wbcsd

CEO Guide to Water

Building resilient business

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FOREWORD

Business depends on water. You share it with people, cities, other businesses and nature.

This competition will get worse. According to the World Bank, within the next three decades the global food system will require between 40 - 50% more water; municipal and industrial water demand will increase by 50 - 70% and water demand for energy will increase by 85%.[1]

The materiality of water risks is clear and urgent. Water demands already exceed supply in many places. Without action, there will be no water available to meet future societal and environmental needs.

Water is central to the delivery of a low-carbon world, stability, prosperity and peace. Carbon capture and storage are notably highly water intensive and biofuel crops pose significant demands on water supply. Water scarcity can induce a security risk in countries where hydroelectricity represents a significant portion of the energy mix.

The impacts of climate change are primarily channeled through changes in the water cycle, with uneven consequences across the globe. Major natural disasters such as droughts are increasing, which influence migration, impact food prices and can lead to social unrest.

Water is central to the achievement of the Paris Agreement and the Sustainable Development Goals

Sunny Verghese
Chair of WBCSD, Co-founder and Group CEO, Olam

Peter Bakker
President & CEO, WBCSD

Ivan Menezes
CEO, Diageo

Business is paying the price too. When there is no water available for operations, businesses must either significantly invest into or abandon certain sites.

Water risks directly a ect bottom lines. To better plan for future shocks and become resilient, there needs to be a fundamental shift in the way that companies value water.

Water should be a priority in the boardroom of every company in the world. Managing water better is a key opportunity for business to create and develop competitive advantages, while securing their license to operate, reducing financial losses and altogether ensuring continuity of operations.

As a decision maker, you need to:

- **Understand** the level of your company's exposure to and sharing of water risks in direct operations and across supply chains;
- **Integrate** water in decision-making, disclosure, and make smart investment decisions;
- **Collaborate** with other water users and stakeholders to address shared risks and seize opportunities.

We encourage you to **show leadership** and become a sound water steward by **stepping up to one of the most pressing sustainability challenges we face.**

Gilbert Ghostine
CEO, Firmenich

Magdi Batato
Executive Vice President & Head of Operations, Nestlé SA

Indra K. Nooyi
Chairman and CEO, PepsiCo

Antoine Frérot
CEO, Veolia

KEY **WATER CHALLENGES**

The world will face a **40% water supply gap**[2] by 2030 if the following challenges are not urgently addressed:

- **Local water scarcity has global financial effects.** Today, local freshwater crises are one of the main threats to the global economy. For example, a drought in Brazil directly affects food prices in Europe.
- **Water is a precious but undervalued resource.** In many countries, water is underpriced or subsidized, failing to reflect its true costs and values.

1 in 4 of the world's cities faces water insecurity[3]

- **Inadequate access to water and sanitation costs the global economy US$323 billion every year.**[4] Over two billion people don't have access to safe drinking water, and over four billion don't have access to safe sanitation.[5] This has severe consequences for productivity as well as health and gender equality.
- **Deteriorating water quality is a major factor in increasing global water scarcity as it reduces the quantity of water that is safe to use.** Globally, 80% of municipal wastewater is discharged untreated.[6] Run-off from industry and agriculture puts water bodies under significant threat.

Credits: Nestlé Côte d'Ivoire

- **Groundwater levels are declining.** Nearly two thirds of the largest aquifers in the world are already being depleted, putting businesses and communities at risk.[7]
- **Globally, agriculture uses 70% of available water.**[8] If agricultural water efficiency is not improved, other water management efforts by government and industry won't suffice.
- **Water users are interdependent.** Local water scarcity is not just a threat to your company but to everyone in the same catchment. One water user's actions can put at risk operations of another.

Water is essential to public health. That's why we're leveraging our science to improve hygiene and sanitation, while reducing our water footprint by 25% by 2020.

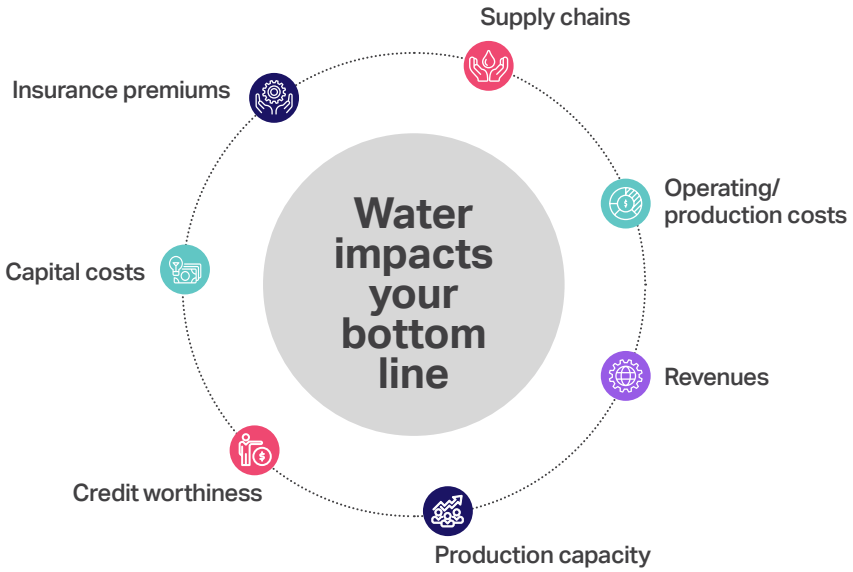
Gilbert Ghostine
CEO, Firmenich

THE **BUSINESS CASE** FOR WATER

Water is underpriced across the world. Businesses often fail to understand the full value of water, and to incorporate water-related risks in their planning.

Water risks affect business profitability

Water risks can lead to growth constraints by increasing your business' risk profile and ultimately its cost of capital. A 2017 Trucost study showed that if the full costs of water availability and water quality impairment had to be absorbed, this would equate to **an average decline in profits of 44% for utilities and 116% for food and beverage companies.**[9]



Water is a material business issue and risk

As competition for water increases, regulation will tighten. Business will come under closer scrutiny and water-related expenditures will rise.

Fund and asset manager ACTIAM aims to make its investments water neutral by 2030[10]

Investors are paying closer attention to water

An increasing number of investors are recognizing the value of water and striving to better account for it in investment decisions. For example, the recently-launched **Drought Stress Testing Tool**[11] reveals that even when exposed to drought scenarios of only medium severity, most companies see their credit ratings downgraded.

The Task Force on Climate-related Financial Disclosures (TCFD)

The recommendations recently developed by the TCFD and implemented by leading businesses **will drive disclosures on water** as demand from investors for improved climate-related financial disclosures increase.

As part of the recommendations, water is identified among potential disclosure metrics, targets, and climate-related opportunities.[12]

We integrate water management into our voting decisions for our investee companies.

Carine Smith Ihenacho
Chief Corporate Governance Officer, Norges Bank Investment Management (Source CPD, 2017)

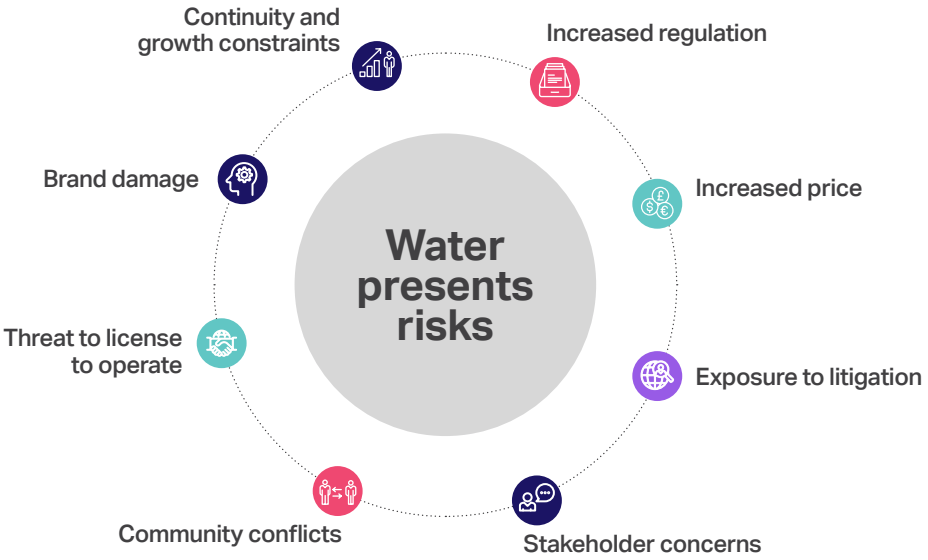
THE **BUSINESS CASE** FOR WATER

Companies face physical and non-physical risks driven by competition for water, pollution, regulation, and climate change.

Operational risks

Business disruption due to water scarcity or flooding

- In Brazil, drought pushed up water costs by over US$2 million in 2015 while increasing electricity costs by close to US$6 million due to reduced availability of hydropower. **General Motors Company** responded by increasing water conservation efforts and energy efficiency measures.[13]



Legal and regulatory risks

More stringent legislation or reduced allocations; fines or penalties for water pollution incidents

- Water prices charged to **The Kellogg Company** manufacturing facilities in Mexico have risen 300% since 2012, which directly impacted operating costs in these locations.[14]

Reputational risks

Brand damage; loss in market share; loss of social license to operate

- **The Coca-Cola Company** was forced to abandon plans to build a US$81 million new bottling plant in Tamil Nadu, India after fierce resistance from local farmers, who feared the company would cause a fall in the water table.[15]

Financial risks

Increased cost of capital and reduced financing options

- **Morgan Stanley Capital Index Research** shows that the total value of sales or reserves at risk from water scarcity amounts to US$221 billion for All Country World Index (ACWI) goldminers, close to US$21 billion for MSCI US Investable Market Index (IMI) electric utilities and over US$17 billion for MSCI ACWI steel producers.[16]

14% of green bonds issued in 2016 were for water-related projects[17]

THE **BUSINESS CASE** FOR WATER

Investing in sustainable water management offers **opportunities to gain a competitive advantage.**

For example, to transition to a circular economy, businesses can implement and offer products and solutions to reuse water and recover resources out of used water.

This is one of the largest untapped opportunities to move from waste to resources.

Water is far too precious a resource to be used just once.

Antoine Frérot
CEO, Veolia

Case study: Turning a crisis into an opportunity

On Australia's west coast, where water availability had been declining and water prices were on the rise, companies needed to maintain access to a suitable water source and lower their production costs.

ENGIE and **BP** implemented programs and activities for reducing water use. With the **Water Corporation and Government of Western Australia, other industrial users and the local regulator,** they also worked to develop an alternative source of water.

This collaboration delivered the **Kwinana Water Reclamation Project (KWRP).** One company's wastewater became a source of industrial water for another.

The switch to recycled water has saved costs by reducing water use and chemicals, helping to secure future operations while increasing potable water supplies. **In one plant alone, it saved a company US$1.5 million.**[18]


Credits: BP

OPPORTUNITY IN ACTION
THE SUSTAINABLE DEVELOPMENT GOALS

Changing the way water is valued and managed can help the world achieve the 17 SDGs.

Water security is at the core of society's sustainable future. Valuing water inclusively and comprehensively is critical for a sustainable business and for collectively achieving our goals towards a water secure world. Businesses can be the inspiration and take the lead. The High-Level Panel on Water calls and counts on the business community to partner, lead and inspire, by example, and value water right.

Henk Ovink
Special Envoy for International Water Affairs, Kingdom of the Netherlands and Sherpa to the UN / World Bank High-Level Panel on Water

Now and in the future, water scarcity represents a real and significant risk to many businesses. Understanding and managing the business impact of water is an absolute priority for Diageo.

Ivan Menezes
CEO, Diageo

A **WATER TOOLBOX** FOR BUSINESS

Consider the following seven steps to design and implement your water stewardship journey in the order that best suits your business.

1. Ensure board level oversight to integrate water into business strategy and planning
2. Set meaningful, ambitious goals and targets at industrial unit, country and global level
3. Value water appropriately to respond to true risks and opportunities
4. Implement innovative business solutions to achieve your goals and targets
5. Collectively address shared water risks and opportunities
6. Raise awareness and create engagement among your employees, suppliers, and consumers
7. Advocate for policy and finance enablers by calling for policies that support business investment in water-smart solutions

Planet is screaming at us, and the language it uses is water.

Peter Bakker
President & CEO, WBCSD

A **WATER TOOLBOX** FOR BUSINESS

ACROSS DIRECT OPERATIONS AND SUPPLY CHAINS

1 Ensure board level oversight to integrate water into business strategy and planning

IDENTIFY, MEASURE AND VALUE RISKS

Establish a cross-sectoral team to understand impacts and dependencies

Use global and local tools to assess sites

Value water, considering its true costs and values

Consider scenario analysis

INTEGRATE RISKS INTO BUSINESS STRATEGY

Integrate water risks into corporate enterprise risk management

Set accountability within the company

Set policies and context-based targets for water

MANAGE RISKS

Engage with stakeholders at watershed level to implement a water stewardship strategy

Engage with investors

Identify collaborative opportunities to secure water supply and improve water quality

REPORT RISKS

Disclose water-related risks and financial impacts in mainstream reports

Nestlé is certifying its good practices at priority manufacturing sites with the Alliance for Water Stewardship Standard.

Magdi Batato
Executive Vice President & Head of Operations, Nestlé SA

2

Set meaningful, ambitious goals and targets at industrial unit, country and global level

DIAGEO

By 2020, reduce water use through a 50% improvement in water use efficiency at all owned production sites and in water stressed areas replenish the amount of water used in the final product.

OLAM

By 2020, 100% of priority supply chains have Water Resources Management plans and 100% of Olam's direct operations in high water risk areas participate in a water stewardship program.

UNILEVER

By 2020, halve the water associated with the consumer use of company's products (2010 baseline).

3

Value water appropriately to respond to true risks and opportunities

NESTLÉ

A theoretical price of water (between US$1 – 5 / m^3) is established for Capex payback calculations purpose, depending on a site's physical risk score (Combined Water Stress Index).

DIAGEO

An internal cost of water tool estimates the full cost of water to a plant, to inform the business case for investment in water and help achieve water efficiency goals.

VEOLIA

The True Cost of Water tool takes into account the direct and indirect costs as well as financial implications of water risks.

4

Implement innovative business solutions to achieve your goals and targets

					
DRIVER	**Continuity of operations**	**Employee health and safety**	**Water supply in scarce environments**	**Water efficiency in agriculture**	**Climate resilience**
BUSINESS SOLUTION	**Water stewardship:** Working with relevant stakeholders to improve sustainability of local watersheds	**Access to water, sanitation and hygiene (WASH):** Provide adequate access in your own operations, supply chains, and local communities	**Circular water management:** 5Rs approach of **r**educing, **r**eusing, **r**ecycling water, **r**ecovering resources, and **r**eplenishing watersheds	**Water-smart agriculture:** "Smart" agricultural solutions to address production in contexts of growing water scarcity, pollution and climate change	**Investing in natural infrastructure:** Harnessing the services that nature provides for business needs, while bringing important benefits to nature and society
WBCSD RESOURCES*	Sharing water, engaging business Business guide to water valuation	WASH at the workplace Pledge (includes Guiding Principles, Self-Assessment tool and case studies)	Business guide to circular water management and accompanying case studies	Co-optimizing solutions for water and agriculture: lessons from India for water scarcity	Natural Infrastructure for Business (NI4Biz) platform (includes business case, tools, case studies)

*These resources are available at www.wbcsd.org.

5

Collectively address shared water risks and opportunities

27 corporate and environmental partners convened in California to address water scarcity through different solutions such as groundwater recharge and corporate collective action in the **California Water Action Collaborative**.

6

Raise awareness and create engagement among your employees, suppliers, and consumers

Unilever's Lifebuoy Handwashing program is one of the world's largest hygiene behavior change programs, with a goal of reaching one billion customers by 2020.

7

Advocate for policy and finan e enablers by calling for policies that support business investment in water-smart solutions

In the roll-out of the **Zero Liquid Discharge (ZLD)** policy in India, businesses are advocating for realistic timeframes given significant investments and manpower skill required to implement the policy.

BUSINESS IN ACTION

Olam

Integrated water resource management

First agribusiness site certified by the Alliance for Water Stewardship (AWS) for sustainable water management within and beyond the company fence.

Impact: Convened the different water users into a formal water users association, to address the shared water challenges faced by 300,000 people living in the river basin.

P&G

Water reuse in manufacturing

95% reuse of cleaning water at a Chinese manufacturing site, responding to strict regulatory requirements and local water scarcity.

Impact: Over 60,000 m³ in annual water savings. Today, this site is the company's international benchmark for water reuse.

LafargeHolcim

Increasing resilience

Quarry areas converted into storm water areas to reduce flooding risk, create wetlands, and harvest rainwater. Driven by regulatory requirements and community demand.

Impact: Flood protection for local communities, increased biodiversity and water supply, and a recreational area for the local community.

PEPSICO

More crops per drop

Replaced flood irrigation with drip irrigation with farmers on more than 2,600 acres, provided training on efficient practices, and invested in new technologies to save water in India in 2016.

Impact: Annual water savings of over 800 million liters in Maharashtra (2016, verified by Deloitte) and greater reliability of supply of potatoes for the growers and PepsiCo.

DIAGEO

Business case for WASH in agriculture

Implementation of WBCSD WASH Pledge in own operations & work with selected supply chain farmers on WASH provision where the issue is identified as priority e.g. in Tanzania, Kenya, Nigeria, Cameroon and Ghana.

Impact: Reduced incidences of water-borne diseases, increased school attendance; women spend less time sourcing water.

Nestlé

Good Food, Good Life

Going water-circular

Zero-water withdrawal technologies have been used at a water-scarce site by recovering water from milk (in a milk powder production facility in Mexico) for daily operational water needs.

Impact: The dairy factory can operate without using any groundwater, running solely on water recovered from milk.

US$302 billion of investment is needed to close the current gap on access to drinking water and sanitation, including wastewater treatment[19]

WATER @ WBCSD

Water is a key enabler of large scale systems transformation and it is integrated into our programs on Food, Land and Water, Redefining Value, Energy & Circular Economy, People and Cities & Mobility.

WBCSD also represents the **voice of forward-thinking business on water** in global fora and policy platforms.

We provide members with **leadership opportunities** to advance the strategic business case for action and collaboration on water.

Work with us to get **latest information** on water trends and opportunities at your finger-tips, to **collaborate** to incubate and implement innovative business solutions with peers and to **amplify your voice.**

Water leadership group

At CEO level, 15 companies lead the development and implementation of business solutions and represent the voice of business on water at key policy and advocacy platforms.

The ambition is to scale knowledge and practice in key water-stressed geographies of the world to foster action on the ground where companies are directly facing water risks, while contributing to the advancement of the global water agenda.

Key WBCSD contacts

Tom Williams
Director, Water
tom.williams@wbcsd.org

Deepa Maggo
Manager, India Water Program
maggo@wbcsd.org

Swapna Patil
Associate, Water
patil@wbcsd.org

For a complete list of sources used in this Guide, please refer to the online version on our website.

ENDNOTES

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World Business Council
for Sustainable Development
Maison de la Paix
Chemin Eugène-Rigot 2B
CP 2075 1211 Geneva 1
Switzerland

www.wbcsd.org | @wbcsd