



# Addressing the Triple Water- Nature-Climate Crisis in Asia: The New Sustainability Approach for Business

PREPARED BY EURASIA GROUP &  
THE SUSTAINABILITY LEADERS COUNCIL (SLC)  
28 MARCH 2024

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Prepared by Eurasia Group & the SLC

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## Executive summary

Amid growing global awareness of water scarcity, 2023 was heralded as the "year of water," drawing attention to the need for businesses to adopt sustainable water management practices. This call to action was motivated by the projection that half of the world's urban population could suffer from water scarcity by 2050, potentially destabilizing economies and triggering an increase in the incidence of drought.

Water scarcity encompasses both physical shortages, when natural replenishment cannot meet demand, and economic shortages, characterized by inadequate infrastructure and management. Expanding the framework further, water stress also contemplates issues of water quality and accessibility, thereby affecting corporate risk assessments and compliance with environmental, social, and corporate governance (ESG) principles.

The acceleration of climate change is expected to open a 40% gap between water demand and supply by 2030, disproportionately affecting the agricultural sector, the largest user of water. Increased scrutiny of water consumption puts pressure on companies to manage water footprints carefully to mitigate potential regulatory repercussions and earn public trust through transparent practices and community engagement.

Disclosure practices for corporate water use are evolving. Initiatives such as the Taskforce on Nature-related Financial Disclosures (TNFD) incorporate water risks into broader sustainability reports. Addressing water-related concerns is thus becoming a fundamental aspect of corporate responsibility, involving the planning and adoption of advanced management strategies and technologies.

New global interest and initiatives, such as the upcoming appointment of a UN special envoy for water, acknowledge the connection of water issues with climate and nature concerns. Advances in water technologies and nature-based solutions (NbS) serve strategic objectives, providing environmental, social, and economic benefits, especially in the densely populated regions that are most at risk.

The concluding advice underscores how crucial it is for businesses to take a proactive approach to the water crisis. Engagement with policy discussions, alignment with consensus-driven initiatives such as the CEO Water Mandate, and compliance with international standards will reflect a legitimate commitment to environmental stewardship. Companies must utilize transparency, innovation, and advocacy to contribute meaningfully to sustainability and cement their roles as guardians of natural resources.

In the broader context, the triple water, nature, and climate crisis poses significant business and geopolitical concerns. Addressing it requires a thorough reconsideration of water strategies by businesses, emphasizing action plans that are well-grounded and detailed, with clear targets that acknowledge the interplay of various environmental factors. Focusing on aligning operational processes with the realities of water scarcity and climate change is critical for advancing toward a sustainable and resilient future.



## Introduction

Amid growing attention to water scarcity, this issue took center stage in 2023, dubbed by experts the "year of water." The increasing focus on water-related challenges will have major consequences for businesses for the remainder of the decade, encouraging firms and financial institutions to integrate their approaches to water with their climate and nature strategies. Adopting a holistic approach to tackling these three environmental issues will help corporates and investors generate both quick wins and longer-term gains in terms of stakeholder engagement, social license to operate, and sustainability credentials. It will also allow them to easily incorporate new environmental considerations—that will grow more prominent in the future—into their strategies.

### The science: How bad is the global water stress crisis?

By 2050, water scarcity will likely affect half of the global urban population, especially in large countries such as India and China, exacting a significant economic toll. According to the World Bank, the GDP of some regions could contract by up to 6% owing to water scarcity by 2050. This underscores the critical nature of the issue: The absence of water means stagnation for local businesses and industries. Economies could suffer billions in losses stemming from unaddressed water hazards such as floods and droughts, not to mention the tragic loss of life. Over the last two decades, drought incidents have increased by 29%, with notable examples in India, Pakistan, and Japan. With water demand expected to outpace supply considerably by 2030 because of population increase, rapid industrialization, and accelerated urban growth, the stress on water resources is intensifying. Policymakers are scrutinizing these developments and rapidly crafting new regulations in response. Water is now emerging as a crucial component of ESG strategies for investors, who are increasingly attentive to a spectrum of water risks—ranging from demand conflicts to access constraints—that have the potential to disrupt supply chains and inflate costs. The capacity for cooperation among international actors will be an important factor in the success of efforts to combat water problems.

### Physical scarcity versus economic scarcity

Physical scarcity arises when the human thirst for water surpasses what the Earth can supply, a common occurrence in the world's most parched regions. Physical water scarcity resulting from climate change is a growing concern, with rising temperatures leading to more evaporation and less rainfall. According to Brian Richter of Sustainable Waters, the burgeoning global population depletes available freshwater sources beyond what precipitation and snowmelt can replenish. Climate change also acts as an amplifier of water scarcity, adding a complex layer to an already pressing issue, as shown by the heatwaves coming earlier in the year and prolonged drought conditions experienced recently in India and Pakistan.

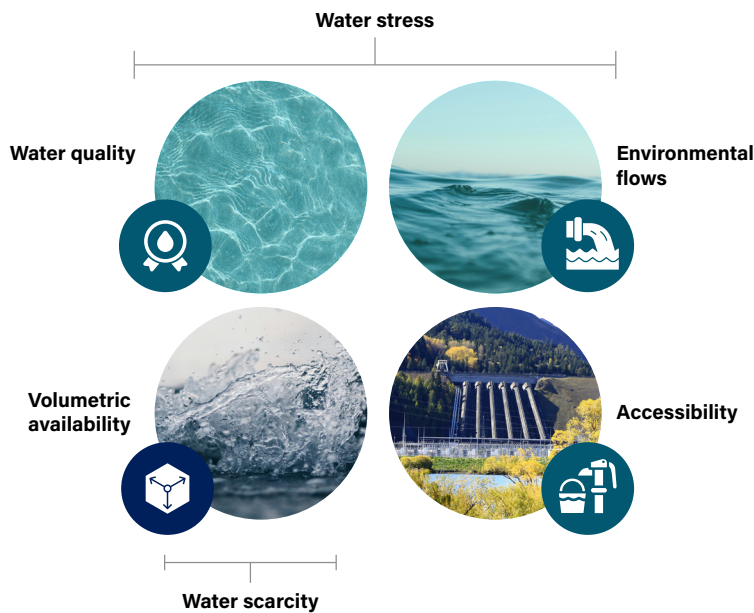
Meanwhile, economic scarcity is driven by inadequate water infrastructure and subpar management, factors that take on greater importance as the world's population hits the 8-billion mark, exerting additional pressure on already taxed water supplies. Whether it is a general deficit of water management infrastructure or the inefficient use of existing facilities, the causes of economic water scarcity are multifaceted and interconnected.



## From water scarcity to water stress

Water scarcity speaks only to the volume—or lack of—water supply and is typically measured as the ratio of human water use to its availability in a given area. It is an objective gauge that can be uniformly measured across regions and over periods. On the other hand, water stress looks at the ability to satisfy human and environmental water demands. It is a comprehensive and inclusive concept—incorporating various aspects related to water resources—not just the availability of water but also its quality, the need for environmental flows, and the ease of access to water. Thus, it is possible for a region to be under severe water stress without being water scarce, for instance, because of the contamination of an otherwise ample water supply. For companies and organizations to truly grasp the extent of water-related risks, they must discern the many facets of water stress—including scarcity, access, environmental flows, and water quality—along with other contributing factors such as water governance.

### Water scarcity is one of many components of water stress



Sources: CEO Water Mandate, Eurasia Group




### Uneven level of water stress across Asia will shape management responses

#### Baseline water stress: **Extremely high** (>80%)









Country ranking 2019

24. **India**














#### Baseline water stress: **High** (40-80%)

Country ranking 2019

31. <b>Pakistan</b>		33. <b>Turkmenistan</b>		34. <b>Uzbekistan</b>		35. <b>Thailand</b>		40. <b>Afghanistan</b>	
42. <b>Kyrgyzstan</b>		45. <b>Nepal</b>		46. <b>Mongolia</b>					


#### Baseline water stress: **Medium-high** (20-40%)

Country ranking 2019

52. <b>China</b>		55. <b>Indonesia</b>		56. <b>Bangladesh</b>		58. <b>Kazakhstan</b>		60. <b>South Korea</b>	
61. <b>Sri Lanka</b>		62. <b>Tajikistan</b>		63. <b>North Korea</b>		67. <b>Myanmar</b>		68. <b>Vietnam</b>	
70. <b>Philippines</b>									

#### Baseline water stress: **Low-medium** (10-20%)

Country ranking 2019

71. <b>Japan</b>		75. <b>Cambodia</b>		104. <b>Malaysia</b>	
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#### Baseline water stress: **Low** (<10%)

Country ranking 2019

119. <b>Laos</b>		130. <b>Bhutan</b>		158. <b>Brunei</b>	
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Source: WRI, Aqueduct 4.0 (2023)



## **Mounting toll of climate change on water resources**

Climate change is accelerating at a faster rate than previously predicted. By 2030, the gap between the supply and demand of water is projected to reach a staggering 40%, magnifying the water scarcity crisis. This is not the distant future; the gap is already widening. Looking ahead to mid-century, the global population is expected to swell by an additional 2 billion, and in tandem, food demand is projected to rise by 50% by the year 2050, putting an enormous strain on water supplies, particularly as agriculture already accounts for 70% of water use. With current rates of population growth, every incremental increase in global temperature could bring a corresponding decrease in water resources of at least 20%. In this scenario, climate change is not a single challenging factor but a force that multiplies threats. It is one that has already been exacerbating water scarcity through early heatwaves and prolonged droughts in India and Pakistan, among other places.

## **Implications and recommendations for the private sector**

### **Growing social discontent with the water footprint of big corporations**

There is a palpable increase in public scrutiny of the water footprints of large and multinational companies, often leading to intensified calls for reduced water use and pollution. These concerns are expected to translate into regulatory shifts. Companies need to pre-emptively address such discontent and proactively engage in initiatives that bolster community support. Actions viewed as after-the-fact responses will likely be met with skepticism, whereas gestures of genuine support for affected communities are apt to be more well-received. It is crucial for companies to strategically choose the appropriate partnerships for these initiatives. Preparations for the upcoming summer seasons and beyond should start immediately.

Additionally, corporations must deepen their understanding of their water footprint across the supply chain, from integration and operations to purchasing and distribution. Planning with full stakeholder involvement from the outset, everyday management of operations, procurement of all necessary materials and supplies, and smooth delivery of products to customers are all essential elements. A clear picture of the cumulative impact of a company's operations on water consumption and pollution is pivotal. This knowledge will enable the identification of water-related business risks and strategies for sustainable water usage and resource efficiency. In the near future, adopting these measures may become less of a choice and more of an imperative.

### **Broadening scope of reporting with new water-related disclosures**

The TNFD has fully integrated water quantity and quality risks within its nature and biodiversity reporting framework. Drivers of water risk include weather phenomena, climate change, pollutants, floods, fierce competition for water, and reputational risk, all of which can translate into significant financial losses. Impacts may range from lowered revenue projections and increased production costs to squeezed margins and affected operations. It is often underestimated how much water is consumed by businesses, typically by a factor of three to five times the actual amount. Additionally, an increasing number of companies are acknowledging "water risk" in their annual reports as indicated by filings with the US Securities and Exchange Commission: The number rose from 41 in 2019 to 58 in 2020.



## Local versus regional business impacts of water stress

How water stress affects businesses can vary from one location to another, often more so than regional patterns suggest. Businesses should brace for more stringent regulatory environments, including higher water prices, rationing measures, stricter effluent permits, and the mandatory incorporation of water-saving technologies. Various national, state, and municipal prohibitions and moratoria are already in place for energy production in industrialized countries—for example, restrictions on shale energy development and hydraulic fracturing because of the negative impacts on groundwater. These could soon expand to industries such as cement, semiconductors, data centers, textiles, clothing, and beverages. These developments could directly influence a company's reputation and its social license to operate.

## Direct impact on reputational risk and social license to operate

Inadequate water management poses a significant threat to a company's reputation, financial stability, and brand. It can lead to conflicts with local stakeholders and regulatory bodies, resulting in reputational damage and financial consequences, including credit rating downgrades and increased insurance costs. There have been instances of companies forced to reconsider expansion plans due to public outcry over their excessive use of groundwater resources.

The risk of reputational harm and financial repercussions from poor water stewardship is expected to grow. Drought-shaming is likely to become more prevalent, while internal whistleblowing by employees could become a threat. Moreover, the failure to address environmental concerns adequately may lead to difficulties in retaining staff, especially millennials, who prioritize sustainable practices in their employment decisions.

## Indirect impact of water scarcity on energy and transport sectors

Water scarcity indirectly threatens water-reliant sectors, such as power generation and waterway transport. The cost of securing new water supplies is expected to soar, potentially doubling, which could have a domino effect on operations. Interruptions and rising production costs could result, thus affecting revenue. Possible adaptation measures include relocating business operations in response to water crises, requiring strategic planning focused on regions with more abundant water resources to minimize disruptions.

The issue of water pollution in manufacturing and other sectors is also garnering public attention, which could increase the probability of litigation and associated risks for businesses.

## New incentives for water use assessment and management

Calls for rigorous contingency planning are intensifying in response to water supply challenges. For instance, major disruptions in water supply to key industrial regions have highlighted the importance of response measures to minimize operational and financial impacts. Successful water resource management strategies include the evaluation and categorization of sites according to water stress levels, leading to targeted action plans for water reduction that not only meet but exceed initial goals, thereby setting an industry standard for sustainable water use and progressive reduction targets.





## **New technology addressing water challenges will turn risk into opportunity**

The current landscape allows for cautious optimism owing to the combination of global and local initiatives focused on water resource management, coupled with national-level targets that support new technologies. There are various innovative projects gaining traction that focus on treating and repurposing wastewater and tapping into renewable energy sources to power desalination plants. The adoption of new water technologies is expected to have its most substantial effect at the local level where existing water systems are often tightly regulated and integrated, thus making rapid technological changes more challenging.

Technological advances in water resource management related to desalination, smart irrigation, and water recycling could revolutionize geopolitical landscapes if they become more cost-effective and widely adopted. Just as renewable energy technologies brought a shift in climate and energy discussions, innovations in water technology have the potential to alter approaches to water scarcity. However, new technologies can be expensive and are not always cost-effective for all industries, as in the case of desalination plants in the agricultural sector.

But not all solutions require high-tech investment. Simple enhancements such as improved metering and digital water management systems can lead to immediate water savings and the recovery of significant quantities of non-revenue water (water that is being extracted but subsequently lost or unaccounted for within the water distribution system). Initiatives to expand global access to safe water, share data for better water resource management, and increase the prominence of water issues on the international stage are underway and are testing new innovations in policies and practices.

## **From water villain to water steward**

Companies are increasingly embracing water stewardship. Some have faced intense criticism over their water use, specifically in relation to their impact on water access for underprivileged populations. In response, many companies have prioritized local access to drinking water and sanitation over corporate needs, aligning with the notion that businesses should "do no harm." By embedding water and sanitation access into their broader strategies, organizations are taking substantial steps to improve their impact on water sources and communities. There have been examples of success with large-scale outreach and commitments to provide water, sanitation, and hygiene services in and near their operational sites.

Firms have the opportunity to evolve and influence global water governance with incremental steps, starting with measures to improve water efficiency and advancing toward comprehensive sustainable water use. The ultimate aim is to proactively offer solutions to water challenges at multiple scales—from local to global. Leaders in the industry can set precedents by disclosing their water usage transparently, setting clear targets to reduce their water footprints, and focusing particularly on areas where water scarcity and pollution present pressing challenges.



## Toward a climate-nature-water nexus

### 2023 was the year of water

Many wondered if last year would be a turning point for international water policy. The first UN water conference in nearly half a century, which took place from 22-24 March, may not have been as transformative a moment as the Paris Agreement. Yet it brought a noteworthy development—the creation of a UN special envoy for water, which promises to provide a dedicated focus within the UN structure for water-related issues. Previously, more than 30 UN agencies had attempted to cover aspects of water without a unified directive.

Slovenia emerged as a pivotal player in the creation of this envoy position, rallying support from more than 150 countries for the initiative. Following the announcement of the agreement, a group of European nations, including France, Germany, and Switzerland, committed financial resources to support the special envoy's office. This effort should allow Europe to influence the envoy's mandate, with a potential emphasis on three key areas: more inclusion of water issues at UN climate and nature summits to foster a permanent water-nature-climate nexus, advocacy for more detailed water reporting by the private sector, and the creation of a mechanism to monitor the more than 700 voluntary commitments made during the conference by governments, the private sector, and NGOs. Despite public disclosure of these commitments, a clear system for accountability remains elusive.

The UN water conference may not have revolutionized water policy globally, but it did bring more political focus to the issue of water stress. Noteworthy pledges were made, particularly by Asian countries, with China and Japan focusing on infrastructure, Vietnam on regulatory frameworks, and India on rural water access. The Asian Development Bank committed a staggering \$11 billion for regional water technology improvements by 2030.

The intrinsic link between climate, nature, and water was a theme running throughout discussions and events at the conference, and leading companies shared their strategies to align environmental sustainability across all operations.

The significance of 2023 for water issues was underscored by other events, solidifying the "year of water" narrative. High-profile agreements such as the landmark UN treaty to preserve international waters, rounds of discussion on a global plastics pollution treaty, and the UN climate summit (COP28), where the UAE placed water high on the agenda, all contributed to this narrative.

Eurasia Group highlighted water stress as one of the most pressing geopolitical challenges of 2023 in its annual Top Risks report. Dwindling water resources have contributed to an intensifying energy crisis, causing factory shutdowns across Asia over recent years. Predictions for the next few years are grim, suggesting water stress will become an operational risk, with river levels falling and most global companies grappling with significant water-related challenges in their operations or supply chains.

Water policy urgently needs to evolve from a reliance on last-minute, emergency solutions to putting in place risk management frameworks, a paradigm shift unlikely to occur in the next couple of years. Accordingly, the onus will fall on investors, insurers, and private sectors to navigate this challenge independently. While there are no immediate panaceas on the horizon, the realization is dawning that water scarcity is not solely an issue for poorer nations as was once presumed—a misconception that led to a persistent lack of investment in viable technological solutions. As a result, innovations such as desalination plants, though necessary, remain exorbitantly expensive, particularly for agriculture, which accounts for the lion's share of freshwater use.



## The sustainability umbrella: Embracing a holistic approach to environmental issues

The recent UN water conference underscored the interconnections among the climate, nature, and water crises, emphasizing an integrated approach to sustainability. Given that climate change accounts for an estimated 11%-16% of nature loss and amplifies water-related issues such as droughts and floods, the need for a unified strategy has never been clearer. Water risks are heightened by climate change, while water contamination exacerbates nature loss. The cumulative impact is quantified by the formula  $E = (C \times W) + (B \times W)$ , where E represents the environmental impact, C the carbon footprint, W water usage, and B biodiversity loss.

With a focus on the dual assessment of water and carbon risks, companies and investors are struggling to understand the potential crossover effects where mitigating one risk could inadvertently exacerbate the other. For instance, desalination technologies provide a critical remedy for water scarcity yet have a large carbon footprint. Conversely, shifting to wind power from coal offers a win-win scenario in terms of carbon and water savings, albeit with a potential loss for nature.

Climate change mitigation is often assigned the highest priority on the assumption that nature and water crises can be addressed subsequently. Yet this segmented approach can have grave repercussions. While technologies such as desalination alleviate water scarcity, they have a high carbon toll. Similarly, projects such as mass-scale single-species afforestation, though beneficial for carbon absorption, can transform vibrant ecosystems into biological deserts.

To formulate effective solutions that do not require trade-offs between one aspect of the planet's health for another, NbS are gaining traction. These strategies aim to address climate change, promote natural diversity, and safeguard water systems. For instance, mangrove forests are some of the most carbon-dense and biodiverse ecosystems, performing crucial roles in water filtration and offering protection from climatic extremes. However, they are facing severe threats. Research suggests that safeguarding and revitalizing mangroves in the Asia-Pacific could bolster millions of people's well-being and potentially lead to business opportunities valued at an estimated \$23 billion.

Nonetheless, there is often a lack of urgency in dealing with the deterioration of nature and water bodies, largely because of their slow rates of decline and the seasonal factors involved. If the erosion of the world's life-support systems continues, the global ramifications will be vast. The rapid loss of coastal wetlands is already diminishing local food security and increasing susceptibility to extreme weather conditions. In 2018 alone, environmental disasters linked to wetland degradation resulted in about \$56.8 billion in economic damage in Asia-Pacific coastal areas. To avert a further escalation of these crises, coordinated action from both the public and private sectors is imperative, with a commitment to addressing multiple environmental challenges simultaneously.



## The water-nature-climate nexus will inform corporate decision-making



### Major economic co-benefits of water-related projects

- Reduced cost of climate damage
- Greater employment opportunities and income opportunities
- Increased productivity and economic growth
- Increased food security



### Major environmental co-benefits of water-related projects

- Improved soil conservation and quality
- Improved biodiversity
- Greater resilience of ecosystems and ecosystem integrity
- Enhanced water quality and quantity



### Major social co-benefits of water-related projects

- Increased access to drinking water and lower costs of drinking water
- Increased safety (during disaster)

Source: Green Climate Fund

## Solutions to tackle water stress and nature loss at the same time

Leading advocacy groups such as the CDP, the Water Footprint Network, and the Alliance for Water Stewardship are steering the conversation toward improved water and nature management practices. Companies and financial institutions engaging with these organizations are finding benefit in the push toward more precise water disclosures. This trend is expected to gain momentum, leading to more ambitious targets for water management.




## Nature disclosures = More water disclosures

In response to growing resource scarcity, governments and investors are pressing for increased transparency in corporate water usage and pollution. In the past couple of years, dozens of financial institutions united behind an initiative led by the Ceres sustainability advocacy organization advocating for large corporations to address water-related financial and material risks. The final TNFD framework, with its focus on water, is likely to amplify these calls for transparency. However, companies will probably encounter challenges in reporting water pollution owing to associated reputational and liability risks, particularly since public awareness of water pollution is more acute than that of carbon emissions. Alarming, 80% of wastewater is discharged untreated into the environment, underscoring the need for improved practices.



## Water disclosures are poised to grow

(as part of the Taskforce on Nature-related Financial Disclosures framework)

Driver of nature change	Indicator	Metric	Connection to the COP15 agreement
 <b>Freshwater</b>	Total extent of freshwater-use change	Extent of freshwater-use change (km <sup>2</sup> ), by type of ecosystem (before and after change) and business activity (absolute and change from previous year)	Targets 1, 2, 5, and 11
	Freshwater-use change in prioritized ecosystems	Extent of freshwater-use change (km <sup>2</sup> ), by type of ecosystem (before and after change) and business activity	Targets 1, 2, 5, and 11
 <b>Pollution (or pollution removal)</b>	Volume of wastewater discharged and concentrations of key pollutants in the wastewater discharged	Volume of water discharged (cubic meter) and concentrations of key pollutants in the wastewater discharged by type	Targets 7 and 11
 <b>Resource use (or replenishment)</b>	Quantity of high-risk natural commodities sourced from freshwater	Quantity of high-risk natural commodities sourced from freshwater, split into types (absolute in tons, and proportion of total, change from previous year)	Targets 5 and 11

Source: TNFD framework (final draft)

### Sophisticated approach to corporate water efforts

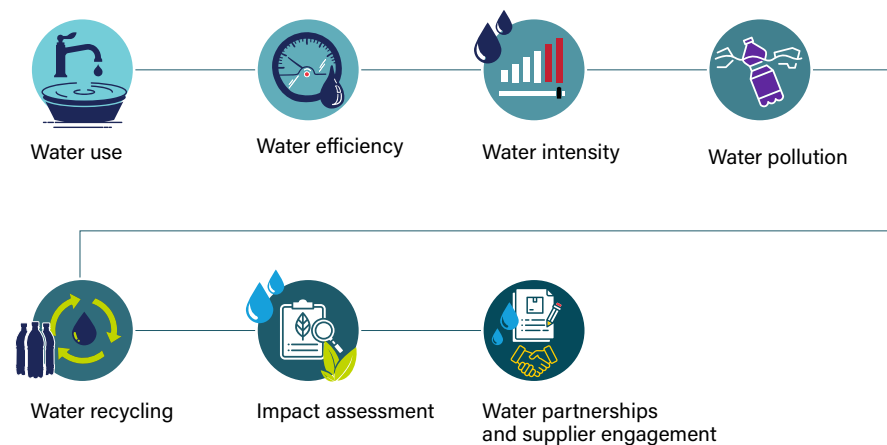
This shift in perspective is leading corporations toward a more nuanced approach to water management. Beyond mere usage, businesses are beginning to consider supplier engagement and the implementation of internal "shadow water prices" to reflect water's true cost. This hypothetical pricing, based on water's undervalued market price, is aimed at encouraging more environmentally and socially responsible corporate decision-making.

To address these demands:

- Large companies in sectors such as textiles, agriculture, food and beverage, and mining are pioneering sophisticated water management techniques, which are gradually establishing informal industry benchmarks.
- The quest for precision in measuring water withdrawals requires innovative solutions, as most companies currently fall short in accurately tracking both consumption and discharges, posing a growing business risk.
- Discussions about nature-based solutions that may adversely affect water sources are becoming more critical. Afforestation projects in Asia are attracting attention because of their potential impact on water supplies. Companies are now expected to take clear positions and formulate response plans.



### Increased sophistication of corporate water management approach



Sources: Eurasia Group, CDP

### NbS address water management challenges

NbS represent a promising avenue for tackling the intertwined challenges of water management and climate change. They are commonly defined as cost-effective solutions that offer environmental, social, and economic benefits while enhancing resilience. The UN Environment Programme-Danish Hydraulic Institute (UNEP-DHI), alongside the UNEP and International Union for Conservation of Nature, has identified the multiple water management functions supported by NbS, including the deployment of:

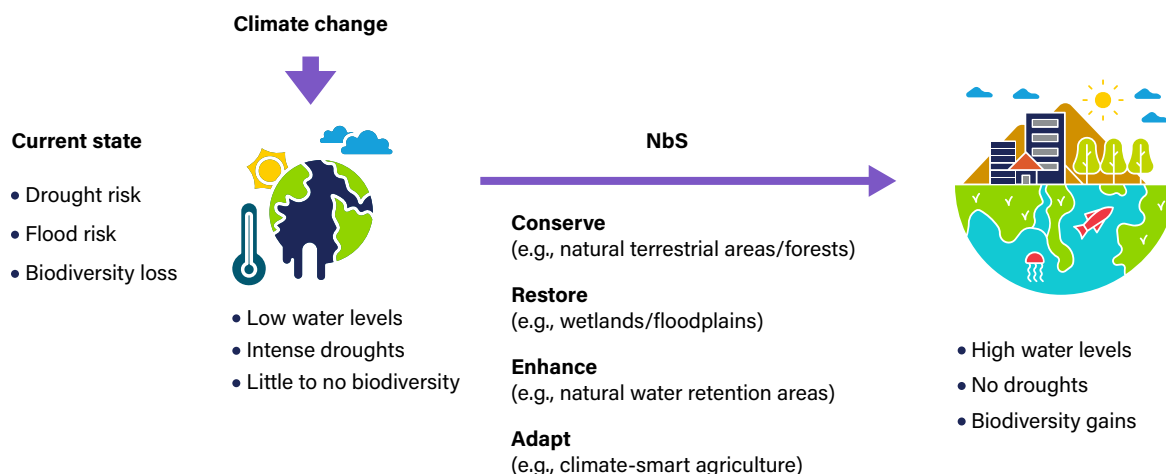
- Vegetation and forests that mitigate soil erosion and runoff, reducing flood risk
- Surface and groundwater reservoirs that ensure clean drinking water and productive use
- Green urban spaces that allow rainwater infiltration, pollutant filtration, and groundwater recharge
- Forests that play a role in temperature regulation and manage water flow during floods and droughts, affecting downstream activities such as urban water supply and hydropower

Wetlands and coastal habitats, including mangroves, coral, and oyster reefs, provide a host of benefits ranging from floodwater absorption to water purification and storm impact mitigation. Such ecosystems are invaluable for protecting coastal areas against saltwater intrusion.

The sheer scale of investment required for water infrastructure, especially in regions with burgeoning populations, makes NbS an attractive option that serves multiple strategic and policy goals. By incorporating NbS into water management strategies, countries in the Asia-Pacific region can both confront immediate water challenges and fulfill broader objectives related to environmental conservation, quality of life, air quality, climate resilience, and livelihood security.



## NbS will play a key role in the water-nature-climate nexus



Source: Cambridge University Press, Eurasia Group (2023)

## Water stress: Dealing with the impacts of climate change

With more than 70% of the Earth's surface covered in water, it is a common misperception that water is an abundant resource. However, freshwater constitutes a minuscule 3% of the total volume, and even less—roughly 1%—is accessible for use. This critical resource is currently facing unprecedented threats, notably from climate change. Companies frequently miscalculate the true cost of water, and policymaker responses to the looming water crisis are often inadequate or completely absent. The repercussions of such oversight are now manifesting worldwide as water stress escalates into a crucial global issue. Particularly in Asia, the relationship between water stress and climate change is evident and highly concerning.





In response, businesses are navigating a range of solutions to mitigate water stress, such as:

- Deploying tracking technologies for water use
- Building wastewater treatment, desalination plants, or other water-related infrastructure
- Harnessing renewable energy to generate freshwater




## Company examples of water management efforts

### Water conservation

Company	Initiatives/Commitments/Targets
	<p>Reducing the water intensity of production at its owned plants by 35% by 2030 and replenishing more than 100% of the water used in at least 50% of its owned plants through local water source conservation efforts; as of 2023, the company has cut its global water usage in production by 28% from 2015 levels globally; moreover, it oversees more than 22 forest areas spanning 12,000 hectares in Japan, known as "Natural Water Sanctuaries"; these areas are situated where groundwater feeds into Suntory's Japan-based plants, replenishing double the volume of groundwater extracted by Suntory's facilities in the country</p>
	<p>Reducing water consumption intensity at Indorama Ventures by 20% by 2030 from 2020 baseline</p>
	<p>Improving the quality and consistency of corporate water reporting and enhancing stakeholders' understanding of, and ability to use, water reports and associated data; publishing guidance to support embedding and advancing water stewardship practices at corporate and asset levels</p>
	<p>Focusing on river and water conservation by collaborating with the Society of Wilderness to spearhead a three-year ongoing rapid assessment of river waste among Taiwanese enterprises</p>

Sources: Suntory, Indorama, ICMM, ADB, Taiwan Mobile, Sumitomo, JBIC

### Awareness of water issues




Company	Initiatives/Commitments/Targets
	<p>Developing the Asia Pacific Water Resilience Hub, an open, online platform to strengthen water security through partnerships and training</p>
	<p>Publishing a "Water Risk Assessment Report" (2022) to provide an overview of water risk and its potential impact on the business; different water-related risks, including water stress, drought, floods, and sea level rise were also assessed via the WRI Aqueduct tool, covering 100% of Indorama Ventures' operations; additionally, the cost of water and the potential financial impact of different shutdown times in the event of water scarcity in locations with high, and extremely high-water stress as well as other water-related risks were studied</p>

Sources: Suntory, Indorama, ICMM, ADB, Taiwan Mobile, Sumitomo, JBIC





## Water technologies

Company	Initiatives/Commitments/Targets
 <b>SUNTORY</b>	Managing more than 22 forest areas covering 12,000 hectares and recharging twice the amount of groundwater withdrawn by Suntory's factories for more than 20 years through the "Natural Water Sanctuary" initiative
 <b>Taiwan Mobile</b>	Implementing "in-plant water reclamation" protocol by requiring plants to install water quantity and quality measurement devices, submitting monthly water flow balances, and complying with periodic site audits
 <b>Sumitomo Corporation</b>	Developing activities in the water sector, moving from build-own-operate-transfer and build-own-operate activities using private sector capabilities—such as water and wastewater treatment and seawater desalination—to fully privatized activities

Sources: Suntory, Indorama, ICMM, ADB, Taiwan Mobile, Sumitomo, JBIC

## Water finance

Company	Initiatives/Commitments/Targets
 <b>国際協力銀行</b> JBIC JAPAN BANK FOR INTERNATIONAL COOPERATION	Providing financial support for various water infrastructure projects, including water supply, wastewater treatment, and flood protection projects, with water viewed as critical for achieving sustainable growth
	Catalyzing more than \$9.5 billion in innovative and sustainable investments in the water sector, benefiting 122 million people across Asia

Sources: Suntory, Indorama, ICMM, ADB, Taiwan Mobile, Sumitomo, JBIC

Complementing these efforts, nonprofit organizations and microfinance institutions contribute by:

- Elevating awareness about water scarcity
- Influencing policymaking
- Offering financial aid to small-scale water suppliers and households in need

Simultaneously, governments are also stepping up by:

- Aiming for universal water access
- Investing in water infrastructure enhancements
- Employing water diplomacy to equitably manage transboundary water resources

Still, significant challenges persist, and addressing water scarcity effectively requires multi-faceted and tiered collaborative efforts. A shift in approach is essential, moving from ad-hoc, crisis-oriented reactions to structured and proactive policy planning. Reversing the current predisposition toward short-term crisis management in favor of sustainable risk mitigation is a strategic necessity. As with energy or climate policies, comprehensive multi-year water strategies should be developed and implemented, focusing on key domains.



### 1. Enhancing water system efficiency

Essential measures such as water metering installation for informed decision-making, the repair of leaks in water infrastructure to decrease losses, and system modernization to avoid widespread pollution and contamination need to be a priority for policymakers.

### 2. Advancing water technology

A significant increase in both public and private sector investments is required to promote solutions such as rainwater harvesting, industrial wastewater treatment, and greywater recycling systems, which collectively help ease the burden on regional water supplies.

### 3. Promoting water conservation

A mindset change to recognize water as a finite and valuable resource is critical within water-dependent sectors such as agriculture and industry. Establishing a functional system of checks and balances that involves governments, investors, civil society, and industry leaders is imperative to ensure advances in water conservation and management.

## Business advocacy: How to avoid greenwashing

The rise of ESG initiatives has led to a surge in sustainability-related claims—leading to doubts about the veracity of some and to suspicions of greenwashing. Regulators, previously less active in ESG oversight, are stepping up to meticulously evaluate environmental claims with the aim of influencing corporate behavior. Amid this evolving ESG landscape, countries are recalibrating compliance standards, laying down rigorous guidelines and potential penalties for non-compliance.

Greenwashing is a deceptive practice whereby companies present themselves as environmentally responsible through their marketing strategies, despite failing to meet genuine sustainability standards. As it gains prominence across all sectors, the issue of greenwashing will attract increasing attention, especially as the water-nature-climate nexus strengthens, prompting regulators and advocacy groups to launch crackdowns on this misleading behaviour.

### Short-term consequences: Financial and reputational risks intensify

- Heightened regulatory scrutiny has resulted in financial penalties for misleading water-nature-climate claims.
- Greenwashing accusations have prompted high-profile executive departures.
- For companies implicated in greenwashing, reputational harm is a tangible threat, magnified by increased media scrutiny.

### Mid-term consequences: Companies realign their sustainability positioning

- Broad-scale reviews of past sustainability claims are prompting companies to uncover and address previous instances of greenwashing.
- Companies are revising and updating previous statements to align with accountability measures and avoid further suspicion.
- Conservatism in setting water, nature, and climate targets is set to take hold, driving companies to commit to more realistic and verifiable ESG goals.

## Longer-term consequences: Shaping responsible ESG practices

- New ESG standards are set to emerge, aiming to support water-nature-climate claims with hard data.
- Investors' practices will pivot to adhere to updated guidance from industry groups and regulatory bodies, with many reacting to newly proposed rules defining water, nature, and climate terminologies.
- Investors will adopt enhanced screening of and engagement with companies, involving meticulous assessments and sophisticated disclosure standards.

## The cascading impact of anti-greenwashing measures

- Investors will intensify their due diligence efforts with heightened scrutiny of water, nature, and climate-related claims.
- Regulatory examination of corporate marketing is increasing, paving the way for potential action against unsubstantiated water, nature, and climate-related assertions.
- As part of a transition from qualitative to quantitative reporting, companies will increasingly disclose concrete, actionable decarbonization initiatives.
- The compliance of supply chain practices with environmental standards will become more critical, a trend that will probably start in Europe and then expand to Asia.

## Conclusion

The increasing unpredictability of the regulatory environment, politicization of water issues, and awareness of affected communities imply that integrating political risk assessment into water-related investment decision-making is gaining critical importance for the industrial and consumer sectors.

Though a somewhat latent crisis, water stress demands attention. Companies are advised to augment their water management capabilities, prioritizing proactive strategies such as:

- Engagement in shaping policies through proactive dialogue
- Alignment with influential global coalitions, such as the CEO Water Mandate launched by the UN in 2007, which is considered essential for companies eager to position themselves as water stewards; alignment with sector-specific initiatives such as the Zero Discharge of Hazardous Chemicals Program, which helps industry actors adopt sustainable practices in the footwear, leather, and textile sectors
- Adherence to established standards such as the OECD Guidelines for Multinational Enterprises and the UN Business and Human Rights framework to demonstrate true environmental stewardship and safeguard against greenwashing allegations

By taking these steps, businesses can underscore their commitment to genuine environmental awareness and sustainable development, while mitigating the risks associated with greenwashing.