosure practice (i.e., which aspects of the Disclosure Framework are reported, and to what extent) are directly related to the maturity and comprehensiveness of a company's water management practices. In other words, companies cannot report data they do not measure, or management response strategies they are not pursuing. Acknowledging this reality, the Guidelines categorize various aspects of disclosure practice as either "basic" or "advanced." While basic practice provides a good starting point for companies with limited experience in water management, advanced practice represents the full range of information that companies ideally report. Table ES-1 summarizes basic and advanced practices for each information area included in the Disclosure Framework.

## TABLE ES-1:
### Summary of Basic and Advanced Reporting Practices

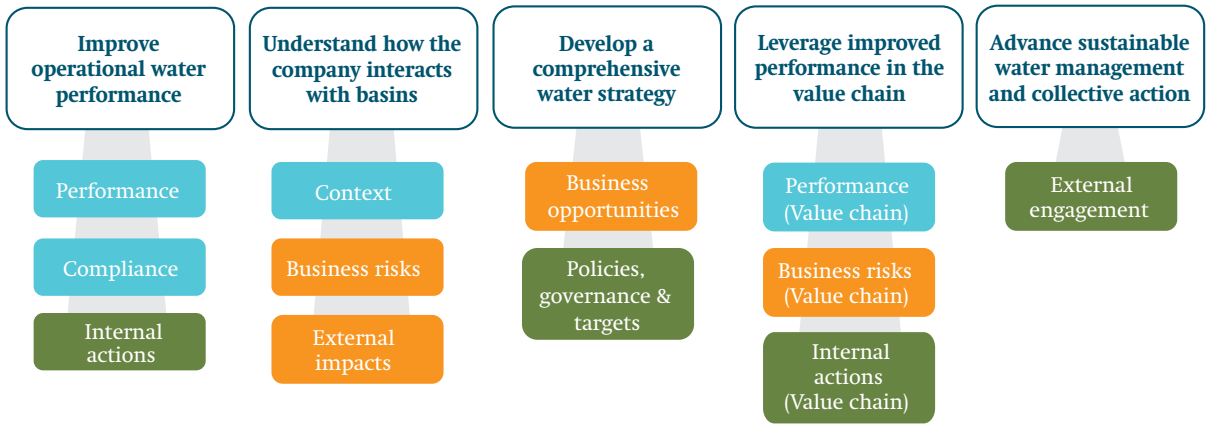
| | Subsection | Basic | Advanced |
|---|---|---|---|
| Current State | **Context** | • High-level assessment of water stress<br>**PROFILE**: List of "hot spot" basins | • Detailed assessment of water stress and other context factors in "hot spot" basins |
| | **Performance** | **PROFILE**: Percentage of withdrawals in water-stressed areas<br>**PROFILE**: Average water intensity in water-stressed areas | • Basin-level data:<br>– Water withdrawals by source type<br>– Water consumption<br>– Water intensity<br>– Water discharge by destination<br>• Water withdrawals in the value chain |
| | **Compliance** | **PROFILE**: Significant water-related regulatory compliance violations | • Adoption of internal and/or voluntary sustainability standards |
| Implications | **Business risks** | • Risks related to water stress | • Risks related to other factors<br>• Value chain risks |
| | **Business opportunities** | • High-level assessment of:<br>– Cost-saving opportunities<br>– Revenue-generating opportunities | • Detailed assessment of opportunities |
| | **External impacts** | • N/A (legal compliance used as proxy) | • Impacts from water discharge<br>• Impacts from consumption and withdrawals<br>• Human-rights-related impacts<br>• Value chain impacts |
| Response | **Policies, governance, and targets** | • Commitment<br>• Goals/targets | • Policies, strategies, and governance |
| | **Internal actions** | • Improvements in direct operations | • Product innovation<br>• Value chain engagement and improvements |
| | **External engagement** | • N/A | • Consumer/public engagement awareness building<br>• Policy advocacy<br>• Participation in global initiatives and partnerships<br>• Place-based collective action |

The types of information provided through disclosure also depend heavily on the broad types of water management activities a company pursues, as its approaches and practices evolve and mature over the long term. Corporate water management activities can be generally separated into five categories, which generally track from basic to more advanced practice:

- Improving operational water performance
- Understanding how the company interacts with surrounding basins
- Developing a comprehensive water strategy
- Leveraging improved performance throughout the value chain
- Advancing sustainable water management and engaging in collective action

Figure ES-2 helps companies identify which aspects of the Disclosure Framework may be most applicable to them.

**FIGURE ES-2:** Linking Corporate Water Management Maturity and the Disclosure Framework




## How can the Guidelines be used?

The Guidelines are designed to be applicable to a broad range of corporate water users, regardless of industry sector and region. However, many companies will likely choose to augment their reports with additional metrics and information particularly relevant to their specific industry or geography. While some companies will seek to report all the information put forth in the Guidelines, others will report only the part of the information most relevant to them and their stakeholders. For some companies, particularly small- and medium-sized enterprises or those for which water is only marginally significant, the Company Water Profile may constitute the only water-related information disclosed.

By building on earlier standardization processes developed by organizations such as the Carbon Disclosure Project and the Global Reporting Initiative, among others, the Guidelines aim to support and inform existing and emerging work in the field of corporate sustainability, in addition to supporting companies' water-related disclosure. For example, the metrics and information put forth in the Guidelines might prove a fruitful starting point for deliberations regarding the water-related aspects of the Global Reporting Initiative's forthcoming G4 Guidelines. The Carbon Disclosure Project will also seek to align future iterations of its Water Information Request with the Guidelines wherever possible. Finally, it is our hope that the Guidelines might be adopted by, or integrated into products being developed by, other corporate water initiatives, such as the Alliance for Water Stewardship, Ceres, Global Environment Management Initiative, Water Footprint Network, and others, bringing these Guidelines to an extensive global audience.

# SECTION 1
# Introduction

## A. OBJECTIVES

The Corporate Water Disclosure Guidelines seek to advance a common approach to corporate water disclosure that addresses the complexity and local nature of water resources. In order to achieve this overarching goal, the Guidelines

- Identify common corporate water disclosure metrics that support harmonization and comparability over time and across companies
- Provide guidance on how companies can assess the water topics that are the most relevant to them (as well as how to actually report this process)
- Describe how companies can best report activities that are difficult to depict quantitatively, such as policy advocacy or engagement with nongovernmental organizations (NGOs), governments, suppliers, and communities
- Align corporate water management with disclosure so as to enable companies to understand which information is most appropriate to report and how to generate water disclosure content

# B. HOW TO USE THE GUIDELINES

## Structure & Applicability

Corporate water management objectives and activities vary greatly depending on industry sector and geographic location. This dynamic leads to many possible disclosure approaches and metrics that are more relevant to certain companies than others. In the spirit of advancing harmonized reporting practice, all the suggested metrics and information provided in the Guidelines are designed to be applicable to a broad range of corporate water users, regardless of industry sector and region. However, many companies will likely choose to augment their reports with additional metrics and information particularly relevant to their specific industry or geography.

Corporate water disclosure also varies significantly depending on the maturity of a company's water management practices. For this reason, some companies are able to report only a limited amount of water-related information, where others are able to report with greater breadth and depth. These Guidelines are designed to be applicable to this wide spectrum of prospective disclosers. Each section of the Guidelines has been structured such that it should be accessible regardless of the maturity of a company's water management and disclosure practices.

*Section 2: Aligning Disclosure with Corporate Water Management Practice* discusses the processes that underpin a company's water disclosure. In doing so, it illustrates how companies generate water disclosure information within their broader water management practice, as well as how water disclosure is situated within their efforts to improve as water resource managers over time. This section can help a company assess the maturity of its water management practice and in doing so identify the report content that will likely be most relevant to it.

*Section 3: Company Water Profile* describes how a company can offer a snapshot of its water management that a broad spectrum of audiences will easily understand. The profile can be included in company sustainability reports, websites, financial reporting, and other publications.

*Section 4: Defining Report Content* provides guidance on how companies can determine what information is most relevant to report, as well as how companies can report this process itself. It can help companies just beginning to consider its water management to assess the extent to which they should report. It can help more advanced companies determine which specific water-related topics are most relevant to them.

*Section 5: Detailed Disclosure* provides in-depth guidance on the specific types of information to be included in corporate water disclosure and discusses how companies can structure this information in a coherent fashion. This information can be used in many publications, including water-specific reports, general sustainability reports, and company websites. In order to promote accessibility to a wide range of readers, the metrics and other information offered in Section 5 are organized according to maturity of practice.

- **Basic:** Metrics or indicators (quantitative or qualitative) that demonstrate meaningful action. This content is scoped such that most small and medium-sized enterprises (SMEs) and those with nascent water management programs have the capacity to collect and report this information. In most cases, companies should focus on building their capacity to assess and disclose these content areas before proceeding to advanced practice.
- **Advanced:** Aspirational guidance aimed at companies with mature water management practices. Advanced reporters provide a broader and richer look into their water-related issues that ultimately provides greater value to audiences.

Section 5 also includes several excerpts from actual company water disclosures that serve to highlight good and innovative practice.

The appendixes provide various types of detailed guidance, examples of practice, tools and resources, and other materials that support effective corporate water disclosure.

Terms in **purple bold font** throughout the Guidelines are defined in the glossary in Appendix H.

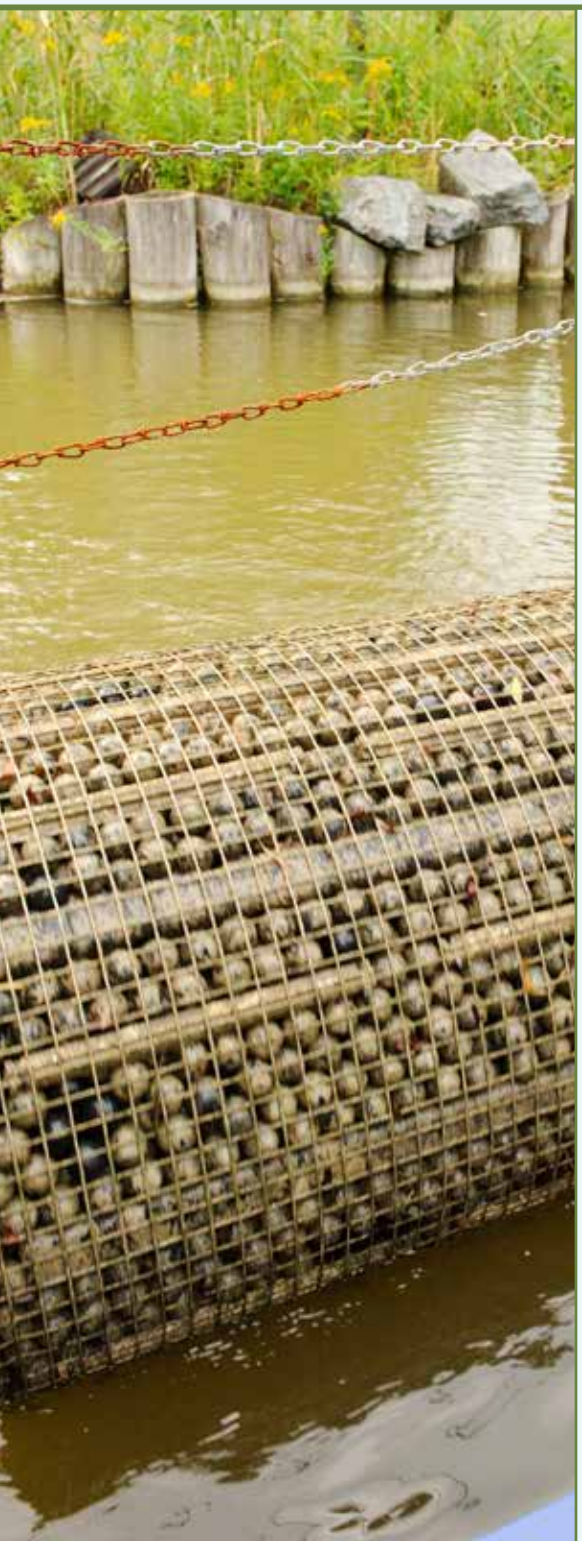
## How to Use the Guidelines in Conjunction with Other Tools

The Guidelines aim to inform existing and emerging work in the field of corporate water management, assessment, and disclosure. Specifically, the Carbon Disclosure Project (CDP) will seek to align future iterations of its Water Information Request with the Guidelines wherever possible. The metrics and information put forth in the Guidelines might also prove a fruitful starting point for deliberations regarding the water-related aspects of Global Reporting Initiative's (GRI) forthcoming G4 Guidelines. Finally, it is our hope that the Guidelines might be adopted by, or integrated into products being developed by, other corporate water initiatives, such as the Alliance for Water Stewardship (AWS), Ceres, Global Environment Management Initiative (GEMI), Water Footprint Network (WFN), World Business Council for Sustainable Development (WBCSD), World Wildlife Fund (WWF), and others.

The Guidelines reference other water and disclosure tools at relevant points throughout the document. A list of these tools and resources is provided in Appendix C. However, the Guidelines do not endorse any specific tools. The CEO Water Mandate believes that the existing tools serve a range of purposes and can therefore provide value to companies in different ways.

SECTION 2

# Aligning Disclosure with Corporate Water Management Practice



**Corporate water disclosure** is only one aspect of a company's overall water management programs and practices. Indeed, effective implementation of corporate water strategies relies on iterative management systems for different water-related activities, including those pertaining to internal corporate policies, governance, and operational performance as well as engagement with stakeholders outside the company fenceline.

This section describes how water disclosure is situated within and contributes to these broader management processes and how it provides business value. The section outlines the practical and administrative steps that make up a typical corporate water management cycle and then offers an overview of how the long-term maturity and evolution of a company's water management practices relate to its water disclosure efforts.

> Water has been an important part of H&M's sustainability work for many years. As part of this, our water disclosure work helped us to more accurately identify our company's dependencies on water and the impact we have on freshwater ecosystems, and hence it helped us to address even more of the challenges and opportunities connected to water.
>
> **—HELENA HELMERSSON, HEAD OF SUSTAINABILITY, H&M**

# A. THE BUSINESS CASE FOR CORPORATE WATER DISCLOSURE

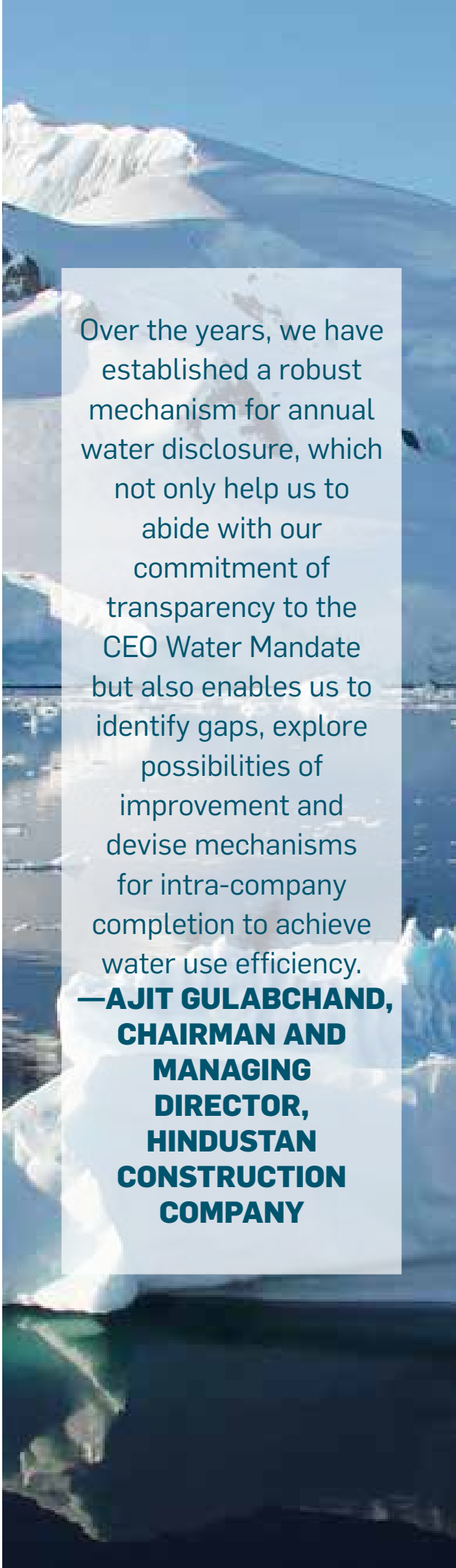
Companies are increasingly motivated to be proactive and comprehensive in managing their water risks and impacts, seeing a number of advantages to doing so, including[7]

1. Ensuring the company's local legal and social license to operate in a specific location
2. Preventing or reacting to operational crises resulting from the inadequate availability, supply, or quality of water or water-dependent inputs in a specific location
3. Gaining an advantage over competitors because of stakeholder perceptions that the company uses natural resources responsibly and has a minimal impact on communities or ecosystems
4. Assuring investors and markets that business operations will continue to be profitable by securing water availability for operations and reducing water-related costs
5. Upholding corporate values based on sustainable and equitable development by contributing to the well-being of the catchments, ecosystems, and communities in which the company operates

Disclosure supports these goals in a variety of ways. Many companies have found that the disclosure process itself improves internal understanding of water challenges and contributes to the development of effective response strategies that reduce risks and impacts and help capture opportunities.

For those companies that have taken significant steps to manage their water-related risks and impacts, disclosure provides an opportunity to demonstrate progress and good practice to both internal and external stakeholders. This in turn helps companies strengthen their brand value and reputation and fosters increased investor confidence.

7 For an in-depth discussion of water-related business risks and the business case for sustainable corporate water management, see the official CEO Water Mandate website at www.ceowatermandate.org

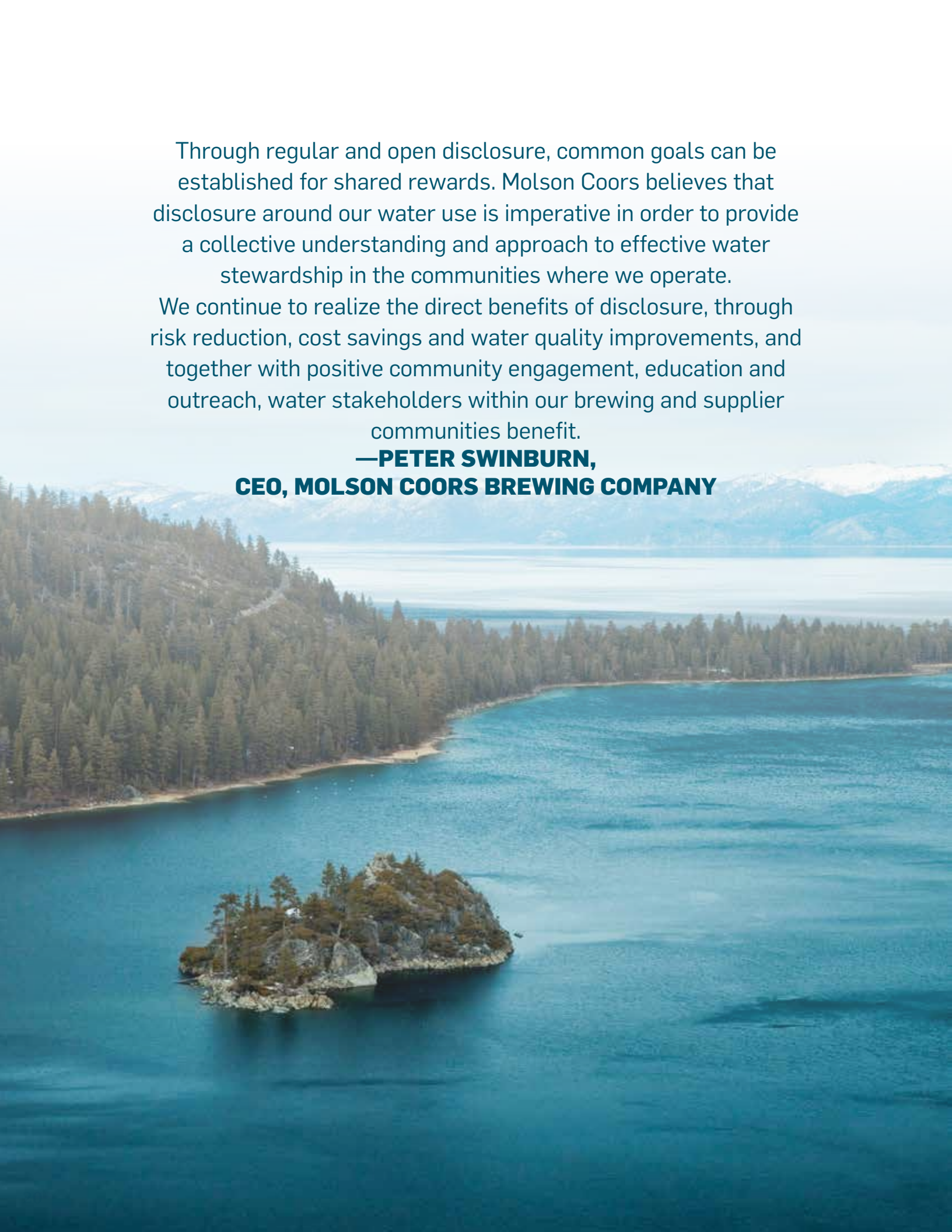


Over the years, we have established a robust mechanism for annual water disclosure, which not only help us to abide with our commitment of transparency to the CEO Water Mandate but also enables us to identify gaps, explore possibilities of improvement and devise mechanisms for intra-company completion to achieve water use efficiency.

**—AJIT GULABCHAND, CHAIRMAN AND MANAGING DIRECTOR, HINDUSTAN CONSTRUCTION COMPANY**

Through regular and open disclosure, common goals can be established for shared rewards. Molson Coors believes that disclosure around our water use is imperative in order to provide a collective understanding and approach to effective water stewardship in the communities where we operate.
We continue to realize the direct benefits of disclosure, through risk reduction, cost savings and water quality improvements, and together with positive community engagement, education and outreach, water stakeholders within our brewing and supplier communities benefit.

**—PETER SWINBURN,**
**CEO, MOLSON COORS BREWING COMPANY**



Corporate water disclosure also offers a vehicle to establish a dialogue between companies and their stakeholders. Showcasing progress and articulating future targets and commitments via disclosure (while allowing stakeholders to provide feedback on these aspects) strengthens corporate accountability and builds credibility with employees, local communities, civil society, and governments. Conversely, disclosure can also help companies hold other stakeholders accountable on water issues. For example, if a company can show that it has significantly reduced its water demand, it has a stronger position to call on governments to better manage water throughout a basin—instead of letting the government assume that the company's plant or supplier is the problem. Developing trust and accountability with these stakeholders reinforces a company's license to operate and serves as a starting point for partnerships and collective action in support of shared risks and sustainable water management.

An overview of the water-related interests of different stakeholder groups is provided in Appendix B.

Water shortages and poor water quality can cause production shortfalls, price volatility, higher energy costs, regulatory action, competition and social unrest. Because of these material risks, Calvert expects companies we own to measure, mitigate and disclose information about their water risks and water management strategies. Corporate water disclosure allows Calvert to assess how well a potential investment is positioned for sustainable growth and responsible business and in turn, aides Calvert in offering our investors responsible investment opportunities.

**—BARBARA J. KRUMSIEK, PRESIDENT, CEO, AND CHAIR OF CALVERT INVESTMENTS, INC.**

# B. HOW DISCLOSURE FITS INTO CORPORATE WATER MANAGEMENT

A typical corporate water management cycle features a series of practical steps that a company uses to understand its relationship with water, undertake response strategies, and eventually communicate both to stakeholders. Understanding each step and the type of information generated through this process allows for more effective reporting. This section describes how a typical corporate water management cycle aligns with the Disclosure Framework presented in these Guidelines.

Though corporate water management processes vary from company to company, they can be generalized as being iterative and having the following fundamental steps. (Note: The process depicted below as an illustrative example is derived from the UN Global Compact Management Model[8] and adapted for water-related management.)

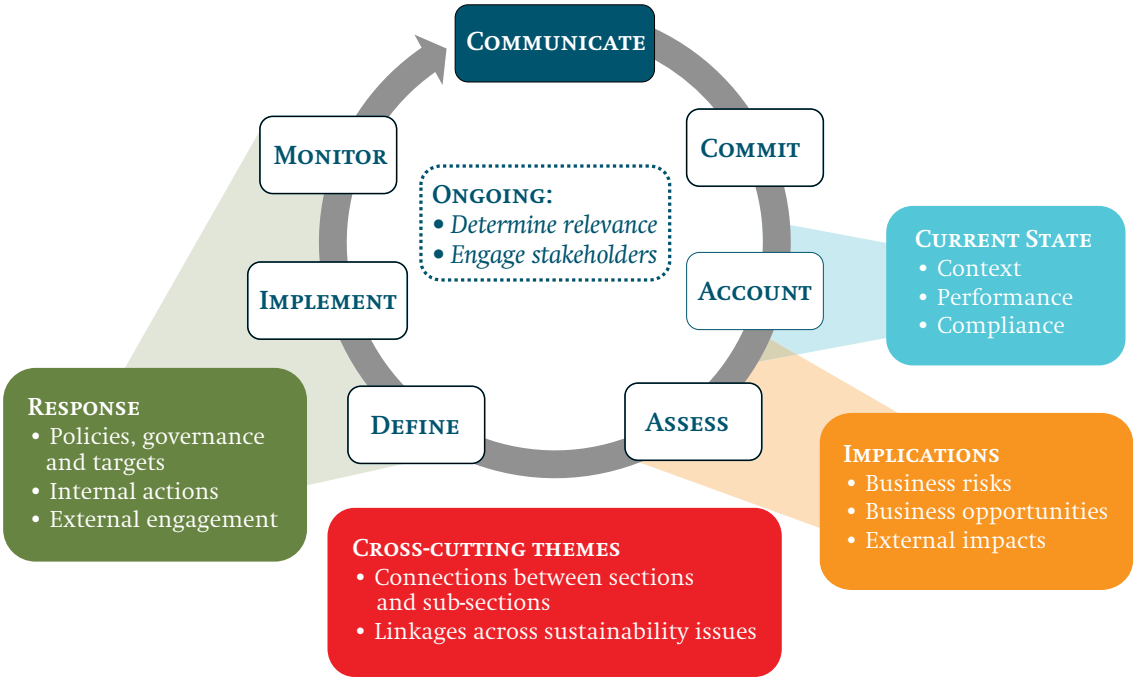
1. **Commit.** Commit to drive sustainable water management.
2. **Account.** Collect data on internal water performance and the condition of the basins in which the company operates.
3. **Assess.** Use the data generated in the Account phase to identify water-related business risks and opportunities and adverse external impacts.
4. **Define.** Define and refine corporate water policy, strategies, and performance targets that drive performance improvements, and address risks and impacts.
5. **Implement.** Implement water strategies and policies throughout the company and across the company's value chain.
6. **Monitor.** Monitor progress and changes in performance and basin conditions.
7. **Communicate.** Communicate progress and strategies and engage with stakeholders for continuous improvement by means of corporate water disclosure. (This document provides a framework and guidance for conducting this step in an effective and harmonized manner.)

This process is sequential and iterative, following a continuous-improvement mindset. It also includes two ongoing actions that reinforce each of the seven steps. First, a company continually engages with key stakeholders in order to better understand its water-related risks and impacts and receive input on the efficacy of its policies and response strategies. Second, a company must continually assess the relevance of various water-related issues to understand new trends and conditions and identify the issues of highest priority for the business and its stakeholders. The process of assessing relevance is discussed in detail in Section 4.

8 UN Global Compact, UN Global Compact Management Model, 2010.

Figure 1 shows how this management cycle fits with the Disclosure Framework.

## **FIGURE 1:** A Corporate Water Management Cycle and Its Relation to the Disclosure Framework




NOTE: The UNGC Management Model's "Measure" step has been broken into two components: "Measure" and "Monitor" to align more closely with water-specific management processes

This general management cycle includes all the practical and administrative steps needed to generate the disclosure content described in the Disclosure Framework. In the Account phase, companies quantify their internal performance (e.g., withdrawals, consumption, discharge) and assess basin conditions (e.g., water stress, water quality) to better understand the "Current State" of their business with respect to water. In the Assess phase, companies interpret these data to understand better the "Implications" for business viability (i.e., physical, regulatory, and reputational risk) and the well-being of communities and ecosystems that the business touches (i.e., social and environmental impacts). The Define, Implement, and Monitor phases of the management cycle comprise a series of actions whereby companies develop, operationalize, and evaluate "Response" actions (i.e., corporate policies and strategies, internal and external engagement) that address their water-related risks and impacts.

# C. THE LONG-TERM CORPORATE WATER MANAGEMENT MATURITY PROGRESSION

While the management cycle offered in the previous section describes the various practical steps that companies conduct as part of their broader corporate water management processes, it does not speak to how water management practices evolve and mature over the long term. Many companies have discovered that they face material risks that lie outside their immediate control or operation fenceline. For many reasons, it may not be possible or desirable to relocate away from these risks. Instead, engaging in the basin (e.g., assisting local governments to invest in more efficient irrigation techniques) may help to substantially reduce pressure on water resources and, thus, the company's water risk.

Often the scope and robustness of corporate water policies and programs expand over time. For example, those companies just beginning to prioritize water issues may begin by focusing on water measurement and efficiency programs within their direct operations. Those with advanced water management programs might address a wider array of water-related issues such as a comprehensive corporate water strategy, supply chain management, and engagement in sustainable water management activities outside the company fenceline.

Corporate water management can generally be categorized into the following types of activities:

- Improving operational water performance
  Perhaps the most basic (and typically first) activity for companies is to understand how and to what extent direct operations use and affect water resources, and then to take steps to become more efficient and less polluting on a continuous basis. Thus companies typically begin their water management journey by focusing on such internal measures.

- Understanding how the company interacts with surrounding basins
  To fully understand and address its business risks and opportunities and its external impact, a company must look outside the factory fenceline and have a firm understanding of the context in which it operates, including water stress, flooding, poor ambient water quality, regulatory uncertainty, and other factors. This knowledge is typically gained through internal data collection and assessment and the use of third-party datasets and tools.

- Developing a comprehensive water strategy
  A nuanced understanding of river basins and the company's own operations within them positions a company to become strategic about developing policies and programs to address its top water priorities. Strategy development can include many dimensions, such as establishing corporate governance and accountability mechanisms, setting goals, and defining water management philosophy. Comprehensive strategies are integrally linked to core business and long-term business success, differentiating them from the piecemeal de facto "strategies" a company pursues when beginning a water management journey.

- Leveraging improved performance throughout the value chain
  More mature companies look beyond their direct operations to address water risks and impacts in the value chain. In order to address those risks and opportunities, a company assesses value chain exposure to water risk to consider the impacts its products may have on water resources and how water challenges may impact its value chain. A company then mandates or encourages improved practices throughout the value chain.

- Advancing sustainable water management and engaging in collective action[9]
  A company with the most advanced water management practices may look to engage externally to ensure long-term business continuity by contributing to the sustainable management of shared water resources on which the company relies. Such place-based external engagement occurs in a variety of forms, ranging from information sharing, to community engagement and basin-restoration projects, to work with local and regional governments to strengthen local water management capacity. In most cases, this requires cooperation and collaboration with other organizations and actors, exposing the company to complex dependencies and increased expectations.

## D. HOW DISCLOSURE FITS WITH CORPORATE WATER MANAGEMENT MATURITY

Ideally, companies would work to advance all five types of water management activities concurrently. However, due to the complexity of accounting for and managing water and the fact that water has only recently emerged as a priority corporate sustainability issue, many companies currently pursue only one activity or a few. As a logical consequence, the breadth and depth of their disclosure will vary depending on the maturity of their management practice and the relative importance of water to their business. Recognizing this range of water management and disclosure maturity, the information contained in these Guidelines is categorized along the lines of basic and advanced practices (described in Sections 1 and 5).

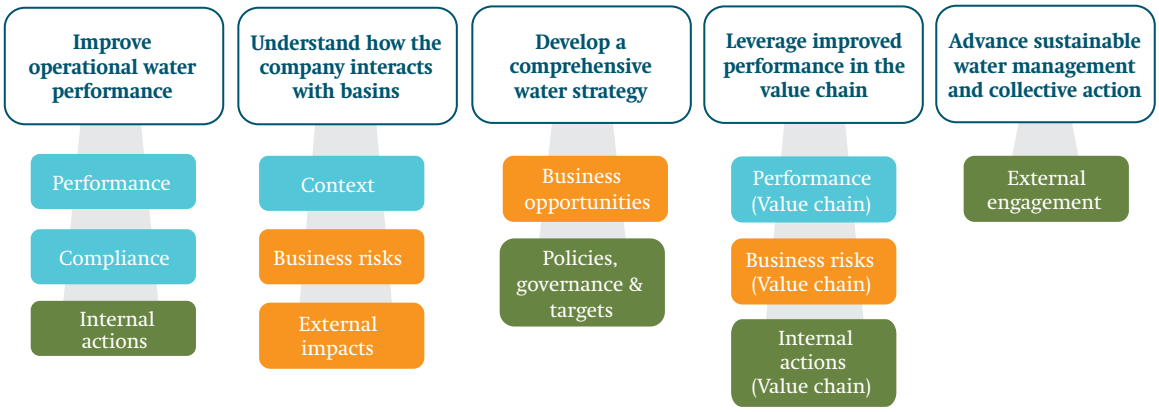
Since these types of activities differ with respect to time and resource commitments, as well as level of complexity and difficulty, companies tend to pursue them in a similar order (though this can vary from company to company within and among industry sectors). For example, improved operational performance is typically a prerequisite for effective external engagement.

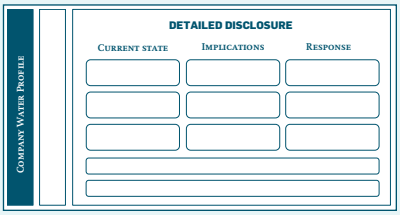
The maturity of a company's water management practice is directly related to the maturity and comprehensiveness of its water disclosure. As the company expands its water management activities to address a wider range of risks and impacts, the scope of its disclosure practice expands as well. Thus, if a company identifies where it resides on this progression, it also gains insight into the types of information that are most relevant and

9 The CEO Water Mandate's 2010 publication Guide to Responsible Business Engagement with Water Policy offers detailed guidance on how companies can best engage with governments and others to advance sustainable water management.

important to report, as well as how its disclosure practice might expand over time. Figure 2 shows how the types of management activities described above align with and link to the various subsections of the Disclosure Framework.

## **FIGURE 2:** Linking Corporate Water Management Maturity and the Disclosure Framework






# SECTION 3
# Company Water Profile

A key aspect of the Disclosure Framework is the Company Water Profile, a high-level overview of a company's water issues and management efforts. In essence, the profile provides an executive summary that, due to its brevity (one or two pages), adds context and meaning to the wider array of more detailed water-related information that the company offers. Profiles are designed to offer a snapshot of water performance, risks, impacts, and response strategies that nontechnical audiences can easily understand. For some companies, particularly SMEs or those for which water is only marginally significant, the profile may constitute the only water-related information disclosed.

Appendix D provides an illustrative example of an effective Company Water Profile.

# A. CONTENT

Company Water Profiles will vary with respect to length and sophistication depending on the maturity of the companies' water management; however, a profile should be brief and include basic information regarding the following components.

### 1) The company's interactions with water

Companies describe generally how they utilize water resources (e.g., their operational uses for water, the nature of water discharge, the importance of water to the value chain, the water efficiency of their products). Ultimately, readers should come away with a clear idea of how the company utilizes water resources and why and to what extent water is important for business viability.

### 2) The company's water challenges and opportunities

Companies then provide a high-level discussion of the opportunities and challenges that water poses to the business. This discussion synthesizes information about how the company uses water with a discussion of global water trends and specific basin conditions in order to provide an overview of the company's water-related business risks and opportunities as well as its external impacts. The robustness of this description inevitably depends on the extent to which the company is able to evaluate water challenges and opportunities comprehensively and systematically.

### 3) The company's commitment and response

A profile can also summarize the steps the company is taking to address water-related risks and impacts and to seize water-related opportunities. Such a summary can touch upon many issues, ranging from a high-level commitment to water sustainability to specific company policies and strategies. Profiles will vary depending on the maturity of the management practices. Some companies may choose to situate the maturity of their water management practice within a broader continuum and articulate how they anticipate their strategies and programs will grow and evolve over time.

### 4) Profile metrics: Summaries of companywide water performance and risk

A profile offers a chance to provide a quantitative snapshot of companywide water-related performance and risk. To do so, the company demonstrates its performance over time with respect to the profile metrics noted in Table 1.

## **TABLE 1:** Profile Metrics

| |
|---|
| **Percentage of** withdrawals located in water-stressed areas |
| **Average withdrawal** intensity in water-stressed areas |
| **Number of** significant water-related compliance violations |

Ideally, a company will display numerous years of data for these metrics (in chart or tabular format) in order to demonstrate performance over time, using a base year to track progress. The articulation of targets for one or more of the metrics can also serve to reinforce relevant policy commitments and strategies. Appendix D includes an example of a profile table with historic data and corresponding targets.

#### *Comparability*

In some instances, it may be appropriate to make comparisons of profile metrics and other data across companies, especially for companies within the same industry sector. However, companies should be quite cautious when doing so. Though the Guidelines put forth common metrics applicable to a wide range of companies, they do not strictly define certain key terms contained within those metrics, such as *water-stressed* and *significant*. Because of this, company results may vary due to the datasets and tools they use to assess these concepts. Another reason profile metrics are not comparable between companies is that they depend on report boundaries. This document supports the approach to the reporting boundaries outlined in the Greenhouse Gas Protocol, which does not specific a single methodology but rather describes two common approaches (operational and organizational boundaries).[10]

### 5. A list of "hot spot" basins where risks and impacts are most likely

Lastly, profiles allow companies to shed light on the "hot spots" where they are most likely to experience water risks or create adverse water-related environmental and social impacts. Ideally, a company will provide a list of water-stressed (or otherwise high-risk) basins where it has operations. When listing these "hot spots," a company should specify each basin's corresponding country. Appendix D includes an example of a table that companies can use to list their "hot spot" basins.

10 World Resources Institute (WRI) and World Business Council on Sustainable Development (WBCSD), *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, rev. ed.*, 2004.

# B. APPLICATIONS OF THE COMPANY WATER PROFILE

A Company Water Profile can have numerous functions, including the following:

### The executive summary of a water-specific sustainability report

As water continues to emerge as a critical corporate sustainability challenge (and as stakeholder expectations for disclosure increase[11]), more companies are developing reports that look specifically at water-related challenges and opportunities. In this context, the profile can act as a high-level summary of that report's content.

### A water-related summary in short sustainability reports

As sustainability reporting continues to mature, some companies are choosing to produce brief reports that contain less detailed information and are geared toward audiences interested in a high-level overview of sustainability issues. In these settings, companies can use the profile as the entirety of their water-specific content.

### A page in the company website

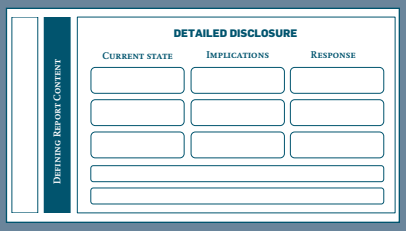
Most companies' websites feature sustainability-related information. Here, the profile can serve as a landing page to which users can link for more detailed water-specific information.

### Part of the annual report

Many companies are increasingly choosing to include sustainability-related information in their annual reports or other public reporting on financial issues. Due to the wide range of other information presented in such a context, there is often only limited room for sustainability information, allowing the profile to act as a snapshot of water challenges and management practices.

11 Ceres, Murky Waters: Corporate Reporting on Water Risk, 2010.

# SECTION 4
# Defining Report Content




land; waste; greenhouse gas emissions, etc.). Even within the realm of water, numerous issues affect (and are affected by) companies to different degrees, depending on their geographic location, industry sector, and other circumstances. A company must determine which sustainability-related and water-specific topics are most important to it and its stakeholders or which have (or may have) adverse impacts on communities and ecosystems. This process provides a company with insight into which topics are most meaningful for it to report.

This section provides information on how a company can define which water-related topics it should disclose, as well as how it can effectively discuss this process and its outcomes within the report itself. Though the guidance provided in this section could be applied for specific facilities or basins, it typically plays out at the companywide level and includes all of a company's many operations (and in many cases its suppliers) across the globe.

# A. RELEVANCE AND MATERIALITY: WHAT ARE THEY?[12]

Materiality is often thought of as a threshold at which certain topics become relevant enough for a company to report on. In sustainability reporting, materiality refers to:

1. Topics that have a significant financial impact on the company (and are therefore relevant to internal stakeholders and investors), or otherwise hinder its ability to realize its vision or strategy
2. Economic, environmental, and social impacts caused by the company that may influence the assessments and decisions of external stakeholders, such as NGOs, communities, governments, investors, and consumers

*Materiality* and *relevance* are like terms that are often used interchangeably. However, they are two distinct terms whose subtle differences are critical to companies seeking to define which content to include in a report.

- Relevant topics are those that may be reasonably considered important for reflecting a company's economic, environmental, or social impacts, or otherwise influencing the decisions of stakeholders (and therefore, potentially, but not necessarily, meriting inclusion in reports).
- Material topics are the subset of relevant topics that are ultimately determined to be sufficiently significant to be included in reports.

Both terms, within the context of sustainability reporting, inherently require some subjective judgments based on the values of the company and its stakeholders. Reporting companies should acknowledge these judgments wherever possible.

# B. ASSESSING RELEVANCE AND MATERIALITY FOR WATER-RELATED TOPICS

The process of determining a company's water-related material topics, and thereby defining which water-related content should be reported, has two main components: 1) determining the importance of water generally to the business and its stakeholders and 2) identifying the specific water-related topics that are material. A company may choose to undergo a materiality assessment as part of every reporting and management cycle in order to capture ongoing changes in global water challenges, specific basin conditions, stakeholder expectations, and

12 For more on defining report content in a sustainability report, see the Global Reporting Initiative (GRI) Technical Protocol: Applying the Report Content Principles. Guidance in this section is drawn heavily from this technical protocol.

how and where the company operates. This process is underpinned by ongoing stakeholder engagement that allows the company to identify emerging water-related challenges and to better understand its adverse impacts on ecosystems and communities. This section describes how a company can integrate water-related considerations into its broader materiality assessment for sustainability topics.

## Defining report boundaries

As a first step, a company must determine the scope of the information to be included in the report (e.g., which of its operations, which types of suppliers), and therefore which topics might be considered for inclusion in the report. Ideally, the report should include the entities and elements of value chains where an organization has significant water impacts, risks, and opportunities. At a minimum, basic disclosers should report water-related information for the entities they own or control. Additionally, advanced water disclosers provide water-related information for the elements of its value chains such as suppliers, distributors, and customers where there are significant risks, impacts, or opportunities. Value chain data and information should be reported separately from the amounts reported for the organization's owned and controlled entities. Detailed guidance on setting report boundaries and calculating and consolidation approaches can be found in the GHG Protocol. Although the Protocol does not cover reporting on water, the consolidation approaches such as equity, financial control, and operational control can be applied to other topics, including water.

## Determining whether water is a material topic

Next, companies assess whether water generally is a priority topic. For many companies, such as those in the beverage sector, the importance of water to the business is self-evident. However, other companies, particularly those whose water footprint and associated impacts are located primarily in the value chain or those who are just beginning to think about water sustainability, may be unsure of the importance of water to their business. These companies often choose to conduct a high-level risk assessment that gauges their exposure to water-related challenges relative to those of other companies.

In order to determine whether water is a material reporting topic, companies typically assess 1) the general exposure of their industry sector to water-related risks and likelihood they may create adverse water-related impacts and 2) the risk exposure and likelihood of creating adverse impacts in the specific basins in which they operate. Table 2 offers an overview of industry sectors typically exposed to significant water-related business risks due to the nature of their water use. Industry sectors not included in these two lists may still very well face acute, location-specific water-related challenges.

## **TABLE 2:** Industry Sectors with High and Medium Exposure to Water-Related Risks[13]

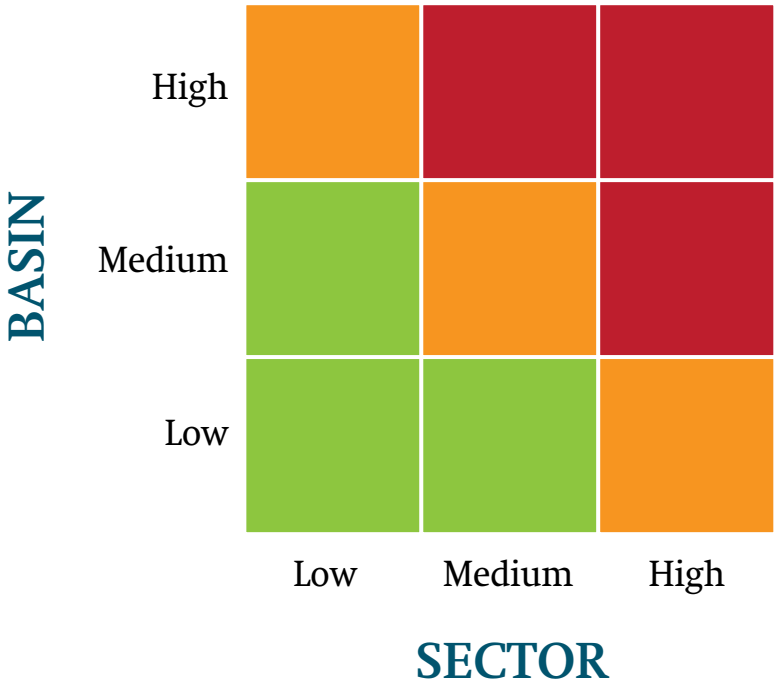
| High Priority | Medium Priority |
|---|---|
| Agriculture | Construction & materials |
| Beverage producers | Gas distribution & multi-utilities |
| Biomass power production | Manufacturing of industrial household goods, home construction, leisure goods |
| Chemicals | Media (printed) |
| Clothing & apparel | Real estate (asset owners) |
| Electric power production | Transportation |
| Food producers | Travel & leisure |
| Food retailers | |
| Forestry & paper | |
| Freshwater fishing & aquaculture | |
| Hydropower production | |
| Mining | |
| Oil & gas | |
| Pharmaceuticals & biotech | |
| Technology hardware & equipment, semiconductors | |
| Water utilities and services | |

13 Ceres, The Ceres Aqua Gauge: A Framework for 21st Century Water Risk Management, 2011.

Next, companies can approximate their exposure to risk and likelihood of creating adverse external impacts based on their geographic location by determining the extent of their exposure to water stress. This high-level assessment can be accomplished by a variety of means. The Ceres Aqua Gauge features a list of high- and medium-risk basins, while the WBCSD Global Water Tool, WWF-DEG Water Risk Filter, and WRI Aqueduct Water Risk Atlas all offer methods by which companies can assess water stress at a high-level. The GEMI Local Water Tool and WFN Water Footprint Assessment Tool offer more granular assessments of water stress. More information on all of these tools can be found in Appendix B.

After this high-level assessment of water risks based on industry sector and geography, companies can locate themselves on the matrix in Figure 3.

**FIGURE 3:** Measuring Relative Exposure to Water Risk and Impacts




Those that fall in the red areas will benefit from managing water in a robust fashion and reporting on water in a detailed manner. Those that fall in the orange areas will certainly want to consider their water-related challenges and seek, at a minimum, to prioritize reporting the information described in Section 3.

## Identifying specific significant water-related impacts, risks, and opportunities to report

Reporting companies then seek to determine what specific water-related elements are of particular significance. At this level of assessment, a company should consider at least the following broad considerations:

1) Its impacts on water resources and access to water services

2) Risks stemming from basin conditions (aridity, water stress, pollution, regulatory uncertainty, etc.)

3) Opportunities to contribute to sustainable water management

4) Opportunities to adapt to ensuing changes in basin conditions (e.g., climate change or land use) and planned changes in policies and regulatory frameworks

These considerations should include both acute topics of immediate importance as well as frontier challenges that may not tangibly affect the company for many years (especially if they are deemed to be of potentially great impact to the company and its stakeholders).

The process of identifying material water-related topics involves three core steps. A general description of this process can be found in the GRI Technical Protocol.

### Step 1: Identification

Initially, a company will seek to identify all the *relevant* topics that might be included in the final report. Since the company must identify the topics important to it, as well as to its key stakeholders, this step inherently includes a process by which the company identifies the entities and stakeholders that it controls (e.g., suppliers and subsidiaries) or influences (e.g., communities), or that have bearing on its reputation and license to operate (e.g., NGOs, consumers, regulators). A company should also review the existing literature to understand and identify emerging global water challenges and should conduct impact assessments to identify its contribution to these challenges.

Potential global- and basin-level water topics that might be considered part of the identification step include, but are not limited to

| Business Risks | Business opportunities |
|---|---|
| *Water-related conditions with the potential to negatively affect business viability, such as* | *Water-related ways to create business value, such as* |
| • Water stress<br>• Flooding<br>• Poor ambient water quality<br>• Regulatory uncertainty<br>• Insufficient infrastructure<br>• Inadequate access to drinking water or sanitation<br>• Drought<br>• Climate change<br>• Changing demographics<br>• Limited management capacity<br>• Ecosystem vulnerability<br>• Total basin availability<br>• Supply variability<br>• Cultural and religious values<br>• Media awareness | • Cost savings<br>• Revenue generation |
| | **External impacts** |
| | *Adverse effects of company operations on water resources, such as* |
| | • Water stress exacerbated by operations or products<br>• Pollution caused by operations or products<br>• Destruction of ecosystems and habitat<br>• Human rights abuses<br>• Undue influence on water policy |

## Step 2: Prioritization

A company then selects the relevant topics that are most important to report (and therefore are deemed material). As part of this process, the company determines the relative importance of each material topic, thereby better understanding the level of report coverage it should receive. Fundamental to this step is assessing the significance of all relevant topics to stakeholders and the company.

When assessing a specific water-related topic's significance, it can ask the following questions:

- Does this topic compromise the company's license to operate in a specific location?
- Might this trend or condition eventually lead to crises in the company's own operations or its value chain?
- Is there an opportunity to gain competitive advantage through action in this area?
- Might action in this area further assure investors and markets that business operations will continue to be profitable?
- Does this topic compromise the company's ability to uphold its own values and ethics?

When assessing a specific water-related topic's significance to the company's stakeholders, the company should proactively engage with stakeholders and allow them to identify and articulate their interests and values. Stakeholder engagement related to water topics can take place in a number of different ways, including regional stakeholder roundtables, community water forums, global sustainability conferences, consultation with NGOs, and others.

### Step 3: Validation

In the final step, the company ensures that the report provides a reasonable and balanced representation of water-related impacts, risks, and opportunities, by assessing the proposed material topics against the scope, boundary, and time frame of the report.

## C. REPORTING THE MATERIALITY ASSESSMENT PROCESS FOR WATER-RELATED TOPICS

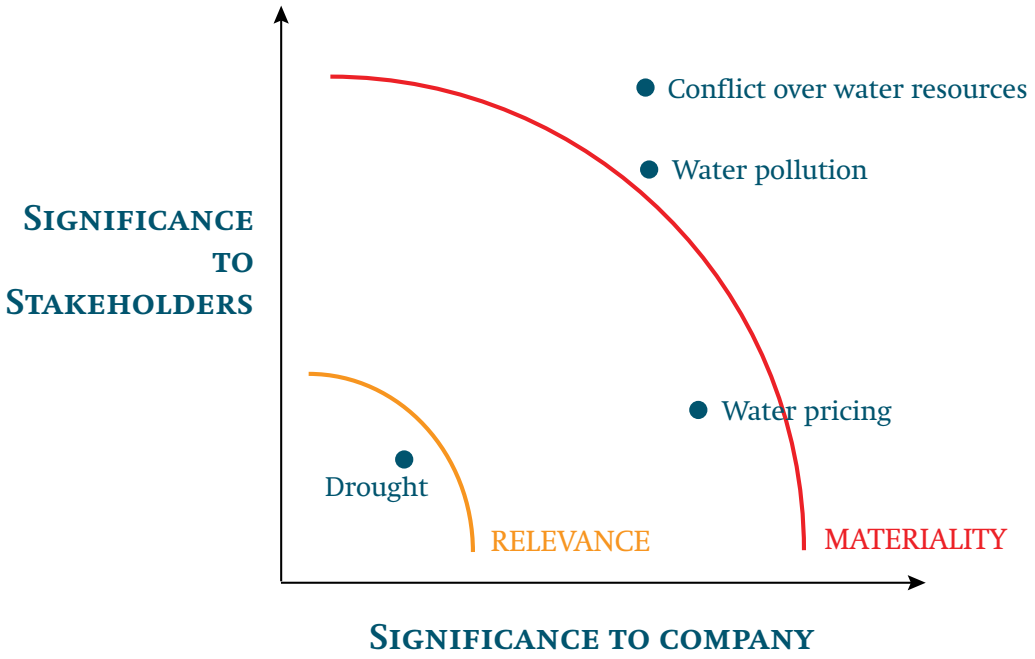
Including a description of the materiality assessment process within the report itself allows the readers to better understand and evaluate whether the company is managing and reporting on the most important water-related topics. Reporting on water-related materiality assessments comprises three main components:

1) How important water is (relative to other companies and other sustainability topics)
2) How different water-related topics are prioritized
3) How stakeholder engagement informed the materiality assessment process

The matrix provided in Figure 3 is an effective tool for illustrating the importance of water to the business. A company can locate itself on it (based on self-assessment) and include this in the report. The matrix can be supplemented by a description of the industry's relative exposure to water-related risks, as well as regions in which the company has operations that are facing water challenges.

Next, a company will want to show which specific water-related topics were deemed material—and which of those are most important. In order to do so, the company can plot different water-specific topics on a matrix indicating their significance to the company and their significance to key stakeholders. In addition, it can provide a table that lists different water-related topics, in order of report weight and priority, and briefly describe 1) why each one is important to the company, 2) to which stakeholders it is important and why, 3) the extent to which the company can influence that risk or impact, and 4) where in the report it is located.

## **FIGURE 4:** Example of plotting relevant and material topics




## **TABLE 3:** Example of Relevant Topics List

| Material Topic | Basin(s) | Company Interest | Stakeholder Interest | Ability to Influence | Location in Report |
|---|---|---|---|---|---|
| | | | | | |

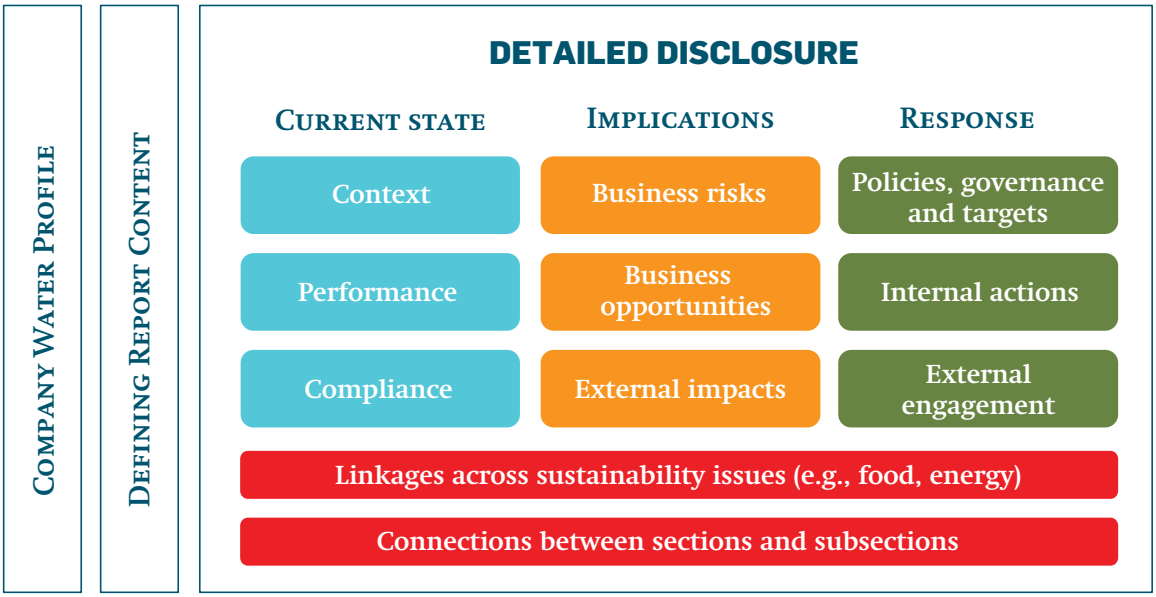
Finally, a company will want to discuss how it engaged stakeholders to support the materiality assessment process. Specifically, the company should discuss, within the narrative, which specific stakeholders were engaged, how this was done (through local water forums, unsolicited messages, working groups, etc.), and what the key outcomes of that engagement were. The report can also discuss the stakeholder engagement plan for the next reporting cycle.

# SECTION 5
# Detailed Disclosure

## A. UNDERSTANDING AND LINKING DIFFERENT COMPONENTS OF THE FRAMEWORK

This section provides guidance on the Detailed Disclosure pillar of the Disclosure Framework. This pillar consists of the 11 information areas that should ideally be addressed in a company's water disclosure.

## **FIGURE 5:** Corporate Water Disclosure Framework




## Detailed water disclosure topics

The information areas of Detailed Disclosure can be loosely aligned with the generic corporate water management process discussed in Section 2, although how exactly each company approaches water management will differ. Many companies start by assessing the current state of their water management, evaluating basin-level context and gathering quantitative information about their water performance and compliance. They then consider the consequences of this information with regard to business risks, opportunities, and external impacts. Many companies complete the process by developing their water-related policies, programs, and engagement efforts. Thus, when companies seek to disclose their water management process they are generally conveying the *current state* the company finds itself in, the *implications* of the situation for the business, and the *response* the company is pursuing to ensure future viability and success.

Just as the disclosure process varies from company to company, so do companies use a wide range of disclosure formats. Some companies structure their water disclosure along the lines of the sections presented in the framework, discussing first the current state of their water management, then the implications of this information, and finally their response. Other companies may find it more useful to structure their water disclosure along operational boundaries (e.g., direct operations, supply chain, product-use phase), thematic issues (e.g., the six elements of the CEO Water Mandate), or geographic boundaries. Regardless of the format used, the content of a company's disclosure document should ideally cover all 11 of the detailed disclosure information areas shown in Figure 5.

## Basic and advanced reporting

Guidance provided in this section is divided into "basic" and "advanced" practices. While basic practice provides a good starting point for companies with limited experience in water management, advanced practice represents the full range of information that companies ideally report. Table 4 summarizes the basic and advanced disclosure practices discussed in this section. A more detailed summary of basic and advanced disclosure practice is provided in Appendix E.

### **TABLE 4:** Summary of Basic and Advanced Reporting Practices

| | Subsection | Basic | Advanced |
|---|---|---|---|
| Current State | **Context** | • High-level assessment of water stress<br>**PROFILE**: List of "hot spot" basins | • Detailed assessment of water stress and other context factors in "hot spot" basins |
| | **Performance** | **PROFILE**: Percentage of withdrawals in water-stressed areas<br>**PROFILE**: Average water intensity in water-stressed areas | • Basin-level data:<br>– Water withdrawals by source type<br>– Water consumption<br>– Water intensity<br>– Water discharge by destination<br>• Water withdrawals in the value chain |
| | **Compliance** | **PROFILE**: Significant water-related regulatory compliance violations | • Adoption of internal and/or voluntary sustainability standards |
| Implications | **Business risks** | • Risks related to water stress | • Risks related to other factors<br>• Value chain risks |
| | **Business opportunities** | • High-level assessment of:<br>– Cost-saving opportunities<br>– Revenue-generating opportunities | • Detailed assessment of opportunities |
| | **External impacts** | • N/A (legal compliance used as proxy) | • Impacts from water discharge<br>• Impacts from consumption and withdrawals<br>• Human-rights-related impacts<br>• Value chain impacts |
| Response | **Policies, governance, and targets** | • Commitment<br>• Goals/targets | • Policies, strategies, and governance |
| | **Internal actions** | • Improvements in direct operations | • Product innovation<br>• Value chain engagement and improvements |
| | **External engagement** | • N/A | • Consumer/public engagement  awareness building<br>• Policy advocacy<br>• Participation in global initiatives and partnerships<br>• Place-based collective action |

## Connections between the topics

One of the most important aspects of effective water disclosure relates to a company's ability to make connections among the information topics (the sections and subsections) within the Disclosure Framework. In some instances the connections are implicit and are made automatically. For instance, it is not possible for a company to meaningfully convey business risks or opportunities without linking back to the company's water performance and basin-level context. In other instances, making the connections adds relevance and meaning to the information provided. For instance, response strategies should explicitly address the water-related risks, impacts, and opportunities the company has identified as significant.

## Linkages across sustainability issues[7]

Though practice in this area is quite nascent, companies also endeavor to consider and report the linkages between water and other sustainability topics, such as food production, energy use, land use, and climate change. These linkages look at 1) the extent to which water-related challenges contribute to other corporate sustainability issues (e.g., a drought that affects hydropower generation), 2) how other sustainability challenges may affect the company's approach to water management (e.g., the energy requirements and GHG emissions of water treatment), and 3) the trade-offs of water-related response strategies (e.g., whether the benefits associated with **water recycling** outweigh the impacts related to higher energy use). At a minimum, audiences should understand how water is inextricably linked to these other challenges and how companies must consider water management in the context of other sustainability issues.

# B. ASSESSING THE CURRENT STATE

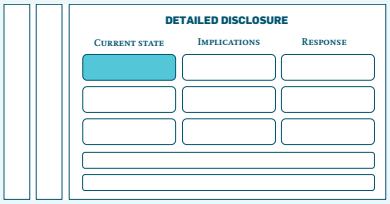
This section describes the information companies can use to assess and report the current state of their water management. This information spans three categories: context, performance, and compliance. Not all disclosure audiences will take an interest in all the information described in this section. Some audiences will focus only on information relating to the larger picture, while others will seek out more quantitative basin-level data. The level of detail a company pursues will vary depending on the water issues relevant to its business and the type of audience it is most interested in reaching. In order to decide how detailed to be when reporting on the current state, the company must consider its disclosure audiences, the relevant water issues, and its own level of reporting ambition.

7 The German government's Water, Energy, and Food Security Resource Platform and the World Economic Forum's Water Security: The Water-Energy-Food-Climate Nexus report are excellent resources for learning more about these important linkages.

Unless clearly noted otherwise, current-state data should be consistent with the reporting period of the overall disclosure document. Companies also consider reporting historic data so as to build an understanding of how the situation has changed over time. Disclosing at least three years of historic data is necessary to allow disclosure audiences to meaningfully assess trends.

Appendix F provides additional guidance on the datasets and tools that can assist companies in assessing the current state. Appendix G provides tables that show how basic and advanced disclosers might report current-state data.

## Context




### Overview

Water is a uniquely complicated resource for companies to manage and report because its value, availability, and quality vary significantly according to location. A critical component of the water disclosure process is assessing and reporting how basin-level context factors relate to the business.[8]

**Water stress** is the most common contextual factor used to measure a company's susceptibility to water-related business risks as well as the likelihood of its creating adverse external impacts in a specific location. According to the UN Environment Programme (UNEP), **water stress** occurs when "the demand for water exceeds the available amount during a certain period or when poor quality restricts its use."[9] Today, some researchers are taking an expanded view of stress that, in addition to physical water scarcity (e.g., due to arid climate or overallocation), also considers economic water scarcity (i.e., when the human capacity or financial resources are insufficient to provide water).

This section describes how a company can measure **water stress** and report the degree to which it operates in water-stressed areas. It also describes a variety of other contextual factors that can expose a company to water risks or increase the likelihood of adverse social and environmental impacts.

8 Wherever possible, companies should assess context at a basin level of granularity. However, for some contextual factors, existing datasets and tools may provide only country-level information. In these cases, companies should strive to use relevant country information. For other context factors, existing datasets and tools may be able to provide subbasin-level information. This level of detail can be especially valuable for large basins such as the Mississippi or Yangtze River basins, where conditions vary significantly by subbasin.

9 UNEP, Freshwater in Europe, 2004

The table below provides a summary of information collected and assessed at basic and advanced levels of disclosure practice. Each information area discussed in Section 5 features a table similar to the one below, and an amalgamation of all of the tables can be found in Appendix E.

| | Content | Scope | Format |
|---|---|---|---|
| **Basic** | • High-level assessment of water stress<br>• Profile information: List of "hot spot" basins | • Companywide | • Tabular; quantitative |
| **Advanced** *(includes basic reporting)* | • Detailed assessment of water stress and other context factors in "hot spot" basins | • Basin level | • Tabular; qualitative |

## Basic

### High-level assessment of water stress

Basic reporters assess at a high level the extent to which their operations are located in water-stressed regions. This information serves as a key component for many of the companywide metrics described in the ensuing Performance section. Such an assessment also helps companies 1) determine the extent to which water stress is an issue for the business generally and 2) identify water "hot spots" where sustainable water management practices may be prioritized.

Many companies use their own internal knowledge of the basins where they operate to assess **water stress**. There are also a number of external datasets that can assist companies in this process. Many are accessible and relevant even to companies with quite limited water management practices and water-related data. Some companies make use of these datasets to make these calculations themselves. Others use free web-based tools that use these datasets to conduct these calculations for them; these include

- WBCSD Global Water Tool
- WRI Aqueduct Water Risk Atlas
- WWF-DEG Water Risk Filter (Quick View)[10]
- WFN Water Footprint Assessment Tool[11]

10 The WWF-DEG Water Risk Filter considers a wide variety of factors when assessing the susceptibility of specific basins to water-related challenges, many of which go beyond traditional definitions of water stress. Nevertheless, the "basin risk score" calculated in the Filter—as an attempt at assessing the extent to which water challenges may arise for companies in a specific place—can therefore be used as a proxy for water stress.

11 Version 1.0 of the WFN Water Footprint Assessment Tool is scheduled for release in August 2012.

**GENERAL MOTORS: 2011 SUSTAINABILITY REPORT**

*We have identified three water-stressed regions in which we have facilities: Ramos Arizpe, San Luis Potosí, Mexico, South Australia and Elizabethtown, South Africa. Our facilities in all three locations have implemented significant water conservation, recycling and re-use initiatives.*

Appendix F provides an overview of these tools and their underlying methodologies, describing how each approaches **water stress** assessment differently. When reporting on this topic, companies should indicate the specific tool or methodology they used.

### List of "hot spot" basins

Companies can use the tools and datasets mentioned above to provide a list of the basins in which they operate where **water stress** is most prominent (and therefore water risks and impacts may be most likely).

## Advanced

Whereas basic practice helps determine which basins are water-stressed, advanced practice pertains to the assessment of and reporting on the conditions in specific water-stressed basins. As part of this process, companies consider a wide range of factors—including but not limited to **water stress**—that have bearing on their exposure to risk and likelihood to create adverse impacts in a specific place.

### Detailed assessment of water stress and other context factors in "hot spot" basins

Assessing **water stress** and other contextual factors in specific "hot spot" basins enables companies to formulate a nuanced depiction of the risks and impacts in those areas and ultimately to determine the most appropriate and effective response strategies. Reporting on this topic involves two key elements: the drivers and relative severity of key water challenges. Large companies sometimes report only on high- or severe-stress basins in order to avoid disclosing an overwhelming amount of information.

*Drivers*

Advanced disclosers describe the drivers contributing to water challenges in that basin, potentially including

- Water stress
- Flooding
- Poor ambient water quality
- Regulatory uncertainty
- Insufficient infrastructure
- Inadequate access to drinking water or sanitation
- Drought
- Climate change
- Changing demographics
- Limited management capacity
- Ecosystem vulnerability
- Total basin availability
- Supply variability
- Cultural and religious values
- Media awareness

*Severity of challenges*

In addition, companies describe the severity of the identified drivers. This type of assessment can be conducted using the datasets and tools described under Basic Practice. Additional tools that involve a higher degree of sophistication are also available, including

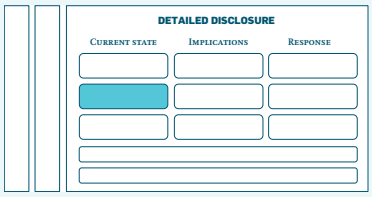
- GEMI Local Water Tool
- WWF-DEG Water Risk Filter (Full Assessment)
- WFN Water Footprint Assessment Tool

Appendix F provides an overview of the datasets and tools that can help companies identify and assess the drivers of water challenges in the basins where they operate. Appendix G provides tables to show how advanced disclosers might summarize this basin-level context information.

**HESS CORPORATE: 2010 CORPORATE SUSTAINABILITY REPORT**

*The Seminole gas processing plant is located within the Llano Estacado regional water planning area and county groundwater conservation district, where agriculture accounts for more than 98 percent of water abstraction, exceeding available water supply. The region and county are therefore considered "water stressed," and drought planning is a way of life. Hess personnel regularly attend water planning meetings and meet with groundwater conservation district staff. The 2010 through 2060 Llano Estacado regional water plan indicates that current and estimated future oil and gas sector water demand and supply are balanced.*

# Performance




## Overview

Understanding water performance (how much water companies use, how efficiently they use it, etc.) helps companies adopt more sustainable water management practices that minimize social and environmental impacts, mitigate water-related business risks, and capture opportunities. It also enables external stakeholders to better understand such issues and to make decisions accordingly.

This section provides guidance to help companies describe their water performance in quantitative, geographically explicit terms that allow disclosure audiences to understand how a company withdraws, consumes, and discharges water resources. It is designed to go hand in hand with the previous section on context.

The tables in Appendix G provide a framework to help companies display much of the information discussed in this section.

| | Content | Scope | Format |
|---|---|---|---|
| **Basic** | • Profile metric: Water withdrawals in water-stressed areas<br>• Profile metric: Water intensity in water-stressed areas | • Companywide | • Tabular; quantitative |
| **Advanced** *(includes basic reporting)* | • Water withdrawals by source type<br>• Water consumption<br>• Water intensity<br>• Water discharge by destination type | • Basin level | |

**BAXTER: 2010 SUSTAINABILITY REPORT**

*Results from the WBCSD water tool showed that of Baxter's 40 largest water-consuming locations, representing 92% of the company's total water use, 10 of those sites are located in water-scarce areas, eight in water-stressed areas and 22 in water-sufficient areas. The company is using that information during 2011 to prioritize possible locations in which to support community aquifer protection projects.*

## Basic

Companies relatively new to water disclosure should focus on collecting and reporting companywide performance data on **water withdrawals** and **water intensity** in water-stressed areas in their direct operations.

### Water withdrawals in water-stressed areas

Companywide **water withdrawals** are often the first and only water metric that companies disclose. Given that withdrawals will present different risks and impacts depending on the conditions in which they occur, basic disclosers should report the volume and percentage of their withdrawals that occurs in water-stressed areas (this is a profile metric as described in Section 3 of these Guidelines). Companies can use the process described above in the Context subsection to assess **water stress**.

### Water intensity in water-stressed areas

Companywide **water intensity** provides insight into the efficiency of a company's water use. Improvements in intensity over time are a strong indication that the company is taking meaningful steps to improve its water management. Efficiency is most important in water-stressed areas, where companies are most likely to face risks or create impacts. Companies should therefore report their average water withdrawal intensity in water-stressed areas.

**ABINBEV: GLOBAL CITIZENSHIP REPORT 2011**

*Several facilities throughout our key geographies are leading the way with best practices:*

**Our Cartersville, GA, facility achieved an annual water-use metric of 3.04 hl/hl, making it the most water-efficient brewery in the country;**

**Our breweries in Belgium reduced 2010 water usage by 12 percent compared to 2009, primarily through optimization of brewing, packaging and utilities processes;**

**In Germany, our Wernigerode brewery achieved a water use metric of 3.2 hl/hl, and is planning even further reductions in 2011. Our Bremen brewery reduced water usage by 3.5 percent in 2010, well ahead of the 2012 goal.**

One way to report intensity is by using *product water intensity* (water withdrawal per unit of product). This is a meaningful metric for companies in sectors with discrete product outputs such as the food, beverage, or automobile industries. However, it is not as relevant for companies with diversified product portfolios or companies in service-oriented sectors. These companies may prefer instead to use *financial water intensity* (water withdrawal or consumption per dollar revenue).

## Advanced

Companies at an advanced level of disclosure practice provide a wide range of basin-level data that provide insight into the performance of specific facilities, as well as withdrawals in their value chain. They can enhance the quality and credibility of their disclosure by obtaining verification of their performance data. Appendix G includes a table that demonstrates how companies might report advanced context and performance information.

### Basin-level performance data

Advanced reporters also provide information on their water performance in specific **river basins**. Companies with multiple facilities within one basin should aggregate all their data into one figure. This allows them and their stakeholders to better evaluate where risks and impacts are most likely and which regions are particularly in need of improved water management. Since many large companies have dozens, if not hundreds, of facilities across the world, companies may choose to report data only for the "hot spot" basins listed in the Company Water Profile (see Section 3).

Basin-level performance data include the following:

*Water withdrawals by source type*

Some advanced disclosers break down withdrawal data down according to source type, including **surface water**, **groundwater** (renewable and nonrenewable), **municipal water**, **recycled water**, **runoff**, **saltwater**, and **wastewater**. This level of detail can be important. For example, pulling water from an overdrawn aquifer has significantly different consequences on local **water stress** than does withdrawing water from other sources, such as the ocean. Distinguishing between source types allows audiences to better understand the risks and impacts associated with a company's water performance.

*Water intensity*

Ideally, an advanced discloser also provides the **water intensity** of their operations in specific basins.

*Water consumption*

**Water consumption**, in many cases, generates greater adverse impacts than withdrawals. For this reason, an advanced discloser reports consumption at the basin-level in addition to their withdrawals.

*Water discharge by destination type*

Data on withdrawals or consumption provide only a partial picture of a company's overall water performance. It is also important to consider **water discharge**. Discharge has two components: *quantity* and *quality*. Quantity is important because in order to understand their social and environmental impacts, companies must be able to quantify the volumes of polluted water discharged to receiving bodies. Many advanced disclosers report the volume of water discharged companywide and at a basin level. Some break down the discharge data further by specifying destination type, including **groundwater**, **sewers**, and **surface water**. This level of detail helps interested audiences understand the specific water bodies a company may be affecting. Destination-type data can be reported as a percentage of basin-level discharge.

Quality is also a key component of discharge but very difficult to disclose meaningfully. Discharge **water quality** varies significantly by industry. For example, companies in the food and beverage sector often discharge high levels of biochemical oxygen demand (BOD), chemical oxygen demand (COD), nitrogen, and phosphorus. Meanwhile, companies in the extractives industry are usually more concerned with parameters such as total dissolved solids (TDS) or heavy metals. Advanced disclosers understand the parameters of concern in their industry and focus their **water quality** disclosure on those metrics, along with information relating to levels of treatment.

**COCA-COLA HELLENIC BOTTLING CO.: SOCIAL RESPONSIBILITY REPORT 2010**

*Coca-Cola Hellenic's corporate water footprint represents the freshwater consumed directly and indirectly by our business. In 2010, this footprint was calculated to be 1,011 billion litres.Most of this (97.7%) is due to our supply chain, agriculture in particular, with water use by our own operations accounting for only 2.3%.*

### Water withdrawals in the value chain

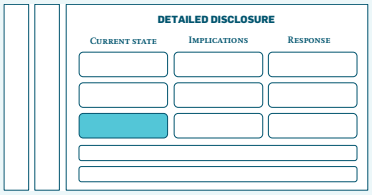
Advanced reporters consider both water withdrawals in their direct operations as well as their **indirect water footprint** in order to fully understand how water relates to their business and their exposure to risks. Indeed, for many companies, such as food producers or apparel manufacturers, a significant portion of their water withdrawals are embedded in the supply chain. For others, such as appliance manufacturers, a significant amount of their **water withdrawals** occur in the product-use phase.

Reporting on this topic involves assessing a company's total withdrawals (including direct and indirect) and then breaking this down into various value chain stages by percentage of total withdrawals. The value chain stages reported may vary from sector to sector but should at a minimum include supply chain, direct operations, and product use (even if some of these stages make up zero percent of the company's direct and indirect withdrawals). This high-level assessment allows disclosure audiences to better understand where the bulk of withdrawals occur within a company's value chain, and therefore where responses may be most needed. Methods available to assess value chain withdrawals include water footprinting (as managed by the Water Footprint Network) and Life Cycle Assessment (a methodology for which will be offered in the forthcoming ISO 14046 guidance standard). Companies that have difficulty obtaining supplier data make estimations by extrapolating data from a subset of suppliers. An example of reporting water withdrawals in the value chain can be found in Appendix G.

### Data verification

Verification of water data provides greater credibility with disclosure audiences. The data verification process begins with an internal assessment of the quality of its own data collection and reporting processes and systems. Subsequently, companies may engage third parties to perform verification of their water data, as appropriate, depending on which metrics the company is seeking verification of.

# Compliance




## Overview

Compliance with water-related regulations as well as with voluntary standards or industry benchmarks may be used as a proxy for understanding a company's approach to managing water resources. For instance, companies that experience relatively few incidents of noncompliance over time are less likely to have adverse impacts on communities and ecosystems and thus less exposure to reputational risk.

The tables included in Appendix G provide a framework to help companies display much of the information discussed in this section.

| | Content | Scope | Format |
|---|---|---|---|
| **Basic** | • Profile metric: Significant water-related regulatory compliance violations | • Companywide | • Tabular; quantitative |
| **Advanced** *(includes basic reporting)* | • Adoption of voluntary and/or internal sustainability standards | | |

## Basic

### Significant regulatory compliance violations

Basic reporters discuss the extent to which they comply with water-related regulations (typically pertaining to **water quality**, but sometimes also to water quantity), providing information on both the number of significant **compliance violations** incurred and the total monetary amount paid in associated **fines and penalties**. CDP's 2012 reporting guidance acknowledges that defining "significant" depends on the company's own internal threshold as well as the local context and states that "what constitutes a significant breach . . . will usually imply a major impact on the environment, community or business(es)."[12]

Companies can also augment companywide compliance information by providing detailed information on their most significant violations in tabular format, covering the following information: 1) the country and/or basin where each significant violation occurred, 2) the quality parameters that were exceeded, if relevant, 3) the monetary value paid in associated **fines and penalties**, and 4) the resulting impacts, if known or relevant.

12 CDP Water Disclosure, Guidance for Responding Companies, 2012.

## **TABLE 5:** Example of Regulatory Compliance Reporting

| Country | River Basin | Significant Violations | | |
|---|---|---|---|---|
| | | Parameters Exceeded | Fines and Penalties | Description of Impact |
| | | | | |

### Advanced

Advanced disclosers may consider reporting conformance with voluntary and internal standards and obtain and discuss verification of their compliance data.

#### Adoption of internal and/or voluntary sustainability standards

Many companies also strive to meet performance standards that are voluntary as a way of achieving and demonstrating good performance. Current and upcoming third-party voluntary standards and guidelines that may be reported on include

- ISO 14001 certification (can contain water-related aspects)
- The standard currently under development by the Alliance for Water Stewardship (to be launched in 2013)

Internally developed standards can pertain to a variety of water management topics, such as water use efficiency, quality parameters, level of water treatment, and operational management protocols. Reporting on this topic describes the nature of these standards, which entities within the business are encouraged and/or expected to meet them, and the extent to which those entities have achieved implementation goals.

#### Data verification

Advanced disclosers may conduct and report an internal or third-party assessment of the quality of its own water-related compliance data collection and reporting processes and systems.

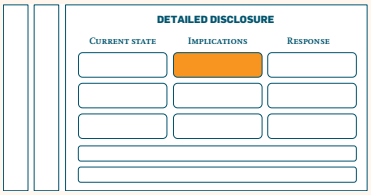
**HEINEKEN: SUSTAINABILITY REPORT 2010**

*In 2010, 82 per cent of our breweries were compliant with the 7hl of water per hectolitre of beer standard as defined in the Aware of Water programme. This was a slight improvement on the 2009 figure of 80 per cent. Seven sites successfully reduced their water consumption to less than 7hl/hl in the last year. However, four previously compliant sites namely Newcastle (UK), Opwijk (Belgium), le Lamentin (Martinique) and Mbandaka (DR Congo) increased their water usage to above the 7hl/hl limit.*

# C. CONSIDERING THE IMPLICATIONS

This section describes how companies can interpret the data collected during the current-state assessment in order to analyze and make statements about business risks, opportunities, and external impacts. Disclosure of such information, while often closely linked to quantitative metrics, is typically presented in narrative form.

## Business risks




### Overview

Many companies are exposed to water-related risks that can negatively affect business viability over the short or long term. Water risks can be grouped into four general categories:

- *Physical risks.* These occur when there is water stress (too little water), flooding (too much water), or pollution (lower water quality). Such conditions may disrupt operations, reduce production capacity, or damage physical assets. Water pollution can impose costs on business by forcing facilities to invest in additional pretreatment.

- *Regulatory risks.* These involve issues such as water permits and allocation, rates controlling withdrawal and discharge quantities, and restrictions on pollutant types and levels. Many jurisdictions around the world have clear regulatory frameworks, but some jurisdictions place little to no regulatory oversight on water issues. Companies operating in such regulatory vacuums have a harder time developing effective compliance programs that meet local government expectations and basic industry standards. In addition, uncertainty around future regulation hampers business planning.

- *Reputational risks.* These manifest when reduced water availability and quality give rise to tensions between businesses and local communities. Community opposition to industrial water use and perceived or real inequities in use can emerge quickly and affect businesses profoundly. Local conflicts can damage brand image or even result in the loss of the company's license to operate.

- *Other risks.* These can arise from issues such as litigation related to water-related compliance or from changing consumer attitudes around water efficiency. They may also involve the supply chain, since all of the risk factors described above have the potential to influence a company's suppliers and interrupt the delivery of key inputs.

Disclosure on water risks enables audiences to better understand what the performance and conditions described in "Current State" actually mean for the company.

| | Content | Scope and Other Considerations | Format |
|---|---|---|---|
| **Basic** | • Risks related to water stress | • Companywide | • Narrative; qualitative |
| **Advanced** *(includes basic reporting)* | • Risks related to other factors<br>• Value chain risks | • Basin level | • Narrative; qualitative<br>• Quantitative |

## Basic

### Risks related to water stress

In general, operations in water-stressed areas are more likely to face business risks than those in water-abundant areas. Basic reporters can simply use the percentage of their **water withdrawals** that occur in water-stressed areas (already reported as part of Performance) as a quick proxy for the company's exposure to risk. Companies can also list the water-stressed basins in which they have the greatest withdrawals, thereby identifying water risk "hot spots."

This quantitative metric can be complemented by a qualitative description of the nature of water risk in those areas, depending on how the company uses and affects water resources. Ultimately, the reader should come away with a sense of the extent to which the company operates in water-stressed areas, and how this could negatively affect its ability to do business.

## Advanced

### Risks related to other factors

Advanced disclosers progress to a more nuanced and detailed assessment and depiction of water risks, considering a much broader range of factors, such as those described above in the Context subsection, and providing a thoughtful discussion on how these factors create specific risks. In the case that a company has dozens (or even hundreds) of potential water-related risks, it should identify a more manageable subset of risks such as those that are most acute or that the company is exposed to broadly.

When reporting risks, advanced disclosers identify 1) the location of identified risks, 2) the types of risks, 3) the potential consequences for the company, 4) the timeframe in which the risks are anticipated to occur, and 5) the methods used to assess the risk. Companies can provide this information in narrative or tabular form. An example of tabular form is shown in Table 6.

## **TABLE 6:** Risk-Reporting Table

| Country | River Basin | Risk Category | Potential Consequences for Business | Estimated Time Scale (in years) | Method(s) Used to Assess Risks | Company Response |
|---|---|---|---|---|---|---|
| | | | | | | |

*Country or river basin*

Advanced disclosers specify the geographic area to which each risk is relevant. In some cases, one type of risk may be applicable to a wide range of areas. In these cases, the company should list all relevant countries and/or **river basins**.

*Risk category*

Companies should categorize the risk (e.g., physical, regulatory, reputational, and other), as well as the specific conditions driving it. Ultimately, the audience should have an understanding of the water-related circumstances or conditions facing the business.

*Potential consequences for business*

Companies should provide a brief explanation of how the risk might affect production or business viability. They can do so by listing broad types of consequences, such as

- Increased operational costs
- Restricted access to water
- Loss of social license to operate
- Lose of legal license to operate
- Unreliable or inconsistent production
- Reduced investor confidence
- Diminished brand value or competitive advantage

*Estimated time scale*

Advanced disclosers specify the timeframe in which they expect the risk described to have tangible effects on the company.

*Assessment methods*

For each identified risk, companies should identify the methods used to assess it.

*Company response*

Where appropriate, companies should describe what actions it has taken to mitigate each identified risk.

## THE COCA-COLA COMPANY: THE WATER STEWARDSHIP AND REPLENISH REPORT (2011)

Comprehensive water risk assessments have been instrumental in helping us understand global water challenges and shape our corporate water strategy. . . .

*Key findings from this global risk summary include:*

• Forty-four percent of water-related risks were derived from growing and competing demands on water, coupled with a lack of adequate government policy and action, which were affecting water quality and quantity.

• Twenty-four percent of our risks were economic and were derived from rising water acquisition and discharge fees.

• Fifteen percent of our risks were due to lack of full compliance with stringent internal wastewater treatment requirements.

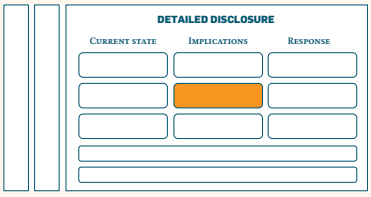
• Seventeen percent of our risks were sociopolitical in nature and derived from local government and community engagement around local and global water challenges.

### Value chain risks

Advanced disclosers also include a description of water risks in the value chain. For many companies (particularly those relying on agricultural production), water risks embedded in the supply chain are of significant concern. However, the specific nature of such risks will vary depending on industry sector and the location of the companies' suppliers. When reporting on these risks, companies can speak broadly to the key inputs and suppliers that are most exposed to risk, the drivers of that risk, and how it may affect the company (e.g., insufficient materials to maintain production, increased input costs, reduction in product quality, reputational damage).

Because companies may source materials from a vast network of suppliers and also typically have limited ability to collect data on those suppliers, water-related supply chain reporting can typically only speak to the broad types and drivers of risk that are most significant in a company's supply chain and/or the regions where supply chain risks are most prevalent. When possible, companies can also report the proportion of key inputs or the percentage of procurement spending that comes from water-stressed regions as a quantitative means of demonstrating exposure to supplier risk.

# Business opportunities




## Overview

For many companies, water may present opportunities to drive positive business value. Water-related opportunities can be grouped into three categories:

- *Operations.* Companies can take advantage of water-related opportunities by reducing the costs associated with procuring, pumping, heating, circulating, or treating water. Many companies capture such operational cost savings by reducing their water and energy needs. They can accomplish this by installing water-efficient appliances, redesigning processes to use less water, or implementing capital project upgrades. Companies can also find cost savings by using alternative methods of treating or disposing of water discharge.

- *Brand value.* Companies that can positively associate themselves with water issues may be able to increase brand value in the eyes of consumers and customers. For example, customers in water-stressed areas may have more loyalty to companies that are known to have very water-efficient operations, to sell water-efficient products, or to invest in improving local water resources. Such an approach can help a company gain competitive advantage by increasing its market share or positioning itself more strongly in new markets.

- *New markets.* Markets are emerging around the world for products or services that provide solutions to water challenges. For instance, poor water quality in China may create greater demand for domestic water filtration systems, and water shortages in Arizona may increase public funding available for smart water-metering services. These opportunities are not limited to companies in the water technology sector, as some companies in other sectors may be able to capture new markets by redesigning products to be more water efficient. This approach has been demonstrated by some companies in the consumer products industry that have developed new detergents and shampoos that require less water per wash.

A description of a company's water-related business opportunities is an important component of comprehensive water disclosure. The following guidance provides insight into how basic and advanced disclosers can report on their water-related opportunities.

## BASF: 2011 CDP WATER DISCLOSURE

*BASF is a supplier to the water treatment industry and continues to seize this business opportunity. In 2011, BASF acquires the ultrafiltration specialist inge water technologies AG, which broadens BASF's technology base and helps to expand its market position in water treatment business. With the acquisition of the water treatment business as part of the Ciba acquisition in 2009, BASF has become a leading supplier of organic flocculants and coagulants, which are key technologies for water treatment processes.*

| | Content | Scope | Format |
|---|---|---|---|
| **Basic** | • High-level assessment of:<br>- Cost savings opportunities<br>- Revenue-generating opportunities | • Companywide | • Narrative; qualitative |
| **Advanced** *(includes basic reporting)* | • Detailed assessment of opportunities | • Companywide<br>• Basin level | • Narrative; qualitative |

## Basic

### High-level assessment of opportunities

Basic disclosure focuses on providing brief descriptions of potential of the broad types of opportunities created by water sustainability challenges that are more prevalent to the company based on its industry sector and geographic location. In particular, basic disclosers focus on the following considerations.

*Cost-saving opportunities*

Most companies have the potential to reduce water-related costs in their operations by implementing capital projects, modifying processes, and instituting behavioral change. Even in areas with low water prices, facilities may find cost savings by reducing the amount of energy used to transport or treat water.

*Revenue-generating opportunities*

For some companies, the greatest water-related opportunities may stem not from operational cost savings but from revenue-generating opportunities (e.g., providing products that contribute to the alleviation of water sustainability challenges, expanding to new markets, building brand value by advancing sustainable water management).

## Advanced

### Detailed assessment of opportunities

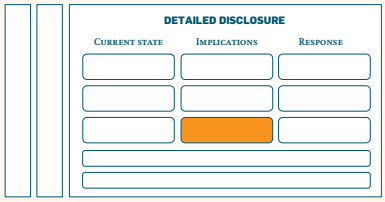
Advanced disclosers provide a more detailed assessment of opportunities, describing whether they are globally applicable or specific to certain countries or basins, the nature of the opportunity (e.g., operations, brand value, new market) and

potential business benefits, and how the company plans to seize it. Potential business benefits to discuss include

- Reduced sourcing costs
- Reduced operational costs
- Increased customer loyalty
- Expanded customer base
- Competitive differentiation (e.g. longer term pact on stock price, attraction and retention of staff etc.)

Companies also specify the timeframe in which they expect the opportunity to affect the company and discuss the specific measures they are taking to exploit the identified opportunities.

## External impacts




### Overview

A company's water practices may adversely affect humans and ecosystems in a number of ways, including:

- Exacerbating water shortages by its operations or product use
- Polluting the environment through its operations or product uses
- Damaging ecosystems and habitat
- Impinging on human rights

A company's operational water impacts can be grouped into two categories:

- *Social impacts.* When companies withdraw, consume, or pollute water resources, they can create a range of impacts on surrounding communities. Excessive water consumption can reduce the availability of water for basic human needs such as drinking water, sanitation, or food, as well as negatively affect the economic livelihoods of communities. Similarly, company's discharges can severely degrade water quality, adversely affecting human health and economic development.

- *Environmental impacts.* Companies can also damage aquatic systems through their withdrawals, consumptive use, or discharges. Ultimately these impacts can result in the loss of ecosystem services, reduced local biodiversity, and even species extinction.

Disclosure on external impacts can be quite challenging for companies due to the high costs and scientific and technical limitations associated with carrying out impact assessments. In turn, assessing water-related impacts is made difficult by the fact that impacts are highly dependent on location-specific circumstances. The following discussion provides insight into how companies can begin thinking about their water-related impacts.

| | Content | Scope | Format |
|---|---|---|---|
| **Basic** | • N/A (regulatory compliance used as proxy) | • N/A | • N/A |
| **Advanced** *(includes basic reporting)* | • Impacts from water discharge<br>• Impacts from withdrawals and consumption<br>• Human-rights-related impacts<br>• Product-use impacts | • Basin level | • Narrative; qualitative |

## Basic

Basic disclosers are rarely able to report meaningfully on external impacts. Instead they can resort to using compliance information discussed in detail in the Compliance subsection above as a rudimentary proxy for potential adverse impact. Many water-related impacts stem from companies discharging contaminants into nearby water bodies that are used as a source of drinking water, recreation, or irrigation or that provide crucial ecosystem services or wildlife habitat. Thus, a rough estimation of the extent to which company may contribute to such impacts is the number of significant compliance violations with respect to water-related regulations. While imperfect, such compliance information should be available and reportable even for small and medium-size enterprises.

## Advanced

Companies with advanced disclosure practices can assess the social and environmental impacts of their direct operations both by means of relatively simple quantitative methods and by robust stakeholder engagement and basin-assessment strategies. They can provide insight into potential impacts by identifying the "hot spot" basins where impacts are most likely to occur.

Specific impacts are among the most difficult water-related issues for companies to assess and report. Though disclosure practice in this area will certainly evolve over time, as a starting point, companies can utilize stakeholder engagement and basin assessment practices to gain insight into the impacts they create and then report this process. They can then use the format shown in Table 7 to describe the nature of their most significant external impacts.

### **TABLE 7:** Impact-Reporting Table

| Country | River Basin or Community | Impact Category | Description of Impact | Methods Used to Assess Impacts | Company Response |
|---|---|---|---|---|---|
| | | | | | |

*Country or river basin*

Specify the country and/or **river basin** where each impact is located. Ideally, a company will identify the specific communities to whom the impact is relevant.

*Impact category*

Identify the impact category (e.g., social, environmental).

*Description of impact*

Provide a brief explanation of the impact's cause (e.g., runoff from agricultural or industrial effluent, spills to local water resources, utilization of nonrenewable aquifer) and who or what was adversely affected and to what extent.

*Assessment methods*

For each identified impact, identify the methods used to assess it.

*Company response*

Describe the strategies used to mitigate identified impacts.

### Impacts from wastewater discharge

Many significant water-related environmental and/or social impacts stem from companies that discharge contaminants into nearby water resources and bodies that are used for drinking water, recreation or irrigation; provide crucial ecosystem services; and/or support wildlife habitat. A company seeking to understand where such impacts are most likely can look at facilities where regulatory violations have occurred, as well as facilities that conduct minimal water discharge treatment.

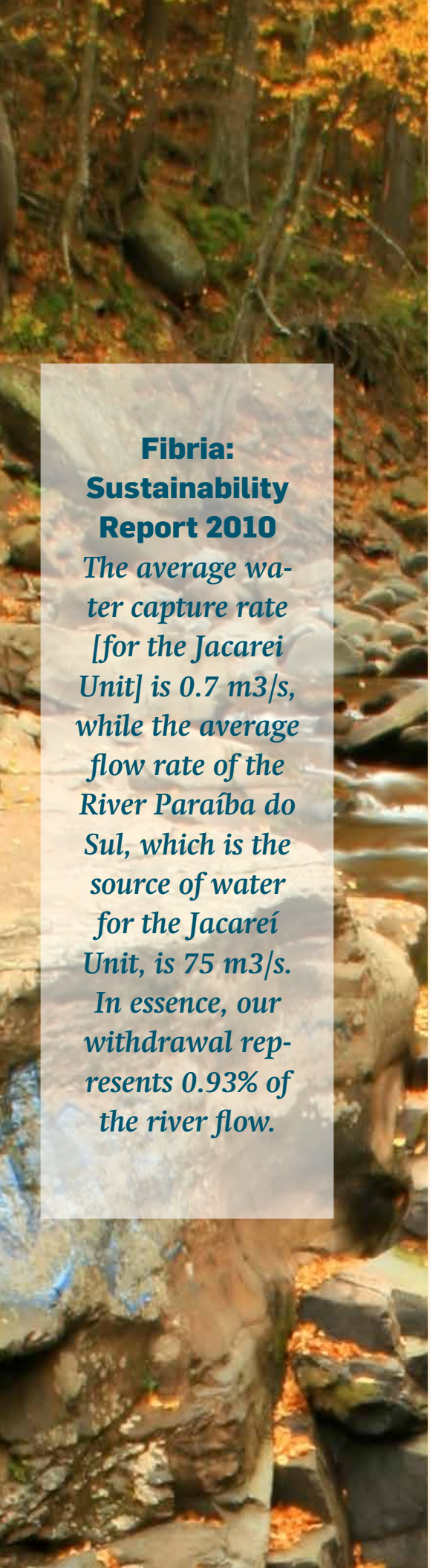
### Impacts from withdrawals and consumption

Advanced disclosers can begin to assess potential impacts by identifying the water-stressed basins in which they operate (see the Context subsection earlier in this section). Consuming water in these areas generally results in more significant impacts than consuming water in water-abundant areas. They can then identify the subset of water-stressed basins where their consumption makes up more than 1 percent of the total amount of available water (see the Context subsection above).[13] This type of first-tier assessment can provide a useful starting point for informing where more in-depth impacts assessments may be needed.

### Human rights impacts

An advanced reporter can also discuss the extent to which the company may adversely impact human rights, including the human right to water and sanitation, as well as the process by which the company is implementing measures that minimize these impacts. GRI's A Resource

13 A facility that consumes a small amount of available water is less likely to have significant water impacts (even in water-stressed areas) than a facility that consumes a significant portion of the basin's available water.



**Fibria: Sustainability Report 2010**

*The average water capture rate [for the Jacarei Unit] is 0.7 m3/s, while the average flow rate of the River Paraíba do Sul, which is the source of water for the Jacareí Unit, is 75 m3/s. In essence, our withdrawal represents 0.93% of the river flow.*

Guide to Corporate Human Rights Reporting provides detailed guidance on this issue and suggests the following as elements of effective human right reporting:

- Addressing the issue of complicity (i.e., the extent to which the company is involved with human rights issues indirectly)
- Discussing the human rights due diligence process
- Establishing human rights policies
- Integrating human rights considerations into the core business
- Explaining the systems implemented to track performance

When considering the human right to water and sanitation specifically, an advanced reporter can use the reporting framework described above. The company takes into account who uses the water sources from which it draws water or to which it discharges water and the extent to which neighboring communities have access to safe drinking water and sanitation, and it engages with others reliant on water sources in the basin to understand their perspective on the company's impacts.

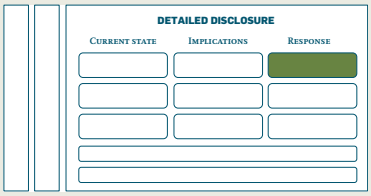
### Product-use impacts

Finally, advanced disclosers can address the social and environmental impacts not only of their direct operations but also of their wider value chain. In particular, companies can assess and discuss the impacts of their products on water resources. This may be especially relevant for companies that manufacture products that have the potential to pollute local water resources during the use or disposal phase. Companies can report on product-use impacts in the same way they approach reporting on the external impacts of their direct operations.

# D. DEVELOPING A STRATEGIC RESPONSE

More than any other component of the Disclosure Framework, the value and meaning of the information provided in the Response section hinges on the degree to which it is meaningfully linked with other sections and subsections of the Disclosure Framework. Effective water disclosure includes a description of what specifically the company is doing to improve performance and manage risks and impacts.

## Policies, governance, and targets




### Overview

One key element of Response is a discussion of the company's policies, governance and goals/targets related to water management. This enables report audiences to better understand and evaluate whether companies are adequately addressing water-related challenges.

| | Content | Scope | Format |
|---|---|---|---|
| **Basic** | • Commitment | • Companywide | • Narrative; qualitative |
| | • Goals/targets | | • Tabular; quantitative |
| **Advanced** *(includes basic reporting)* | • Policies, strategies, and governance | • Companywide | • Narrative; qualitative |

### Basic

#### Commitment

Commitments to action are the first step in building trust and accountability with stakeholders on water issues. Such commitments (often captured within the Company Water Profile) address why water is important to the business, what is being done to improve water performance and conditions, and how the company will address associated risks and impacts. Such policy commitments will ideally be endorsed and signed by the company's chief executive or equivalent.

**AVON METALS: 2010 SUSTAINABILITY REPORT**

*As part of our "20/20 Vision" initiative, Avon Metals has made strides to reduce our water use. We have set ourselves a target to reduce our water use by 5% per annum. . . . In the year July 2007–June 2008 we reduced our water consumption by 0.02 cubic metres per tonne of finished product, representing a 4% decrease.*

Companies that have less developed water management practices (and that lack comprehensive corporate water strategies) may initially focus on reporting on existing or planned projects and activities relating to key water issues.

Some companies have found that reporting the amount of money the company spends on water management can be an effective way of tangibly demonstrating action and commitment. Companies might also choose to demonstrate how much money they have spent specifically on operational improvements that bolster water efficiency and improve water treatment.

### Goals/targets

Goals and performance targets provide benchmarks against which the company and its stakeholders can evaluate company progress. Goals/targets are particularly useful if they can support or relate to one or more of the three Company Water Profile metrics (described in Section 3), and can also pertain to other companywide metrics and specific basins. Key elements of reporting on future ambitions include delineating the desired improvement in performance and a timeframe. The most effective goals/targets are measurable and drive clear action and accountability.

Companies typically provide updates on their progress toward reaching their goals/targets for the reporting cycle. Labels may include 1) Target accomplished, 2) Progress on track, 3) Insufficient progress, or 4) No progress or deterioration. Targets for which companies indicate "Insufficient progress" or "No progress" are often supplemented with an explanation of the factors that have contributed to lack of progress, as well as company plans to catalyze improvement.

## Advanced

### Policies, strategies, and governance

Advanced reporters disclose more detailed information regarding how the company incorporates water-related considerations and strategies into their core business decision making and management processes.

*Policies and strategies*

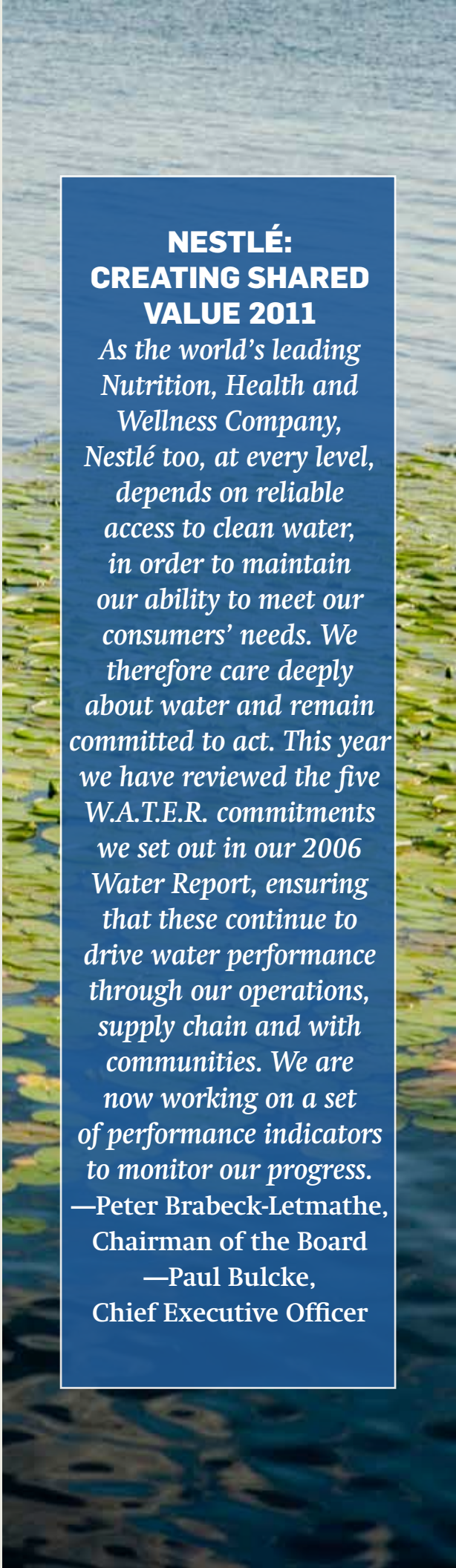
Water-related risks, like other business risks, can be managed through their explicit consideration in a range of core business activities including facility siting, mergers and acquisitions, capital expenditures, procurement contracts, and product development/research and development. *Corporate water policies and strategies* refer to mechanisms that allow companies to integrate water into their core management processes and business planning. Such strategies provide a unifying storyline that pulls together the company's many specific water-related activities as part of the company's overarching priorities and actions. Reporting on these strategies includes

- Describing types of activities in the context of the strategic objectives they support
- Locating specific regions where water management activities are focused
- Explaining how policies address the company's specific water-related risks and impacts

*Governance*

Many companies disclose the mechanisms that support corporate water-related decision making and enhance accountability. Effective governance structures (and reporting on this topic) includes a description of the processes used to develop water-related policies and the chain of accountability for water-related performance. For example, many companies give ultimate oversight of sustainability issues (and water-specific issues when relevant) to the board of directors. In some cases, companies also establish specifically designated bodies to bring together different aspects of water-related expertise and to coordinate water management activities. Lastly, companies are increasingly encouraging good governance by tying executives' compensation to sustainability targets, such as water efficiency.

Governance reporting should provide insight into which body in the company has ultimate oversight of water management and the mechanisms it uses to drive water-related accountability (e.g., compensation structures or water experts groups). Also critical to communicating governance is describing the processes through which the company engages with stakeholders to understand its impacts and establish water policies.



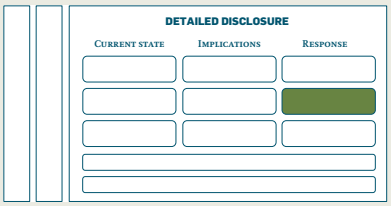
**NESTLÉ: CREATING SHARED VALUE 2011**

*As the world's leading Nutrition, Health and Wellness Company, Nestlé too, at every level, depends on reliable access to clean water, in order to maintain our ability to meet our consumers' needs. We therefore care deeply about water and remain committed to act. This year we have reviewed the five W.A.T.E.R. commitments we set out in our 2006 Water Report, ensuring that these continue to drive water performance through our operations, supply chain and with communities. We are now working on a set of performance indicators to monitor our progress.*

—Peter Brabeck-Letmathe, Chairman of the Board

—Paul Bulcke, Chief Executive Officer

# Internal actions




## Overview

The corporate water management programs, strategies, and goals described above are effective only insofar as they drive meaningful change at the facility and basin levels. One aspect of such change is action that improves the company's operational performance and mitigates the external impacts associated with the company's operations and those of its suppliers.

| | Content | Scope | Format |
|---|---|---|---|
| **Basic** | • Improvements in direct operations | • Basin level | • Narrative; qualitative |
| **Advanced** *(includes basic reporting)* | • Product innovation | | |
| | • Supply chain engagement and improvements | | |

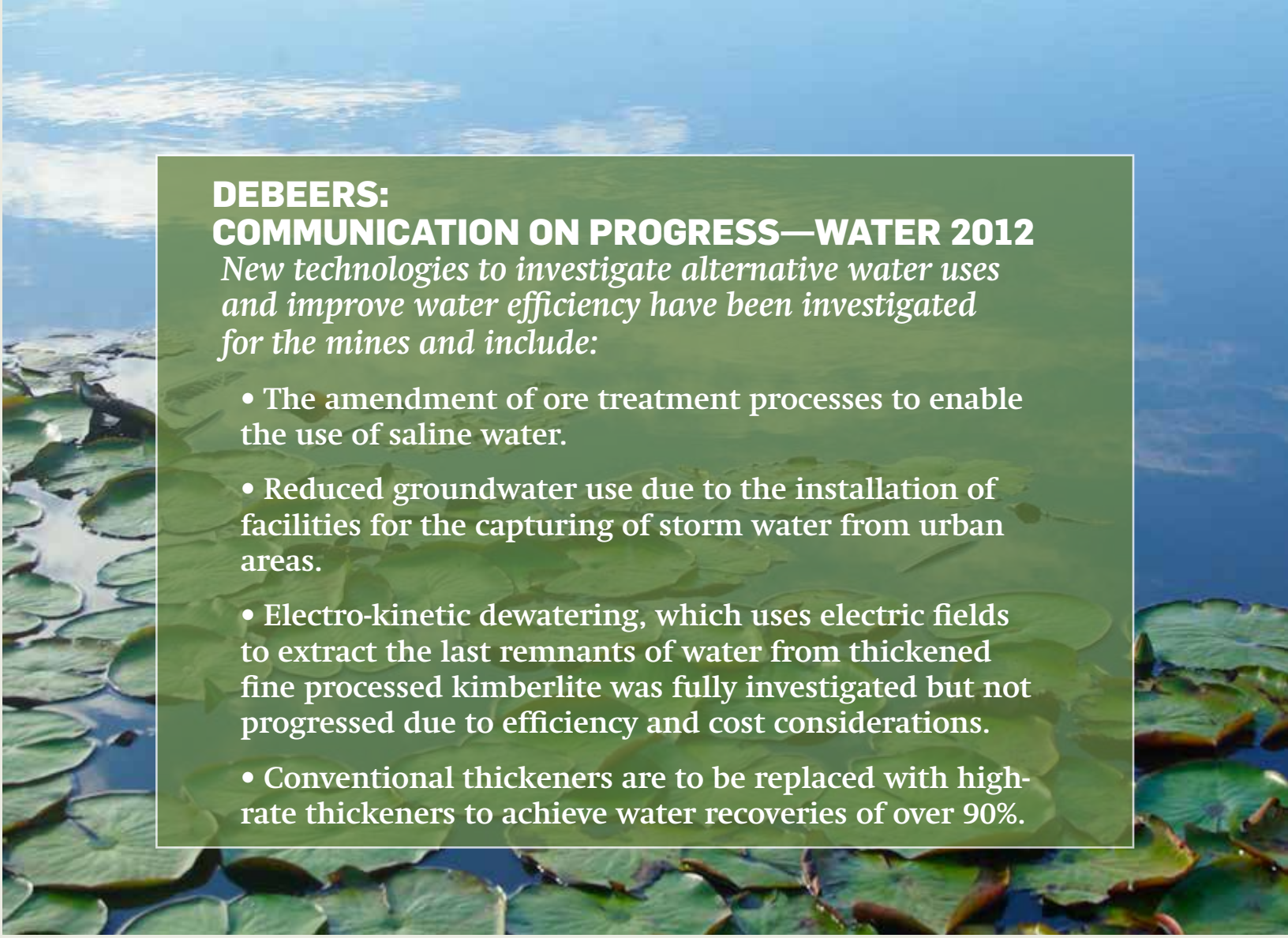
## Basic

### Improvements in direct operations

Basic reporting of internal actions typically focuses on management and technology improvements within the company's direct operations. Management practices and technologies that are broadly applicable and beneficial across the company (and the industry sector) are typically the most meaningful to report. Companies may also disclose their plans to further implement these practices in other parts of the company or make them available to other companies.

*Management practices*

Often the first water-related operational improvements relate to management practices, such as monitoring facility water use (and that of specific processes), regularly checking for leaks, establishing water committees, and strengthening employee awareness and training. These types of improvements often constitute the low-hanging fruit of water conservation efforts. Reporting on these topics is typically done briefly, with a short description of the practice and a quantitative description of its effect on water performance.



## DEBEERS: COMMUNICATION ON PROGRESS—WATER 2012

*New technologies to investigate alternative water uses and improve water efficiency have been investigated for the mines and include:*

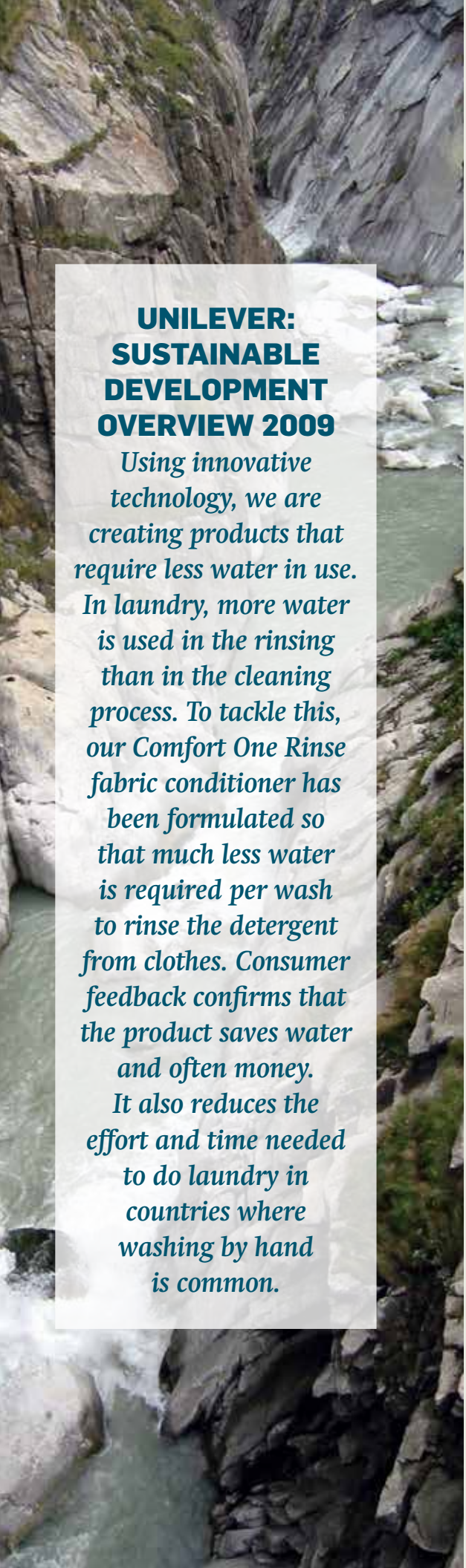
- The amendment of ore treatment processes to enable the use of saline water.
- Reduced groundwater use due to the installation of facilities for the capturing of storm water from urban areas.
- Electro-kinetic dewatering, which uses electric fields to extract the last remnants of water from thickened fine processed kimberlite was fully investigated but not progressed due to efficiency and cost considerations.
- Conventional thickeners are to be replaced with high-rate thickeners to achieve water recoveries of over 90%.

*Technologies*

Companies also invest in technologies[14] designed to drive efficiency and reduce pollution, such as water meters, **water recycling** systems, treatment plants, and alternative production processes. Many companies also disclose the volume of water recycled throughout their operations to demonstrate the degree to which they have implemented efficiency measures.

Companies can report on the degree to which these technologies drive performance improvements at specific facilities, as well as the proportion of company facilities implementing these technologies. Companies also often disclose the financial costs of purchasing and implementing these technologies as a way to demonstrate return on investment and commitment to water sustainability.

14 The Water Technology Product List, developed by the Department for Environment, Food and Rural Affairs (Defra) and HM Revenue and Customs, in partnership with AEA Technology, is a useful resource for identifying such technologies.



**UNILEVER: SUSTAINABLE DEVELOPMENT OVERVIEW 2009**

*Using innovative technology, we are creating products that require less water in use. In laundry, more water is used in the rinsing than in the cleaning process. To tackle this, our Comfort One Rinse fabric conditioner has been formulated so that much less water is required per wash to rinse the detergent from clothes. Consumer feedback confirms that the product saves water and often money. It also reduces the effort and time needed to do laundry in countries where washing by hand is common.*

## Advanced

Advanced reporters often disclose issues beyond operational improvements, such as product design innovations, and the details of actions throughout the value chain, including engagement of supply chain actors. Though reporting this information is not necessarily difficult, the actions themselves typically occur later in the evolution of a company's water management practice.

### Product innovation

Product innovation with respect to water refers to any design changes that allow the company or its products to save water or reduce pollution, or otherwise seize water-related opportunities. Ideal reporting on this topic captures

- The nature of innovation
- Quantified performance improvements during production and in the product-use phase
- Consumer reaction and product marketability

### Supply chain engagement and improvements

Companies also choose to engage with their supply chain to encourage sustainable water practices. Descriptions of supply chain engagement strategies and programs are typically located adjacent to supply chain data (discussed above in Subsection B). The efforts of a company to leverage improved water performance in entities it does not own or control can include

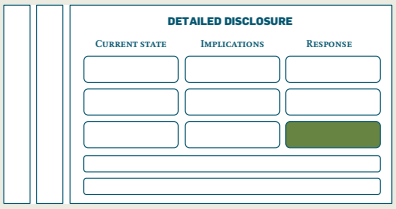
- Awareness-building campaigns
- Promotion of water technologies and good management practices
- Training materials and technical support
- Water use and/or water discharge requirements that are linked to procurement

Reporting on supplier engagement ideally includes a discussion of how many suppliers were engaged and what tangible improvements resulted. It can also include a description of the efforts the company has made to encourage major suppliers themselves to report regularly on their progress in relation to the company's water-related goals. Companies can also discuss their plans to continue and expand supply chain engagement in the future.

## PEPSICO: 2011 CDP WATER DISCLOSURE

*The training tool through which these metrics are communicated is also global, and is called PepsiCo ReCon (short for Resource Conservation). . . . We also extend the impact of this internally developed tool by making it available to key suppliers and also to PepsiCo co-packers. There are 50 suppliers representing over 100 facilities in the North American supplier outreach program who are in various stages of implementing ReCon. In 2010 we conducted Two ReCon Stage 1 classes, one ReCon Water and one ReCon Stage 2 course. Over 100 supplier associates attended the 4 ReCon classes conducted in 2010. Suppliers participating in the program have realized a collective 22% improvement in water use efficiency vs. a 2007 baseline.*

# External engagement




## Overview

Many water-related business risks stem from the water conditions outside a company's fenceline. Because of this, companies are increasingly pursuing external engagement strategies geared toward improving water resource management at the local, regional, and national levels, thereby potentially mitigating water risk.

A company will ideally make linkages describing how specific external engagements align with or advance its water strategies and goals.

<table>
<tr><th></th><th>Content</th><th>Scope</th><th>Format</th></tr>
<tr><td>Basic</td><td>• N/A</td><td>• N/A</td><td>• N/A</td></tr>
<tr><td rowspan="4">Advanced</td><td>• Consumer/public engagement and awareness building</td><td rowspan="3">• Companywide</td><td rowspan="4">• Narrative; qualitative</td></tr>
<tr><td>• Policy Advocacy</td></tr>
<tr><td>• Participation in global initiatives and partnerships</td></tr>
<tr><td>• Place-based collective action (e.g., community engagement, basin restoration, data sharing)</td><td>• Basin level</td></tr>
</table>

## Basic

External engagement constitutes a frontier element of corporate water management practice: relatively few companies pursue these types of water stewardship activities as part of their water management efforts and even fewer are able to report them in a robust and meaningful manner. In this respect, basic reporting on this topic is quite difficult and not expected of companies just beginning their water management and disclosure efforts. Basic reporting that does occur in this area typically pertains to describing ad hoc engagements geared toward influencing consumer and customer behavior or water policy at the local or national levels.

## Advanced

### Consumer/public engagement and awareness building

A significant number of companies conduct awareness campaigns (directed specifically at their consumers or the general public) that speak to global water challenges and/or information on how to use their products in a water-responsible way. Such engagements can encourage more sustainable water management generally, but they can also be a way to minimize the water footprint associated with product use. Reporting on awareness-building campaigns speaks to

- The aspect of water sustainability being addressed
- The medium/forum in which consumers or other interests are being engaged
- The campaign's effectiveness in influencing behavior patterns (quantitatively, when possible)

### Policy advocacy

Many companies influence national- and subnational-level policy development so as to encourage more sustainable water management. Due to the pervasive mistrust of corporate lobbying (particularly in the United States), reporting in this area should be quite explicit regarding how the company's inputs and recommendations in the formulation of government policy and regulation help advance the water-sustainability agenda. Companies that disclose their lobbying activities often discuss specific key details of the legislation, the ways in which it contributes to more sustainable water management, and the amount of financial support given, if any.

### Participation in global initiatives and partnerships

Many companies participate in water-related initiatives that seek to better understand specific water challenges and solutions, or otherwise offer platforms through which companies can assess or demonstrate their water-related activities. Examples of initiatives include the UN CEO Water Mandate, World Economic Forum's 2030 Water Resources Group, the World Business Council for Sustainable Development, the WFN, and the GEMI. Companies often report on their participation in these initiatives to demonstrate action. Reporting in this area typically

**CH2MHILL: SUSTAINABILITY REPORT 2011**

*In 2010, CH2M HILL partnered with National Geographic Education to promote water resources education through Geography Awareness Week. . . . The 2010 theme focused on freshwater, so CH2M HILL helped National Geographic Education develop curriculum for school outreach, including detailing several CH2M HILL projects and technologies being used to treat water in differing geographic circumstances around the world. CH2M HILL professionals got involved by visiting classrooms and leveraging existing school partnerships to share information about freshwater resources, water conservation, and the role of engineers in addressing global water issues of the future.*

## LEVI STRAUSS & CO.: CEO WATER MANDATE COMMUNICATION ON PROGRESS 2010

*In 2007 and 2008, we also lobbied for robust funding for the Water for the Poor Act, a framework for how the United States funds and supports access to clean water as a central aim of U.S. foreign assistance. Building on our support for the Water for the Poor Act, on World Water Day 2010, Levi Strauss & Co. headed to Washington, D.C., to join a day of advocacy for funding and awareness for the global water, sanitation and hygiene needs. We joined other global companies and international NGOs in meeting with members of Congress and other policy makers.*

includes a commitment to that group's programs and a description of how involvement has shaped company water strategies and performance.

### Place-based collective action (e.g., community engagement, basin restoration, data sharing)

Disclosure in this area pertains to describing local-, basin-, or national-level activities in which companies collaborate with other organizations to advance shared goals related to one or more water challenges. Such on-the-ground engagements are typically quite difficult to report since they are heavily dependent on a nuanced discussion of qualitative basin context and stakeholder dynamics. Furthermore, it is often difficult to communicate progress on such collective actions when they are addressing broad concepts and intangible issues such as improving water governance capacity or alleviating water shortages. Reporting on key aspects of place-based engagement can be done consistently regardless of the location or type of entity involved in the collective action, however. Some of these aspects are discussed below.

*The nature of the challenge*

External engagement can address a vast array of water-related challenges that create risk for the company and the organizations the company is engaging with. Though certainly not exhaustive, a list of these challenges includes physical water scarcity, inadequate operation and management of water systems, insufficient infrastructure, ineffective or inconsistent regulatory frameworks and their implementation, water pollution, competition among water uses, and climate change. Disclosing companies should discuss the nature of the water challenge and how it affects the company (and others in the basin), as well as how the collective action aims to address the challenge.

*The level and nature of engagement*[15]

The company should discuss the scope of the collective action, who it is engaging with (e.g., specific government agencies, civil society organizations, other businesses, or

15 The CEO Water Mandate's Guide to Water-Related Collective Action offers more details on these collective action approaches, levels of engagement, and intervention areas.

**INTERNATIONAL PAPER: 2010 SUSTAINABILITY REPORT**

*Since we purchased it in 1992, our mill in Kwidzyn, Poland, has been a positive resource for the community. Our on-site wastewater treatment plant handles all of the town's municipal wastewater, and the excess steam generated from our boilers provides 65 percent of the town's residential heating.*

**DANONE: 2010 SUSTAINABILITY REPORT**

*[F]inanced by danone. communities in 2010, Naandi's mission is to bring clean drinking water to village communities in India. Treatment and distribution systems are managed directly by the villages. This project alone has allowed danone. communities to increase its impact considerably: Naandi distributes 30 million liters a month to around 600,000 people, at a cost of 0.003 euros per liter. It has also created 500 jobs directly and indirectly.*

communities), the interests shared by those involved, and the type of collective action approach being utilized.

Reporting audiences should be able to understand the respective roles of the company and the interested parties with whom it is engaging and the extent to which partner organizations are aware of and support company activities. In doing so, a company can describe the level of engagement pursued, including information sharing, seeking advice, pursuing common objectives, and integrating decisions and resources. Describing the extent to which the company is contributing financial resources and technical expertise can also be helpful in demonstrating it is providing meaningful support to the project.

*The interventions pursued*

Reporting audiences will also want to know what specific interventions the collective action is pursuing. Examples of specific interventions that companies seek to engage collectively with others on include

- Encouraging efficient water use
- Engendering the development of effective governance
- Supporting or sharing research, analysis, data, and monitoring
- Aiding/financing infrastructure development/maintenance
- Advancing public awareness
- Working on community-level WASH issues
- Supporting climate change adaptation/resilience
- Protecting/restoring ecosystems services and source water areas
- Promoting better on-farm practices
- Supporting effluent management and reuse
- Enhancing stormwater management and flood control

Ideally, a company will demonstrate how the intervention it is pursuing addresses the risks and interests of the organizations involved in the collective action as well as how it benefits others in the basin more broadly.

*Tangible results*

Lastly, when possible, a company either demonstrates how engagement has led to meaningful progress toward sustainable water management or offers a framework for evaluating the success of the engagement if the project is still being implemented or tangible results are not yet realized. Though not always possible, the company should report quantitatively how the engagement has contributed to water metrics (improving community access to water services, increasing water availability, making farm irrigation practices more efficient, installing sanitation facilities, etc.).

# APPENDIX A:

## Water Disclosure Working Group Members and Corporate Water Disclosure Stakeholder Advisory Group Members

The Pacific Institute (representing the Mandate Secretariat) led the development of these Guidelines, seeking input from organizations and initiatives with expertise in this area. PricewaterhouseCoopers LLP served as a strategic adviser and provided input throughout this process. The CDP, WRI and GRI were project partners, offering insights regarding water disclosure practice and helping to ensure that the Guidelines build on existing approaches where appropriate.

During the development of the Guidelines, the project team regularly consulted with the CEO Water Mandate's Water Disclosure Working Group (WDWG) members—comprising representatives from Mandate-endorsing companies—and the Corporate Water Disclosure Stakeholder Advisory Group (CWDSAG), which included a variety of representatives from civil society groups, water-related-tool developers, trade associations, and government and intergovernmental agencies. The expertise of these groups enabled the project team to ensure it was building on existing disclosure practice as well as to ensure that the Guidelines addressed the wide range of company and stakeholder interests.

**TABLE A-3:** WDWG Members

| Name | Company |
|---|---|
| Michael Whaley | Allergan |
| Christina Hillforth | AkzoNobel |
| Martijn Kruisweg | AkzoNobel |
| Ivon Studer Noguez | AkzoNobel |
| Bennett Freeman | Calvert |
| Jules Frieder | Calvert |
| Lisa Manley | Coca-Cola |
| Maury Zimring | Coca-Cola Enterprises |
| Jens Rupp | Coca-Cola Hellenic |
| Roberta Barbieri | Diageo |
| A. Q. I. Chowdhury | Finlay Ltd. |
| Johan Firmenich | Firmenich |
| Nancy English | GlaxoSmithKline |
| Bob Hannah | GlaxoSmithKline |
| Mikael Blomme | H&M |
| Niyati Sareen | Hindustan Construction Co. |
| Bart Alexander | Molson Coors |
| Michael Glade | Molson Coors |
| Christian Frutiger | Nestle |
| Naty Barak | Netafim |

| | |
|---|---|
| Heather Rippman | Nike |
| Mark Gough | Reed Elsevier |
| Martin Ginster | Sasol |
| David LoPiccolo | Siemens |
| Johan Holm | Stora Enso |
| Jesse Rep | UPM-Kymmene |
| Dominique Heron | Veolia |
| Ed Pinero | Veolia Water |
| Graham Paterson | West Pac |
| Paul Jones | Xstrata |

## **TABLE A-4:** CWDSAG members

| Name | Organization |
|---|---|
| Adrian Sym | Alliance for Water Stewardship |
| Alexis Morgan | Alliance for Water Stewardship |
| Leslie Lowe | UCI Environmental Accountability |
| Tod Christenson | Beverage Industry Environmental Roundtable |
| Dimitra Christakou | Bloomberg |
| Linda Hwang | EcoMetrix Solutions Group |
| Brooke Barton | Ceres |
| Jan Dell | CH2MHill |
| Jens Hönerhoff | DEG Invest |
| Amy Goldman | Global Environmental Management Initiative |
| Kelly Davina Scott | Institute for Human Rights and Business |
| Nadira Narine | Interfaith Center on Corporate Responsibility |
| David Molden | International Center for Integrated Mountain Development |
| Anne-Marie Fleury | International Council on Mining and Metals |
| Sabrina Birner | International Finance Corporation |
| Paul Freedman | Limnotech |
| Victor Munnik | Mvula Trust |
| Loic Dujardin | Norges Bank Investment Management |
| Olivia Watson | Principles for Responsible Investing |
| Lara Yacob | Robeco |
| Maite Aldaya | UN Environmental Programme, Consultant |
| Ivo Mulder | UN Environment Programme Finance Initiative |
| Sharon Murray | US AID |
| Ruth Mathews | Water Footprint Network |
| Nick Hepworth | Water Witness international |
| Anne-Lennore Boffi | World Business Council on Sustainable Development |
| Dominic Waughray | World Economic Forum |
| Stuart Orr | World Wildlife Fund International |
| Jochem Verberne | World Wildlife Fund International |

# APPENDIX B:
## Tools and Resources

This appendix contains a list of tools and resources that may support or inform meaningful and robust water disclosure.

| Organization | Title |
|---|---|
| **Beverage Industry Environmental Roundtable (BIER)** | *A Practical Perspective on Water Accounting in the Beverage Sector* |
| **Bloomberg** | *ESG Metrics* (not publicly available) |
| **Business Link** | *Water Technology Product List* |
| **Carbon Disclosure Project (CDP)** | *CDP Water Disclosure 2012 Information Request* |
| | *Guidance for Responding Companies CDP Water Disclosure 2012* |
| **Ceres** | *Ceres Aqua Gauge: A Framework for 21st Century Water Risk Management* |
| | *Murky Waters: Corporate Reporting on Water Risk* |
| **Environment Australia** | *Framework for Public Environmental Reporting* |
| **Federal Emergency Management Agency (FEMA)** | *Flood Maps* |
| **German Federal Government** | *Water, Energy, and Food Security Resource Platform* |
| **Global Environmental Management Institute (GEMI)** | *Local Water Tool* |
| **Global Reporting Initiative (GRI)** | *G3.1 Sustainability Reporting Guidelines* |
| | *GRI Technical Protocol: Materiality in the Context of the GRI Reporting Framework / Defining Report Content: The Process* |
| **International Petroleum Industry Environmental Conservation Association (IPIECA)** | *Oil and Gas Industry Guidance on Voluntary Sustainability Reporting* |
| **IBAT for Business** | *Integrated Biodiversity Assessment Tool (IBAT)* |
| **Japan Ministry of the Environment (MOE)** | *Environmental Reporting Guidelines* |
| **Minerals Council of Australia (MCA)** | *A Water Accounting Framework for the Mineral Industry* |
| **South Pacific Applied Geoscience Commission (SOPAC); United Nations Environment Programme (UNEP)** | *Environmental Vulnerability Index* |

| | |
|---|---|
| **University of Colorado** | *Flood Observatory Tool* |
| **National Oceanic and Atmosphere Administration (NOAA)** | *US Objective Long-Term Drought Indicator* |
| **Organisation for Economic Co-operation and Development** | *Glossary of Statistical Terms* |
| **United Kingdom Department of Environment, Food and Rural Affairs (DEFRA)** | *Environmental Key Performance Indicators: Reporting Guidelines for UK Business* |
| **United Nations CEO Water Mandate** | *Guide to Responsible Business Engagement* |
| | *Guide to Collective Action* (under development) |
| **United Nations Environmental Programme (UNEP)** | *Freshwater in Europe* |
| **United Nations Food and Agriculture Organization (UN FAO)** | *Aquastat* |
| **United Nations Global Compact** | *UN Global Compact Management Model* |
| **United Nations World Water Assessment Programme (UN WWAP)** | *Glossary of Hydrology* |
| **Water Footprint Network (WFN)** | *Water Footprint Assessment Manual* |
| | Water Footprint Assessment Tool (under development) |
| | *WaterStat* |
| **World Bank** | *World Development Indicators* |
| **World Business Council for Sustainable Development** | *Global Water Tool* |
| | *Water for Business: Version 3* (under development) |
| **World Economic Forum** | *Water Security: The Water-Energy-Food-Climate Nexus* |
| **World Health Organization (WHO); United Nations Children's Fund (UNICEF)** | *Joint Monitoring Programme* |
| **World Resources Institute (WRI)** | *Aqueduct Tool* |
| **World Wildlife Federation (WWF)** | *Water Risk Filter* |
| | *WWF Priority Basins* |
| **WRI and WBCSD** | *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition* |

# APPENDIX C:

## Tailoring Water Disclosure to Stakeholder Interests

There is a vast array of water disclosure interests within each stakeholder group. This appendix attempts to identify the interests typically associated with those groups. It describes the core interests of each stakeholder group, indicates the primary medium of communications for that group, and then provides specific considerations for reporting to that group.

### TABLE B-1: Tailoring Water Disclosure to Stakeholder Interests

| Investors | | | |
|---|---|---|---|
| **Relevant aspects of the Framework** | Context<br>Compliance<br>Performance | Risks<br>Opportunities<br>Impacts | Policies & targets<br>Internal action<br>External engagement |
| **Primary medium** | Sustainability reports; CDP Water Disclosure | | |
| **Scope** | Global, with focus on companywide metrics | | |
| **Special considerations** | • Many investors will desire harmonized performance metrics that allow them to make comparisons across companies.<br>• They may also be most interested in a *risk-based analysis* (e.g., discussing impacts insofar as they create risk for the business). | | |

| Employees / Internal Stakeholders | | | |
|---|---|---|---|
| **Relevant aspects of the Framework** | Context<br>Compliance<br>Performance | Risks<br>Opportunities | Policies & targets<br>Internal action<br>External engagement |
| **Primary medium** | Internal memos; sustainability reports | | |
| **Scope** | Global, facility specific | | |
| **Special considerations** | • Internal stakeholders will have an interest in understanding core water-related policies and expectations. They may also be interested in understanding risks and the internal actions that may affect production. | | |

| Civil Society | | | |
|---|---|---|---|
| **Relevant aspects of the Framework** | Context<br>Compliance<br>Performance | Impacts | Policies & targets<br>Internal action<br>External engagement |
| **Primary medium** | Sustainability reports | | |
| **Scope** | Global, with a focus on operations in high-risk locales | | |
| **Special considerations** | • Civil society will be primarily interested in understanding the company's effect on the environment and communities. | | |

| Consumers / General Public | |
|---|---|
| **Relevant aspects of the Framework** | Compliance<br>Performance<br>Impacts<br>Policies & targets |
| **Primary medium** | Company Water Profile; web-based reporting |
| **Scope** | Global |
| **Special considerations** | • The average consumer will not be interested in detailed reporting but interested to know whether the company is complying with relevant standards and benchmarks, is improving performance over time, and is setting aggressive performance targets. |

| Potentially Affected Communities | |
|---|---|
| **Relevant aspects of the Framework** | Compliance<br>Performance<br>Impacts<br>Internal action<br>External engagement |
| **Primary medium** | Facility reports; verbal communication at stakeholder engagement forums |
| **Scope** | Watershed specific |
| **Special considerations** | • Communities will likely be interested in the company's impacts on local watersheds, as well as performance, compliance, and policies aimed at managing those impacts.<br>• They will want to know that the company has undertaken meaningful action to mitigate impacts, both by improving internal conditions and by concrete actions that encourage sustainable water management in the basin. |

| Suppliers | |
|---|---|
| **Relevant aspects of the Framework** | Compliance<br>Performance<br>Risks<br>Opportunities<br>Policies & targets<br>Internal action |
| **Primary medium** | Contracts; corporate social responsibility reports |
| **Scope** | Global |
| **Special considerations** | • Suppliers will be interested in understanding company expectations with respect to water performance, especially performance metrics and standards against which they will be evaluated. |

# APPENDIX D:

## Example of a Company Water Profile

*Section 3: Company Water Profile discusses how companies can provide a synopsis of their corporate water disclosure information. This appendix provides a fictitious example of an effective Profile.*

As a beverage company, water is a vital part of our business. Water is used to irrigate many of the crops that are key inputs into our products. It also serves as an important ingredient for many of our products. Our production process requires significant amounts of water and results in water discharge that may include high levels of suspended solids and organic matter.

Many of the existing and emerging water challenges are very real threats to our business that must be addressed proactively. Water stress threatens our ability to maintain consistent production, and as a relatively large water user in some water-stressed regions, we also run the risk of being perceived as restricting local access to water services and limiting environmental flows. Water pollution can increase our operational costs and compromise the quality of our product. Furthermore, because our products have relatively low value per volume (especially when compared to other products such as electronics or oil), almost all of our products are made quite close to the regions they are sold. The local nature of our business means that we have a great stake in ensuring sustainable management of shared water resources in the regions where we operate.

For these reasons, we are committed to improving our water management processes so that we can maintain consistent and high-quality production well into the future. We strive to improve in many ways. We drive operational efficiency in all of our direct operations with rigorous measurement processes and new technologies. We work with local water utilities in several basins to improve management capacity, thus allowing the whole basin to get more out of available water supplies. In the coming years, we plan to work more closely with agricultural suppliers to encourage and facilitate water efficiency and reduced pollution.

| | 2010 | 2011 | 2012 |
|---|---|---|---|
| Percentage of withdrawals located in water-stressed areas | 45% | 50% | 48% |
| Average water intensity in water-stressed areas | 6.3 ML/ML | 5.9 ML/ML | 4.3 ML/ML |
| Number of significant water-related compliance violations | 2 | 4 | 1 |

In the last three years, though the volume of water withdrawn in water-stressed regions has remained relatively stable, we have made significant strides in improving water intensity in these areas. We have been able to use roughly the same amount of water each year despite substantial increases in production volume. Furthermore, though we had four regulatory compliance violations in 2011 (two of which occurred at our facility in Phnom Penh, Cambodia), we had only one compliance violation in 2012 after implementing more thorough monitoring practices.

We have used our internal knowledge to better understand which of our operations are located in water-stressed areas (and therefore may be higher water management priorities). These operations are located in:

- Santiago basin (Chile)
- Murray-Darling basin (Australia)
- San Joaquin basin (United States)

# APPENDIX E:
## Summary of Basic and Advanced Corporate Water Disclosure Practices

Section 5 categorizes water disclosure content into basic and advanced practices. This appendix provides a high-level summary of all basic and advanced practices.

### TABLE E-1: Summary of Basic and Advanced Corporate Water Disclosure Practices

| | | Content | Scope | Format |
|---|---|---|---|---|
| Current State | CONTEXT | | | |
| | Basic | • High-level assessment of water stress<br>• Profile information: List of "hot spot" basins | • Companywide | • Tabular; quantitative |
| | Advanced | • Detailed assessment of water stress and other context factors in "hot spot" basins | • Basin level | • Tabular; qualitative |
| | PERFORMANCE | | | |
| | Basic | • **Profile metric:** Percentage of water withdrawals in water-stressed areas<br>• **Profile metric:** Average water intensity in water-stressed areas | • Companywide | • Tabular; quantitative |
| | Advanced[1] | • Water withdrawals by source type<br>• Water intensity<br>• Water consumption<br>• Water discharge by destination | • Basin level | |
| | | • Water withdrawals in the value chain | • Value chain | |
| | COMPLIANCE | | | |
| | Basic | • **Profile metric:** Significant water-related regulatory compliance violations | • Companywide | • Tabular; quantitative |
| | Advanced17 | • Adoption of voluntary and/or internal standards | | • Tabular; qualitative |
| Implications | BUSINESS RISKS | | | |
| | Basic | • Risks related to water stress | • Companywide<br>• Basin level | • Narrative; qualitative |
| | Advanced | • Risks related to other context factors | | |
| | | • Value chain risks | • Value chain | |
| | BUSINESS OPPORTUNITIES | | | |
| | Basic | • High-level assessment of:<br>- Cost-saving opportunities<br>- Revenue-generating opportunities | • Companywide | • Narrative; qualitative |
| | Advanced | • Detailed assessment of opportunities | • Basin level | |
| | IMPACTS | | | |
| | Basic | • N/A | • N/A | • N/A |
| | Advanced | • Impacts from water discharge<br>• Impacts from consumption and withdrawals<br>• Human-rights-related impacts<br>• Value chain impacts | | • Narrative; qualitative |
| Response | POLICIES, GOVERNANCE and TARGETS | | | |
| | Basic | • Commitments | • Companywide | • Narrative; qualitative |
| | | • Goals/Targets | | • Tabular; quantitative |
| | Advanced | • Policies, strategies, and governance | | • Narrative; qualitative |
| | INTERNAL ACTIONS | | | |
| | Basic | • Improvements in direct operations | • Companywide<br>• Basin level | • Narrative; qualitative |
| | Advanced | • Product innovation<br>• Supply chain engagement | | |
| | EXTERNAL ENGAGEMENT | | | |
| | Basic | • N/A | • N/A | • N/A |
| | Advanced | • Consumer/public engagement & awareness building | • Companywide | • Narrative; qualitative |
| | | • Policy advocacy | | |
| | | • Participation in global initiatives and partnerships | | |
| | | • Place-based collective action | • Basin level | |

# APPENDIX F:

## Additional Current State Guidance

A number of datasets and tools can help companies assess the current state of their water management, as described in the subsection Assessing the Current State in Section 5. This appendix provides reference to these datasets and tools and offers guidance on calculating specific performance and compliance metrics. Appendix G provides sample tables to help companies report this information in a clear format.

## Context

### Water stress

Companies with operations located in water-stressed areas are generally more predisposed to a range of water-related risks. Their water supplies may be restricted, either through direct physical scarcity at the point of withdrawals or through indirect factors such as higher water prices and more stringent withdrawal limits. They may experience negative publicity as competing pressures within the region lead to stakeholder conflict. In worst-case scenarios, local regulators could revoke or suspend a facility's operating permit, forcing it to shut down completely.

#### Datasets

Some companies assess **water stress** by referring directly to independent datasets. The list below provides a snapshot of some of the datasets that companies could draw from when assessing stress. This list should not be considered comprehensive.

*Commonly used data sources*

- Center for International Earth Science Information Network (CIESIN), *Gridded Population of the World*
- Fekete et al., *High-resolution fields of global runoff combining observed river discharge and simulated water balances,* 2002
- Mekonnen and Hoekstra, *National water footprint accounts: the green, blue and grey water footprint of production and consumption*, 2011
- National Oceanic and Atmospheric Administration (NOAA), *Climate Forecast System Reanalysis*
- Pfister et al., *Assessing the Environmental Impacts of Freshwater Consumption in LCA*, 2009
- Richter et al., *A Presumptive Standard for Environmental Flow Protection,* 2000
- Shiklomanov and Rodda, *World Water Resources at the Beginning of the Twenty-First Century*, 2003
- University of New Hampshire (UNH), *Global Runoff Data Centre*
- United Nations Food and Agriculture Organization (FAO), *Aquastat*

## Tools

Other companies find it easier to use third-party tools that interpret the **water stress** data sources for them. However, because the differences between the tools and their underlying methodologies are not always clear, the selection process can be challenging. This section provides guidance to make this decision easier for companies.

*Ease of use*

For many companies, the most important factor when selecting a tool is how easy it is to use.

- *Basic.* Companies at the beginning of the water disclosure journey often use the WBCSD Global Water Tool, WRI Aqueduct Water Risk Atlas, the WWF-DEG Water Risk Filter's Quick View function, or the WFN Water Footprint Assessment Tool. These tools require nothing more from companies than site-location data.

- *Advanced.* More advanced disclosers use the GEMI Local Water Tool or the WWF-DEG Water Risk Filter's Full Assessment function, both of which employ facility questionnaires in addition to site-location data. In December 2012, the WFN Water Footprint Assessment Tool will be expanded to include additional functionalities that may be useful for advanced disclosers.

*Other criteria*

Companies may also consider the following criteria when assessing **water stress**:

- *Geographic scale.* Basin-level data are more appropriate than country-level data because stress conditions almost always follow hydrological, not political, boundaries. When available, subbasin-level data can provide a more detailed depiction of the conditions on the ground, since basins are often very large and conditions can vary greatly across them.

- *Temporal scale (short term).* Monthly data are preferable to annual data because they account for seasonal variability in stress conditions.

- *Temporal scale (long term).* Forward-looking assessments based on projected data provide more insight into how stress conditions are likely to evolve over time than assessments based on current or historical data.

- *Method for estimating supply.* Methods that estimate water supply by taking both **surface water** and **environmental flows** into account are more sophisticated than those that look only at **runoff** estimates.

- *Method for estimating demand.* Methods that calculate **water demand** with actual withdrawal and consumption data are more accurate than those that estimate demand based on per capita **water withdrawal** and **water consumption** assumptions.

The different approaches of the five tools mentioned above are summarized in the following table.

| Criterion | WBCSD Global Water Tool | WRI Aqueduct Water Risk Atlas | GEMI Local Water Tool | WWF-DEG Water Risk Filter | WFN Water Footprint Assessment Tool |
|---|---|---|---|---|---|
| Geographic scale | Basin level | Basin and subbasin level | Site vicinity | Basin level<br>*(Subbasin data to come out in 2013)* | Basin level<br>*(Subbasin data to come out in 2013)* |
| Temporal scale (short term) | Annual | Annual | Recent/seasonal | Monthly; annual | Monthly; annual |
| Temporal scale (long term) | Forward-looking | Current/historic; forward-looking | Forward-looking | Current/historic | Current/historic |
| Method for estimating current supply | Runoff[1] | Runoff[2] | Depends on local water issues | Natural runoff[3,4] minus environmental flows[5] | Natural runoff[3,4] minus environmental flows[5] |
| Method for estimating current demand | Population[6] | Withdrawals[7,8] | Competition with other users, regulatory limits, community stress | Consumption[4,6,7] | Consumption[4,6,7] |

*The sources listed here refer to the list of datasets on the previous page:*

1. *UNH*
2. *NOAA*
3. *Fekete et al.*
4. *Mekonnen and Hoekstra*
5. *Richter et al.*
6. *CIESIN*
7. *FAO*
8. *Shiklomonov and Rodda*

*Summary of underlying tool methodologies*

The table below summarizes the underlying methodologies these five tools use to assess **water stress**:

| Approach | Source(s) | Relevant Tools |
|---|---|---|
| Blue water scarcity: The ratio of the **blue water footprint** (based on consumption rather than withdrawal) to **blue water availability**, where the latter is the natural runoff minus the environmental-flow requirement. Blue water scarcity is defined as the ratio of blue water footprint (based on consumption rather than withdrawal) to blue water availability – where the latter is taken as natural runoff minus environmental flow. Blue water resources are surface water and ground water. 1996-2005. | WFN: Hoekstra, A.Y. et al. (2012), *Global Monthly Water Scarcity: Blue Water Footprints versus Blue Water Availability* | WWF-DEG Water Risk Filter; WFN Water Footprint Assessment Tool |

| | | |
|---|---|---|
| Baseline water stress: The ratio of total annual freshwater withdrawals for the year 2000, relative to expected annual renewable freshwater supply based on 1950–1990 climatic norms. The WRI Aqueduct Water Risk Atlas can help companies collect these data at a subbasin scale for the basins where their facilities are located. After December 2012, the baseline water stress methodology will be updated to include demand data for 2005 and 2009 and supply data from 1979 to 2009. | WRI, The Coca-Cola Company, and ISciences LLC (2011), *Freshwater Sustainability Analyses: Interpretive Guidelines*<br><br>Reig,P., Shiao, T., Gassert, F. (2012), *Aqueduct Water Risk Framework.* WRI Working Paper; in review. | WRI Aqueduct Water Risk Atlas |
| Projected changes in water stress: The ratio of projected water stress arising from shifting patterns in climate, population, and level of economic development during three 11-year time frames (centered on the years 2025, 2050, and 2095) to water stress in the year 2000, using three alternative IPCC scenarios (B1, A1B, A2). | WRI, The Coca-Cola Company, and ISciences LLC (2011), *Freshwater Sustainability Analyses: Interpretive Guidelines* | WRI Aqueduct Water Risk Atlas |
| Annual renewable water supply per person: The average annual renewable water supply per person for individual river basins as measured in 1995 or projected for 2025. Areas where per capita water supply drops below 1,700 cubic meters per year are defined as experiencing water stress—a situation in which disruptive water shortages can frequently occur. | WRI: Revenga, C. et al. (2000), *Pilot Analysis of Global Ecosystems: Freshwater Systems* | WBCSD Global Water Tool; GEMI Local Water Tool |

## Flooding

One of the most common ways water impacts companies is through flooding. A large flood event or frequent smaller flooding events can devastate crops, shut down operations, or even destroy a facility. It is not uncommon for flood events to have negative financial consequences for a business. Companies can use several approaches to assess flooding, as shown in the following table.

| Approach | Source(s) | Relevant Tools |
|---|---|---|
| Flood recurrence: Free and publicly available global database of all major floods during the period 1985–2005. The WWF-DEG Water Risk Filter provides a map depicting these flood recurrence rates by country and helps companies to calculate recurrence rates in the countries where their facilities are located. Note that WWF-DEG Water Risk Filter recurrence rates are reported at a country level. After December 2012, the WRI Aqueduct Water Risk Atlas will be updated to provide a global map depicting the number of flood occurrences from 1985 to 2011 at a subbasin level. | University of Colorado, the Flood Observatory Tool<br><br>Reig, P., Shiao, T., Gassert, F. (2012) *Aqueduct Water Risk Framework.* WRI Working Paper; in review. | WWF- DEG Water Risk Filter; WRI Aqueduct Water Risk Atlas |

| | | |
|---|---|---|
| Country-level databases: Many governments maintain databases of the country's major historic floods and flood zones. For example, the Federal Emergency Management Agency publishes free and publicly available detailed flood maps for the United States. Currently, none of the corporate water risk tools incorporate country-level flood data, but companies that wish to assess floods in more detail may consider using such information. | N/A | N/A |

## Poor ambient water quality

Companies operating in areas with degraded or unreliable **water quality** may be obligated to invest in pretreatment systems so as to ensure water of sufficient quality for production processes. This is especially true for industries where water is a direct product input. For these industries, low quality levels present a significant financial burden and business risk. Companies can use several approaches to assess **water quality**. Six options are shown here.

| Approach | Source(s) | Relevant Tools |
|---|---|---|
| General pollutants: Global basin-level database of general pollutants with well-documented direct or indirect negative effects on water resources and biodiversity. Includes soil salinization, nitrogen loading, phosphorus loading, mercury deposition, pesticide loading, sediment loading, organic loading (as biological oxygen demand, or BOD), potential acidification and thermal alteration. The WWF-DEG Water Risk Filter provides free and publicly available global maps depicting these pollutants by basin and helps companies to collect these data for the basins where their facilities are located. | Vörösmarty, C. J. et al. (2010), Global threats to human water security and river biodiversity, *Nature*, 467: 555–561 | WWF-DEG Water Risk Filter |
| Typical industry level of water pollution: Database depicting average levels of water pollution for the direct operations and supply chain components of 34 industry sectors. Average values consider three pollution indicators: aquatic ecotoxicity, aquatic eutrophication, and aquatic acidification. Based on the Sustainability Consortium's Open IO life cycle assessment (LCA) model. The WWF-DEG Water Risk Filter helps companies consider the average pollution levels for their industry. | Sustainability Consortium | WWF-DEG Water Risk Filter |
| Water pollution level: The ratio of the basin's **grey water footprint** to the total basin discharge. A water pollution level of 1 means the pollution assimilation capacity has been fully consumed and indicates poor water quality. The WFN WaterStat database provides data on basin-level water pollution levels for nitrogen and phosphorus. | Liu, C. et al. (2012), Past and future trends in grey water footprints of anthropogenic nitrogen and phosphorus inputs to major world rivers, *Ecological Indicators*, 18: 42–49. | WFN WaterStat |

| | | |
|---|---|---|
| Water reuse index: The fraction of renewable freshwater supply that has been previously withdrawn and discharged as upstream wastewater. A high number indicates that a significant component of renewable freshwater is withdrawn and discharged as upstream wastewater before reaching any given facility and indicates a water quality risk in the absence of local water treatment infrastructure. The WRI Aqueduct Water Risk Atlas provides a free and publicly available map depicting global subbasin-level water reuse index data and helps companies to collect these data for the basins where their facilities are located. After December 2012, this approach will be renamed "Return Flow Ratio." | WRI, The Coca-Cola Company, and ISciences LLC (2011), *Freshwater sustainability analyses: Interpretive guidelines*.<br><br>Reig, P., Shiao, T., Gassert, F. (2012), *Aqueduct Water Risk Framework*. WRI Working Paper;<br><br>in review. | WRI Aqueduct Water Risk Atlas |
| Upstream protected land: The ratio of renewable freshwater supplies that did not originate from upstream protected lands. Higher ratios indicate a higher likelihood of poor ambient water quality, as runoff originates from areas that are not protected under conservation easements. After December 2012, the WRI Aqueduct Water Risk Atlas will be updated to provide a global map of upstream protected land at a subbasin level. | This metric developed by WRI using the same water availability data as the Baseline Water Stress metric and the World Database on Protected Areas, a joint initiative between IUCN and UNEP-WCMC. | WRI Aqueduct Water Risk Atlas |
| Total phosphorous: The average phosphorous concentration of river basins from a calibrated model of geophysical and human sources. After December 2012, the WRI Aqueduct Water Risk Atlas will be updated to provide a global map of total phosphorus at a subbasin level. | Seitzinger, S. P. et al. (2010), Global river nutrient export: A scenario analysis of past and future trends, *Global Biogeochemical Cycles* 24. | WRI Aqueduct Water Risk Atlas |

## Regulatory uncertainty

A change in law or regulation can increase the costs of operating a business, reduce the attractiveness of an investment, or change the competitive landscape in which a company operates. Conducting business in areas with uncertain regulation around water issues makes it difficult for companies to develop long-term business plans or make capital investments with long payback periods. One resource to assist companies in assessing regulatory uncertainty is the set of country profiles maintained by the WWF-DEG Water Risk Filter. WWF created these profiles in collaboration with Tecnoma (TYPSA Group). They can help companies obtain an overview of water-related regulatory uncertainty for the countries within their reporting boundaries. Specifically, the country profiles can help companies assess 1) the sophistication and clarity of the water-related legal framework, 2) the enforcement of the water-related legal framework, 3) the water strategy of local, national, and upstream governments, including drought- and flood-management plans where appropriate, and 4) the existence of an official forum or platform in which stakeholders come together to discuss water-related issues of the basin. The profiles are free and publicly available through the WWF-DEG Water Risk Filter.

## Insufficient infrastructure

Infrastructure limitations may adversely impact operations. For example, inadequate storage infrastructure in a particular region may undermine the reliability of supply for businesses during prolonged dry periods.

Companies can use several approaches to assess water infrastructure, including the following:

| Approach | Source(s) | Relevant Tools |
|---|---|---|
| Upstream storage: Measures the capacity to buffer variability in water supply (i.e., the resilience to drought and flood), providing a measure of supply-driver vulnerability. Upstream storage is the ratio of total uninhibited flow entering an area during one year (total blue water), over the total local and upstream dam and reservoir storage capacity. The WRI Aqueduct Water Risk Atlas provides a free and publicly available map depicting upstream storage data and helps companies to collect these data for the basins where their facilities are located. | Metric developed by WRI using the same supply data as the Baseline Water Stress metric and data on dams and reservoirs from Lehner, B. et al. (2011), High resolution mapping of the world's reservoirs and dams for sustainable river flow management, *Frontiers in Ecology and the Environment,* 9:494–502. | WRI Aqueduct Water Risk Atlas |
| Dependency on hydropower: Percentage of hydroelectricity over total electric production on country level. The WWF-DEG Water Risk Filter provides a global map depicting dependency on hydropower and helps companies assess the dependency on hydropower for the basins where their facilities are located. | World Bank (2004), *World Development Indicators* | WWF-DEG Water Risk Filter |

## Insufficient access to drinking water or sanitation

When a company operates in regions where significant portions of the population do not have adequate access to drinking water or sanitation, it runs the risk of receiving hostile treatment from local stakeholders, particularly when it is a relatively large water user in a given region and/or when the region is facing prolonged dry periods. Such a company is exposed to reputational risk, as nongovernmental organizations (NGOs) might mount campaigns against companies believed to exploit local water supplies at the expense of basic human rights. Finally, operating in areas without adequate access to safe drinking water and sanitation also risks the health of employees and may result in higher absentee rates. The main methodologies used to assess this context factor are summarized below.

| Approach | Source(s) | Relevant Tools |
|---|---|---|
| Access to safe drinking water: The proportion of the population using an improved drinking-water source, which is defined as a drinking-water source that, by nature of its construction or through active intervention, is protected from outside contamination, in particular from contamination with fecal matter. The four tools listed to the right help companies assess access to safe drinking water in the countries where their facilities are located. Note that one limitation of the Joint Monitoring Programme database is that information is reported at a country level rather than a basin level. | World Health Organization and United Nations Children's Fund, Joint Monitoring Programme | WBCSD Global Water Tool, GEMI Local Water Tool, WWF- DEG Water Risk Filter, WRI Aqueduct Water Risk Atlas |

| | | |
|---|---|---|
| Access to sanitation: The proportion of the population using an improved sanitation facility, which is defined as a sanitation facility that hygienically separates human excreta from human contact. The three tools listed to the right help companies assess access to sanitation in the countries where their facilities are located. Note that one limitation of the Joint Monitoring Programme database is that information is reported at a country level rather than a basin level. | World Health Organization and United Nations Children's Fund, Joint Monitoring Programme | WBCSD Global Water Tool, GEMI Local Water Tool, WWF- DEG Water Risk Filter |

## Drought

Drought can impact companies in many ways. It may cause regulators to limit facility-level **water withdrawals** or heighten local concern regarding a company's role as a water user in the basin. When droughts hit agricultural regions, they can drive up the price of commodities. These events have significant financial implications for companies dependent on these types of material inputs. Some of the options available to assess drought patterns are described below.

| Approach | Source(s) | Relevant Tools |
|---|---|---|
| Drought occurrence: Percent of the country affected by a severe drought in the last three years. The WWF-DEG Water Risk Filter provides global maps depicting these drought occurrence rates by country. Both the WWF-DEG Water Risk Filter and the GEMI Local Water Tool can help companies to calculate drought occurrence rates in the countries where their facilities are located. One limitation of the Global Drought Monitor is that drought rates are reported at a country level rather than a basin level. | University College London, Global Drought Monitor | WWF- DEG Water Risk Filter, GEMI Local Water Tool |
| Drought occurrence: The frequency of droughts lasting four months or longer, defined as a contiguous period of at least four months where soil moisture remains below the 20th percentile. Droughts of this length do substantial damage to natural vegetation and agricultural crops, tax aquatic ecosystems, and increase competition for water. After December 2012, the WRI Aqueduct Water Risk Atlas will be updated to provide a global map of drought occurrence at a subbasin level. | Sheffield, J. et al. (2006), Development of a 50-yr high-resolution global dataset of meteorological forcings for land surface modeling, *Journal of Climate*, 19 (13), 3088–3111<br><br>Li, H. et al. (2010) Bias correction of monthly precipitation and temperature fields from Intergovernmental Panel on Climate Change AR4 models using equidistant quantile matching, *Journal of Geophysical Research*, 115 | WRI Aqueduct Water Risk Atlas |

| | | |
|---|---|---|
| Socioeconomic drought: The ratio of current water stress to baseline water stress. Two versions of the indicator are computed. The one-year indicator is more sensitive to annual fluctuations in weather. The three-year indicator describes long-term droughts that may persist even though the most recent year of weather is more typical. The WRI Aqueduct Water Risk Atlas can help companies to collect these data for the basins where their facilities are located. | WRI, The Coca-Cola Company, and ISciences LLC (2011), *Freshwater sustainability analyses: Interpretive guidelines* | WRI Aqueduct Water Risk Atlas |
| Country-level databases: Many governments maintain databases of the country's major droughts. In the United States, the National Oceanic and Atmosphere Administration maintains a free and publicly available objective long-term drought indicator map. Currently, none of the corporate water risk tools incorporate country-level drought data, but companies that wish to assess drought in more detail may consider using such information. | N/A | N/A |

## Climate change impacts

Current hydrological conditions may be significantly altered in the future depending on the impacts of climate change. Two options for assessing potential climate change impacts at a basin level are described below.

| Approach | Source | Relevant Tools |
|---|---|---|
| Forecasted impact of climate change: Global database and map maintained by the Center for International Earth Science Information Network at Columbia University that integrates projected climate change impacts and the ability of countries to respond to such changes. The WWF-DEG Water Risk Filter uses the worst-case scenario (5.5 °C change by 2050) to help companies assess the forecasted impact of climate change in the areas where their facilities are located. | Yohe, G., E. Malone, A. Brenkert, M. Schlesinger, H. Meij, X. Xing, and D. Lee (2006), *A Synthetic Assessment of the Global Distribution of Vulnerability to Climate Change from the IPCC Perspective That Reflects Exposure and Adaptive Capacity* | WWF- DEG Water Risk Filter |
| Projected impacts of climate change: Free and publicly available model assessing future impacts of climate change under different scenarios. The GEMI Local Water Tool recommends that companies use this tool to assess climate change using a 2050 A2 scenario. | Climate Wizard, Nature Conservancy | GEMI Local Water Tool |

## Changing demographics

It is important to consider how basin-level conditions might evolve in the future. Demographic trends such as population growth, industrialization, and electrification can increase demand for water and intensify pressure on local water resources. Companies can assess such trends using global datasets such as those provided by the *CIA World Fact Book*, U.S. Energy Information Administration, U.S. Census Bureau, and United Nations Population Division. The GEMI Local Water Tool can help companies ascertain how to use these datasets when assessing demographic trends in the basins where they operate.

## Limited management capacity

Water shortages can exist even in relatively water-abundant areas, for when basins do not have sufficient capacity to manage their water resources, water supplies may not be effectively delivered to users and water discharge may not be sufficiently treated. There is currently no quantitative way to evaluate basin-level management capacity. Companies looking to conduct a qualitative assessment of management capacity may find it helpful to refer to the WWF/Tecnoma country profiles available through the WWF-DEG Water Risk Filter.

## Ecosystem vulnerability

Facilities in areas with highly vulnerable freshwater ecosystems are more likely to have significant environmental impacts than those in less vulnerable areas. Operating in areas with vulnerable ecosystems can also present a business risk as these areas are likely to have ecosystem services failures, more stringent water regulations, and/or higher levels of public scrutiny. The science of quantifying ecosystem health is rapidly evolving. Four aspects of ecosystem vulnerability, and the approaches a company can take to assess them, are described below.

| Approach | Source | Relevant Tools |
|---|---|---|
| Threat to freshwater biodiversity: An index of global threats to freshwater biodiversity based on 23 geospatial drivers related to catchment disturbance, pollution, water resource development, and biotic factors. The WWF-DEG Water Risk Filter provides a free and publicly available global map depicting basin-level threats to freshwater biodiversity and helps companies assess threats in the basins where their facilities are located. | Vörösmarty, C. J. et al. (2010), Global threats to human water security and river biodiversity, *Nature*, 467: 555–561 | WWF-DEG Water Risk Filter |
| WWF priority basins: Freshwater areas with particularly high conservation value to WWF. The WWF-DEG Water Risk Filter provides a free and publicly available global map depicting WWF priority basins and helps companies identify facilities located in these basins. Freshwater areas with particularly high conservation value to WWF | WWF (2010), *WWF Priority Basins* | WWF-DEG Water Risk Filter |
| Vulnerability of water ecosystems: Database showing the extent to which the natural environment of a country is prone to damage and degradation. Based on 50 indicators estimating the vulnerability of a country to future shocks. The WWF-DEG Water Risk filter helps companies interpret the vulnerability of water ecosystems in the countries where their facilities are located. | South Pacific Applied Geoscience Commission (SOPAC), United Nations Environment Programme (UNEP) (2012) Environmental Vulnerability Index | WWF-DEG Water Risk Filter |
| Biodiversity: Subscription-based database and interactive mapping tool for globally recognized biodiversity information, including key biodiversity areas and legally protected areas. The GEMI Local Water Tool refers users to this database for additional information on ecosystem vulnerability. | Integrated Biodiversity Assessment Tool (IBAT) for Business | GEMI Local Water Tool |

## Total basin availability

A company that consumes a large proportion of a basin's available water supplies is more likely to create significant social and environmental impacts than one that consumes a small fraction of the available water supplies. Therefore, it is important for companies to consider their **water withdrawals** and consumption in the context of **total basin availability**. This includes water required to meet basic human needs such as drinking, sanitation, and food production as well as water required to maintain local aquatic, riparian, and terrestrial ecosystems.

The WFN provides total basin-level **blue water availability** data in its WaterStat database, which is free and publicly available online. WaterStat includes maps and spreadsheets depicting this data for the world's major river basins, broken down by month. Although monthly variability is critical when assessing availability, for the sake of simplicity in reporting, we encourage companies to extrapolate to an annual average figure. One limitation of WaterStat is that it does not address interbasin transfers. Therefore, basins may appear to be water-stressed when in reality they have an extensive infrastructure in place to receive water supplies from a neighboring basin. Despite this limitation, WaterStat is currently the most comprehensive and accessible source for basin-level availability data. Another source of availability data is the UN Food and Agriculture Organization's Aquastat database, but this resource provides country-level rather than basin-level data.

## Supply variability

Companies located in areas with high variability in water supplies (e.g., with a prolonged dry season), may experience limitations in water supply. Two options for assessing supply variability are described below:

| Approach | Source | Relevant Tools |
|---|---|---|
| Seasonal variability: Standard deviation/mean of total **blue water availability** calculated using the mean availability of each of the 12 cardinal months. After December 2012, the WRI Aqueduct Water Risk Atlas will be updated to provide a global map of seasonal variability at a subbasin level. | Metric developed by WRI using the same supply data as the Baseline Water Stress metric. | WRI Aqueduct Water Risk Atlas |
| Interannual variability: Standard deviation/mean of annual total **blue water availability**. After December 2012, the WRI Aqueduct Water Risk Atlas will be updated to provide a global map of interannual variability at a subbasin level. | Metric developed by WRI using the same supply data as the Baseline Water Stress metric. | WRI Aqueduct Water Risk Atlas |

## Cultural and religious values

Water resources have cultural or religious significance in many local communities. If a company is unaware of these values, it runs the risk of offending local customs and engendering opposition to the company's presence in the basin. In such cases, a company can experience negative reputational or regulatory impacts and even lose its license to operate. As with regulatory uncertainty and management capacity, assessing cultural and religious attitudes toward water resources requires a qualitative approach. The WWF/Tecnoma country profiles available through the WWF-DEG Water Risk Filter can be a useful resource for companies seeking information on this topic.

## Media awareness

In some regions, water issues receive a high level of public scrutiny from local communities and NGOs. Such issues are often picked up by local, regional, or even national media sources. The level of water-related media awareness in the basins where a company operates can greatly influence a company's reputational risks. There is currently no quantitative way to evaluate media awareness of water-related issues, but the WWF/Tecnoma country profiles available through the WWF-DEG Water Risk Filter may provide companies with relevant information. Companies may also conduct a Google search to identify global or local news on basin-specific water issues. After December 2012, the WRI Aqueduct Water Risk Atlas will provide a global map depicting media coverage of water issues. This map will report the number of Google-based media articles discussing water scarcity or water pollution as a proxy for public awareness around water.

# Performance

## BASIC

### Water withdrawals in water-stressed areas

*Compilation*

- Step 1: Calculate total **water withdrawals** for the entire organization. This includes water withdrawn by third parties such as utilities and water used for cooling purposes.
- Step 2: Calculate and report total withdrawals in areas exposed to **water stress**. The earlier section of this appendix provides guidance on assessing **water stress**.
- Step 3: Calculate and report the percentage of total water withdrawals in water-stressed areas (profile metric – see Section 3).

*Reporting units*

Megaliters (ML); percentages (%)

### Water intensity in water-stressed areas

*Compilation*

- Step 1: Use the withdrawal data to calculate **water intensity** for each water-stressed basin, using either *product water intensity* or *financial water intensity*.
- Step 2: Calculate and report the average intensity in water-stressed areas (profile metric – see Section 3).

*Reporting unit*

Megaliters (ML) per product unit or per financial unit

## ADVANCED

### Basin-level performance data

Water withdrawals by source type

*Compilation*

- Step 1: Report the amount and percentage of water withdrawn in each "hot spot" basin.

- Step 2: Break down water withdrawal data by source type, showing the amount of water withdrawn from **surface water**, **groundwater** (renewable and nonrenewable), **municipal water**, **recycled water**, **runoff**, **saltwater**, and **wastewater**. Provide this information at a basin level of granularity.
- Step 3: Obtain verification of the withdrawal data.

*Reporting units*

Megaliters (ML)

### Water intensity

*Compilation*

- Step 1: Use the withdrawal data to calculate and report **water intensity** in each "hot spot" basin.
- Step 2: Obtain verification of the intensity data.

*Reporting unit*

Megaliters (ML) per product unit or per financial unit

### Water consumption

*Compilation*

- Step 1: Calculate and report **water consumption** in each "hot spot" basin.
- Step 2: Obtain verification of the consumption data.

*Reporting unit*

Megaliters (ML)

### Water discharge by destination type

*Compilation*

- Step 1: Calculate and report **water discharge** in each "hot spot" basin.
- Step 2: Break down discharge data by destination type, showing the amount of water discharged to **surface water**, **groundwater**, and **sewers**. Provide this information at a basin level of granularity.
- Step 3: Obtain verification of the discharge data.

*Reporting unit*

Megaliters (ML)

## Water withdrawals in the value chain

*Compilation*

- Step 1: Collect information on **water withdrawals** in the value chain.
- Step 2: Break down data by value chain stage, showing the amount withdrawn in the supply chain, direct operations and product use phase.

*Reporting unit*

Megaliters (ML)

# Compliance

## BASIC

### Significant regulatory compliance violations

*Compilation*

- Step 1: Calculate and report the total number of significant water-related regulatory **compliance violations** incurred during the reporting period (profile metric – see Section 3). Note that it may be helpful in this process to refer to the CDP Water Disclosure request, which asks companies to report "significant breaches" of discharge agreements or regulations. CDP's 2012 reporting guidance acknowledges that defining "significant" depends on the company's own internal threshold as well as the local context. It states that "what constitutes a significant breach . . . will usually imply a major impact on the environment, community or business(es)."[16]
- Step 2: Report the total monetary value paid during the reporting period in **fines and penalties** associated with the violations.
- Step 3 (Optional): Companies may decide to provide detailed basin-level information on the most significant violations. For each violation, describe the basin in which it occurred, the quality parameters that were exceeded, the total monetary value paid in associated **fines and penalties**, and the resulting impact. This data may be provided in table format.

*Reporting units*

Numbers; monetary value

## ADVANCED

### Significant regulatory compliance violations

*Compilation*

- Step 1: Obtain verification of the compliance data described above.

*Reporting units*

Numbers; monetary value

### Adoption of internal and/or voluntary sustainability standards

*Compilation*

- Step 1: Report conformance with internal or third-party voluntary standards. This data may be provided in a tabular format similar to the one described above for basic practice.

*Reporting units*

Numbers; monetary value

16 Source: CDP Water Disclosure 2012, Guidance for Responding Companies

# APPENDIX G:

## Example of Current State Disclosure

### BASIC

| | |
|---|---|
| **Reporting period** | *(12-month period)* |
| **Reporting boundaries** | *(Direct operations)* |

| Companywide Perspective | | |
|---|---|---|
| **PERFORMANCE** | | |
| Total withdrawals in water-stressed areas* | | Average water intensity in water-stressed areas* |
| (ML) | (% of total) | (ML per product or financial unit) |
| | | |
| **Specify method used to assess stress* | | |

| **COMPLIANCE** | | | | | |
|---|---|---|---|---|---|
| Country | River basin | Significant regulatory compliance violations | | | |
| | | Name | Parameters exceeded | Fines and penalties | Description of impact |
| *Country 1* | *Basin 1* | *Violation 1* | | | |
| *Country 2* | *Basin 2* | *Violation 2* | | | |

| **CONTEXT** | |
|---|---|
| "Hotspot" basins identified with high-level assessment of water-stress* | |
| Country | River basin |
| *Country 1* | *Basin 1* |
| *Country 2* | *Basin 2* |
| **Specify method used to assess stress* | |

## ADVANCED

| | |
|---|---|
| **Reporting period** | *(12-month period)* |
| **Reporting boundaries** | *(Direct operations and supply chain)* |

| **Companywide Perspective** | | |
|---|---|---|
| **PERFORMANCE** | | |
| Total withdrawals in water-stressed areas* | | Average water intensity in water-stressed areas* |
| (ML) | (% of total) | (ML per product or financial unit) |
| | | |
| **Specify method used to assess stress* | | |

| **COMPLIANCE** | | | | | |
|---|---|---|---|---|---|
| Country | River basin | Significant regulatory compliance violations and/or violations of internal or voluntary sustainability standards | | | |
| | | Name | Parameters exceeded | Fines and penalties | Description of impact |
| *Country 1* | *Basin 1* | *Violation 1* | | | |
| *Country 2* | *Basin 2* | *Violation 2* | | | |

| **CONTEXT** | | | |
|---|---|---|---|
| Detailed assessment of water-stress and other context factors in "hotspot" basins* | | | |
| Country | River basin | Driver of water-related challenges | Relative severity |
| *Country 1* | *Basin 1* | | |
| *Country 2* | *Basin 2* | | |
| **Specify method(s) used to assess stress and other context factors* | | | |

## ADVANCED (continued):

| Basin-Level Perspective | | | | | | | | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Country | River basin | PERFORMANCE | | | | | | | | | | | | | | | | | |
| | | Water withdrawals by source type | | | | | | | | | | Water intensity | Water consumption | Water discharge | | | | | |
| | | Total water withdrawals | | Source type (% of total withdrawals) | | | | | | | | | | Total water discharge | | Destination type (% of total discharge) | | | Quality |
| | | (ML) | (% of total) | Surface water | Groundwater (renewable) | Groundwater (nonrenewable) | Municipal water | Recycled water | Runoff | Saltwater | Wastewater | (Withdrawals per product or financial unit) | (ML) | (ML) | (%) | Surface water | Groundwater | Sewers | |
| *Country 1* | *Basin 1* | | | | | | | | | | | | | | | | | | |
| *Country 2* | *Basin 2* | | | | | | | | | | | | | | | | | | |
| *Add additional countries/basins as needed* | | | | | | | | | | | | | | | | | | | |

**Data verified by an external third-party should be noted in the table with an asterisk*

**Example of reporting value chain water withdrawals from Unilever's Sustainable Development Overview 2009**

# APPENDIX H:

## Corporate Water Disclosure Glossary

**basin** *See* river basin.

**blue water availability** Natural runoff (through groundwater and rivers) minus environmental flow requirements. Blue water availability typically varies within the year and also from year to year.
Source: WFN, *WaterStat*

**blue water footprint** Volume of surface and groundwater consumed as a result of the production of a good or service. *Consumption* refers to the volume of freshwater used and then evaporated or incorporated into a product. It also includes water abstracted from surface water or groundwater in a catchment and returned to another catchment or the sea. It is the amount of water abstracted from groundwater or surface water that does not return to the catchment from which it was withdrawn.Source: WFN, *WaterStat*

**compliance violation** Administrative or judicial sanctions for failure to comply with environmental laws and regulations, including 1) international declarations/conventions/treaties, and national, subnational, regional, and local regulations. Include noncompliances related to spills...; 2) voluntary environmental agreements with regulating authorities that are considered binding and developed as a substitute for implementing new regulations. In certain jurisdictions, such agreements are referred to as 'covenants'; and 3) cases brought against the organization through the use of international dispute mechanisms or national dispute mechanisms supervised by government authorities."
Source: GRI, *G3.1 Sustainability Reporting Guidelines*

**corporate water disclosure** The act of collecting data on the current state of a company's water management, assessing the implications of this information for the business, developing a strategic response, and ultimately reporting this information to stakeholders (investors, NGOs, consumers, communities, suppliers, employees, and others)

**environmental flows** The quantity, timing, and quality of water flows required to sustain freshwater and estuarine ecosystems and the human livelihood and well-being that depend on these ecosystems.
Source: WFN, *WaterStat*

**fines and penalties** Monetary amount paid in response to compliance violations.

**grey water footprint** The grey water footprint of a product is an indicator of freshwater pollution that can be associated with the production of a product over its full supply chain. It is defined as the volume of freshwater that is required to assimilate the load of pollutants based on natural background concentrations and existing ambient water quality standards. It is calculated as the volume of water that is required to dilute pollutants to such an extent that the quality of the water remains above agreed water quality standards.
Source: WFN, *WaterStat*

**groundwater** Water in soil beneath the soil surface, usually under conditions where the pressure in the water is greater than the atmospheric pressure and the soil voids are substantially filled with the water.
Source: CDP, *CDP Water Disclosure 2012 Information Request*

*Note: This document makes a distinction between renewable and nonrenewable groundwater. Renewable groundwater sources can be replenished relatively naturally and are usually located at shallow depths. Nonrenewable groundwater sources cannot be replenished naturally and are generally located at deeper depths. They are sometimes referred to as "fossil" groundwater sources.*

**indirect water footprint** The freshwater consumption and pollution 'behind' products being consumed or produced. It is equal to the sum of the water footprints of all products consumed by the consumer or of all (non-water) inputs used by the producer.
Source: WFN, *WaterStat*

**municipal water** Water by a municipality or other public provider.
Source: CDP, *CDP Water Disclosure 2012 Information Request*

**recycled water** *See* water recycling.

**river basin** Area having a common outlet for its surface runoff.
Source: UN WWAP, Glossary of Hydrology

**runoff** The part of precipitation that appears as streamflow.
Source: UN WWAP, Glossary of Hydrology

**saltwater** Water in which the concentration of salts is relatively high (over 10,000 mg/L).
Source: UN WWAP, Glossary of Hydrology

**sewers** All water in sewers that lead to rivers, oceans, lakes, wetlands, treatment facilities, and groundwater.
Source: GRI, *G3.1 Sustainability Reporting Guidelines*

**surface water** All waters on the surface of the earth, including fresh and saltwater, ice, and snow, as distinguished from water from the subsurface (i.e., groundwater). Surface waters include oceans, lakes, rivers, and wetlands.
Source: CDP, *CDP Water Disclosure 2012 Information Request*

**total basin availability** The amount of water available for ecological or human (e.g., industrial, agricultural, municipal) use within a basin. *See* blue water availability.

**wastewater** Water which is of no further immediate value to the purpose for which it was used or in the pursuit of which it was produced because of its quality, quantity, or time of occurrence. Wastewater from one user can be a potential supply to a user elsewhere. Cooling water is not considered to be wastewater.
Source: FAO, *Aquastat*

*Note: In this document the term* wastewater *refers to one of the seven potential source types for water withdrawals (see Section 5: Performance). This stands in contrast to* water discharge.

**water consumption** The volume of freshwater used and then evaporated or incorporated into a product. It also includes water abstracted from surface or groundwater in a catchment and returned to another catchment or the sea.
Source: WFN, *WaterStat*

**water demand** Actual quantity of water required for various needs over a given period as conditioned by economic, environmental, and/or social factors.
Source: WBCSD, *Water for Business: Version 3*

**water discharge** The sum of water effluents discharged over the course of the reporting period to subsurface waters, surface waters, and sewers either through a defined discharge point (point source discharge), over land in a dispersed or undefined manner (non-point source discharge), or wastewater removed from the reporting organization via truck. Discharge of collected rainwater and domestic sewage is not regarded as water discharge.
Source: GRI, *G3.1 Sustainability Reporting Guidelines*

**water intensity** This document uses the term *water intensity* to refer to the amount of water a company withdraws per a specific product unit or financial output. *Product water intensity* is the volume of water withdrawn per unit of product created. The product unit may be determined by the discloser. For companies in the beverage sector, for example, a product unit may be one liter of beverage product. For companies in the automobile sector, a product unit may be one vehicle. *Financial water intensity* refers to the financial output produced per volume of water withdrawn. The financial output measure may be determined by the discloser. One commonly used measure is total revenue.

**water quality** *Water quality* refers to the physical, chemical, biological, and organoleptic (taste-related) properties of water.
Source: OECD, *Glossary of Statistical Terms*

**water recycling** The act of processing used water/wastewater through another cycle before discharge to final treatment and/or discharge to the environment. In general, there are three types of water recycling/re-use: (1) wastewater recycled back in the same process or higher use of recycled water in the process cycle; (2) wastewater recycled/re-used in a different process, but within the same facility; and (3) wastewater re-used at another of the reporting organization's facilities.
Source: GRI, *G3.1 Sustainability Reporting Guidelines*

**water stress** Water stress occurs when the demand for water exceeds the available amount during a certain period or when poor quality restricts its use. Water stress causes deterioration of freshwater resources in terms of quantity (aquifer overexploitation, dry rivers, etc.) and quality (eutrophication, organic matter pollution, saline intrusion, etc.).
Source: UNEP, *Freshwater in Europe*

*Note: Traditional water stress definitions focus on physical water scarcity. However, there is increasing recognition that water stress can also be driven by economic scarcity. Economic scarcity occurs when there is insufficient human capacity or financial resources to provide water.*

**withdrawals** The sum of all water drawn into the boundaries of the reporting organization from all sources...for any use over the course of the reporting period.
Source: GRI, *G3.1 Sustainability Reporting Guidelines*

## Pacific Institute


The Pacific Institute is one of the world's leading nonprofit research and policy organizations working to create a healthier planet and sustainable communities. Based in Oakland, California, it conducts interdisciplinary research and partners with stakeholders to produce real-world solutions that advance environmental protection, economic development, and social equity—in California, nationally, and internationally. Since its founding in 1987, the Pacific Institute has become a locus for independent, innovative thinking that cuts across traditional areas of study, helping make connections and bring opposing groups together. The result is effective, actionable solutions addressing issues in the fields of freshwater resources, climate change, environmental justice, and globalization. *www.pacinst.org*

## PricewaterhouseCoopers


PwC firms help organizations and individuals create the value they're looking for. PricewaterhouseCoopers LLP is a Delaware limited liability partnership. PwC refers to the United States member firm, and may sometimes refer to the PwC network. Each member firm is a separate legal entity. *Please see www.pwc.com/structure for further details.*

## Carbon Disclosure Project


CDP is an international not-for-profit organisation that operates the only global system for the measurement, disclosure and management of corporate environmental information. It has harnessed the collective power of market forces including 655 institutional investors holding US$78 trillion in assets to create the largest collection of self reported climate change and water data. This information is used by investors, companies and governments to make informed business, investment and policy decisions. *For more information visit www.cdproject.net.*

## World Resources Institute


The World Resources Institute (WRI) is a global environmental and development think tank that goes beyond research to create practical ways to protect the Earth and improve people's lives. We work with governments, companies, and civil society to build practical solutions to urgent environmental challenges.WRI's transformative ideas protect the Earth and promote development because sustainability is essential to meeting human needs and fulfilling human aspirations for the future. *www.wri.org*


The CEO Water Mandate is a special initiative of the UN Secretary-General and the UN Global Compact, providing a multi-stakeholder platform for the development, implementation, and disclosure of corporate water sustainability policies and practices. The UN Global Compact is the world's largest corporate sustainability initiative with over 7000 corporate participants and other stakeholders from more than 140 countries. The UN Global Compact is based on ten principles in the areas of human rights, labour standards, the environment, and anti-corruption.

## 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.