CROCI Focus

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Marketing material

Sea change needed in water reporting

Fragmented reporting standards and patchy disclosure impede a true evaluation of water risk

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IN A NUTSHELL

- Water-related risks to businesses and economies are increasing. By 2050, 46% of global GDP could potentially come from high-water-risk areas, up from 10% today[1]. This rise could hinder economic growth, spur migration, and spark conflicts.
- As risks increase, so does investor interest in understanding those risks. Over 100 investors managing a total of USD 17.6 trillion in assets have joined the Valuing Water Finance Initiative (VWFI). They promote crucial changes at companies with large water footprint to address water risk and treat them as financial risks[2].
- Water is gaining momentum as a policy topic as part of nature and adaptation policies, but corporate water disclosures are lagging. While most G20 members are implementing climate-related disclosures, only 40% have introduced water-related disclosure requirements on companies[3].
- Major water reporting frameworks have lacked alignment and interoperability, leading to inconsistent disclosures, even within the same industry. Recently though we observe collaborations to standardize nature and biodiversity reporting[4].
- Integrating water risks into the investment process and assessing their impact on corporate earnings and valuations remains complex. This is due to the lack of appropriate disclosures by corporates but also reflects the challenges in quantifying water's 'true' value/'appropriate' price. Also, more work is needed to contextualize risk exposure aligned to the Task Force on Nature-related Financial Disclosures (TNFD)'s LEAP (Locate, Evaluate, Assess and Prepare) approach[5].
- To help investors address water-related risks, there needs to be engagement with diverse stakeholders to improve disclosure standards as well as encouraging companies to set validated Science Based Targets Network (SBTN) targets for their own operations and supply chains[6], alongside specialized water valuation tools.
- In this paper we explore what information and metrics corporates need to disclose for fundamental investors to evaluate water-related risks and its potential financial impact on their equity investments' return.

We thank Steffen Kutscher, Product Specialists ESG and Murray Birt, Senior ESG Strategist for their comments on this paper

[1] WWF (October 2023). WWF Report: Water crisis threatens USD 58 trillion in economic value, food security and sustainability.
[2] Valuing Water Finance Initiative (March 2024). 100 investors with a total of USD 17.6 trillion of assets under management have signed up for the Valuing Water Finance Initiative (VWFI).
[3] CDP (September 2023). CDP Shaping High-Quality Mandatory Disclosure.
[4] TNFD (July 2024). Interoperability mapping between the GRI Standards and the TNFD Recommended Disclosures and metrics.
[5] TNFD. Getting started with the TNFD Recommendations.
[6] Science Based Targets Network. Our target-setting process.

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Introduction: Water and Double Materiality

There is growing evidence that water-related risks and issues are disrupting business models and economic systems in various sectors. The materialization of these risks could soon have a material financial impact, if it hasn't already, with potential consequences on economic growth.

This paper mostly covers water transition risks: the need for companies to avoid, resolve or at least adapt to water (chronic and acute) risks they are exposed to, or taking the risk to bear the cost of their materialization. We adopt a double materiality perspective: DWS has previously highlighted the substantial time scale discrepancy between single and double materiality but also the necessity to address both aspects in any sustainability reporting and assessment efforts[7]. The double materiality perspective is even more crucial for assessing the impact of water risk on corporate financials.

Currently, the financial impact of water risk and associated issues is relatively limited. Many companies continue to withdraw unsustainable volumes of water in areas facing water stress or to discharge polluted water, which can negatively affect communities and natural resources. However, these companies often do not (yet) pay the 'appropriate' price for the water they consume. Determining the 'appropriate' price of water requires consideration of the effects these corporations have on 'external factors', such as communities and the environment, as well as what would be necessary to neutralize or resolve this impact. This underscores the need for a double materiality approach. Additionally, assessing the 'appropriate' price is highly complex and varies depending on the specific types of water risk and associated issues, which in turn depend on the particular location of corporate activities and assets.

The paper is organized into the following sections.

- The **first section** explores how water-related risks are important to the financial system and GDP, which in turn impact investors.
- The **second section** examines the standards and reporting frameworks available to companies for communicating their water-related KPIs and strategies to various stakeholders including investors who need to integrate water-related risks and opportunities into their portfolios.
- The **third section** incorporates bottom-up analysis looking into the quality of data reported by individual companies.
- The **conclusion** highlights the steps financial institutions can follow to mitigate the challenges
- The **annex** provides an overview of how the main water-related standards and frameworks compare.

[7] IFRS (March 08, 2021). IFRS Foundation Trustees announce strategic direction and further steps based on feedback to sustainability reporting consultation

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1 / Water Risk Integration Matters

Water, the world's most precious yet undervalued resource, is at the center of a growing global crisis that endangers both human and planetary health. Water-related risks, including excess water, scarcity, pollution, and disruptions to freshwater systems, are intricately linked to both climate and biodiversity challenges, such as greenhouse gas emissions and species loss. Despite this connection, only about 2% of sustainable finance allocated annually between 2012 and 2020 has been directed toward water investments[8].

Water risks are significant concerns for both the economy and the financial sector. However, current practices reveal that these risks are not adequately addressed by financial institutions. The 2022 CDP findings indicate that water impacts and risks are often under-prioritized[9]. Out of the 1,226 financial institutions asked to disclose on water in CDP's annual global questionnaire, only 275 responded. Of these, only 93 conducted water-related assessments, 40 analyzed portfolio impacts on water security, and just 48 reported their risk exposure. The maximum potential impact from water risk reported by 22 financial institutions was USD 6.4 billion. To protect their interests, financial institutions must prioritize integrating water-related considerations into their decision-making processes.

1.1 Water related risks are material to GDP and economy

Freshwater is extremely important for society, as it accounts for only 2.5% of total global water. The annual economic value of water and freshwater ecosystems is estimated at USD 58 trillion, equivalent to 60% of the global Gross Domestic Product (GDP)[10] and more than three times China's GDP in 2021 (USD 17.7 trillion). Yet, the world's freshwater ecosystems are deteriorating, posing increasing risks. Since 1970, the world has lost one-third of its remaining wetlands, and freshwater wildlife populations have, on average, declined by 83%.

Poor water management and ecosystem destruction have already deprived billions of people of access to clean water and sanitation. UNESCO estimates that approximately 3.6 billion people, or 51% of the global population, currently live in areas expected to experience water scarcity for at least one month each year. Projections indicate this number could rise to between 4.8 and 5.7 billion by 2050[11].

Furthermore, water-related risks to businesses and economies are on the rise, contributing to growing challenges to economic growth. Projections indicate that by 2050, 46% of global GDP could come from high-water-risk areas, up from 10% today. This increase underscores the urgent need for improved water management practices and policies to mitigate these risks and ensure sustainable economic growth.

1.2 Water risks are a concern across all industries

Water risks impact all businesses, regardless of size, sector, or location. The extent of these risks in daily operations may differ, but every company needs to understand and prepare for them. In some sectors, water risks are confined to their own operations, while in others, these risks can be significant throughout the entire value chain. Figure 1 highlights how extractive industries, such as metals and mining, as well as oil and gas, face high water risks in their direct operations. Food and beverage companies encounter water risks in their agricultural supply chains, which consume about 70% of the world's freshwater and are highly sensitive to water stress[12]. Other industries are also exposed to water scarcity threats. An earlier evaluation by Ceres[13] of 42 food companies revealed that although many are making progress, most are still unprepared for water risks. To assess a company's water dependency and security, detailed research into sector-specific and geographic vulnerabilities is necessary.

[8] OECD (September 2023). Watered down? Investigating the financial materiality of water-related risks in the financial system.
[9] CDP (July 2023). Financial Institutions are Valuing Water.
[10] WWF (October 2023). WWF Report: Water crisis threatens USD 58 trillion in economic value, food security and sustainability.
[11] WWF. Linking Water Risk and Financial Value – Part I.
[12] UNPRI (March 2018). What is agricultural supply chain water risk?
[13] Ceres (September 2017). Feeding Ourselves Thirsty. Tracking Food Company Progress Towards a Water-Smart Future.

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Figure 1: Industries exposed to water-related risks

Industry-Level Water Risk Overview

	Supply Chain		Direct Operations		Product Use/End of Life	
GICS Industry	Water Quantity	Water Quality	Water Quantity	Water Quality	Water Quantity	Water Quality
Food Products						
Beverage						
Household Products						
Personal Products						
Textiles, Apparel, and LuxuryGoods						
Automobiles and Components						
Hotels, Restaurants, and Leisure						
Oil and Gas						
Consumable Fuels						
Construction and Building						
Electroplating						
Pharmaceuticals						
Chemicals						
Construction Materials						
Metals and Mining						
Paper and Forest Products						
High-tech and Electronics						
Semiconductor and Circuit Board						
Battery						
Renewable Electricity						
Electric Utilities						

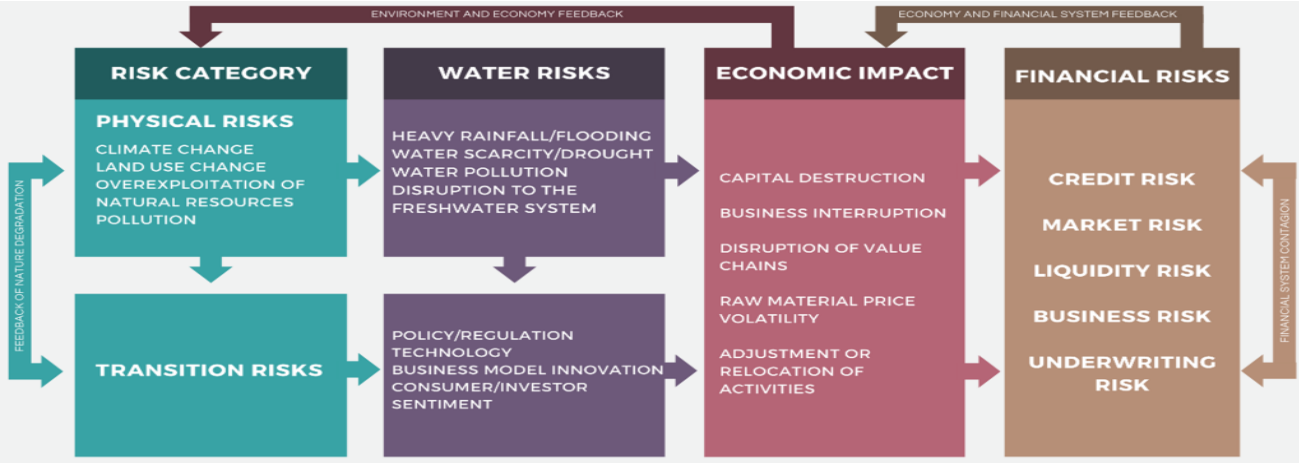
Very high risk | High risk | Medium risk | Not enough information found

Source: Ceres (Global Assessment of Private Sector Impact on Water. April 2022). Table provides a relative assessment of water impacts caused by industries within areas of the value chain, whether from direct operations, global supply chains, or end-product use. Industries with the most severe (very high) impacts throughout the value chain include Food Products, Beverage, Textiles, Apparel, and Luxury Goods, Oil and Gas, Pharmaceuticals, Chemicals, Metals and Mining, Paper and Forest Products, and Renewable Electricity.

1.3 The financial sector should assess its water impacts and dependencies

Water-related risks can arise from climate change and economic activities, such as land use changes, overexploitation of natural resources, or pollution in addition to regulatory changes and conflict with local communities. These risks can impact the financial system through various channels. Figure 2 illustrates how water risks driven by physical and transition risks can affect business operations. This can lead to disruptions in activities and supply chains, as well as relocation of business activities. These economic impacts subsequently transmit to the financial system, resulting in credit, market, liquidity, business, and underwriting risks.

Figure 2: Transmission channel for water-related risks



Source: Adapted from Davies & Martini (2023) Watered down? Investigating the financial materiality of water-related risks in the financial system

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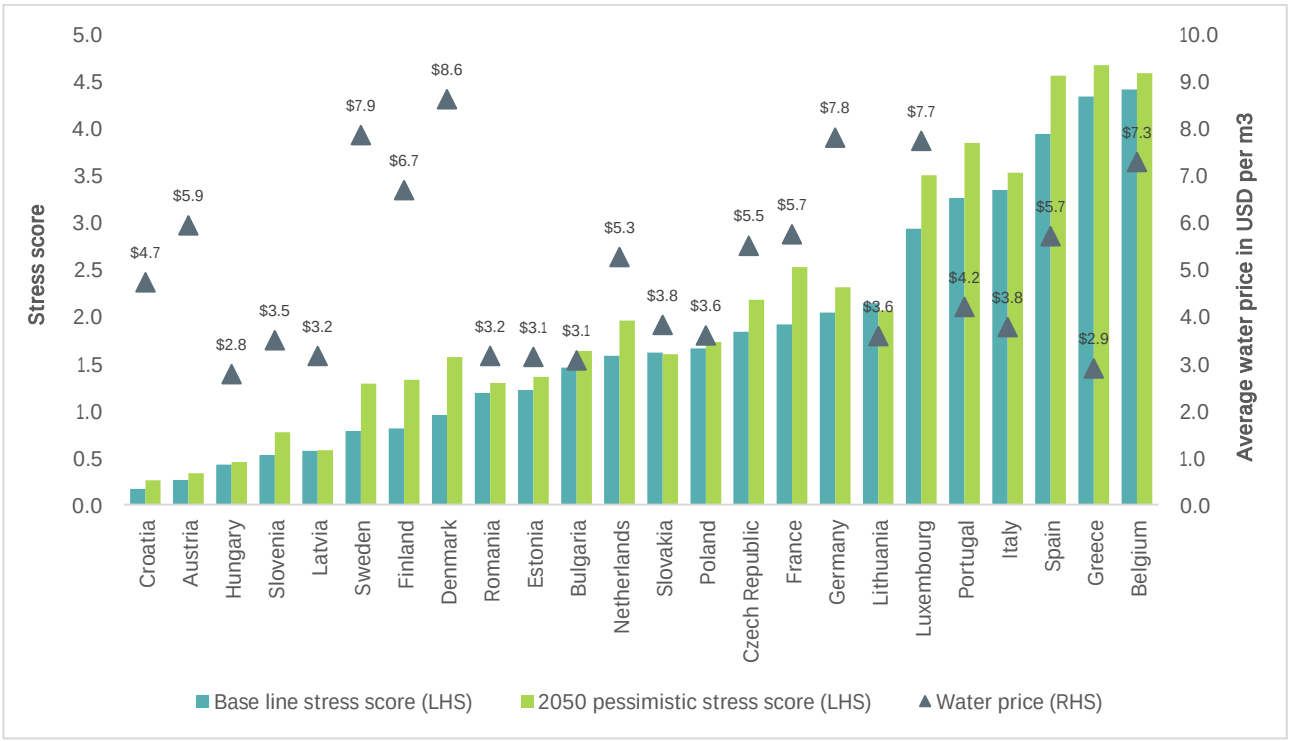
The financial system plays a crucial role in water security by directing capital towards projects that can either mitigate or exacerbate water-related risks. Investors must consider a company's water dependency and future water security in their financial analysis if/when potentially having material financial impact. Water risks extend beyond mere operating costs; they significantly affect revenue and growth. For instance, floods may cause immediate short-term disruptions, while droughts can persist for years, and regulatory changes may have long-lasting effects.

1.4 Current water pricing doesn't reflect its true value

Many companies and investors tend to assess water risks similarly to carbon risks. However, it is important to recognize that water is fundamentally different. Unlike carbon emissions, water-related impacts are highly location-specific. Water prices vary significantly, even within regions and countries with similar development levels. Figure 3 highlights the disparity in water prices across locations in Europe. For example, Northern countries like Denmark, Sweden, and Germany have the highest average water prices, around USD 8 per cubic meter. In contrast, Southern European countries like Greece and Italy have lower average prices, at USD 2.9 and USD 3.8 per cubic meter, respectively[14]. Factors influencing these differences include infrastructure costs and regional economic conditions.

Figure 3: Disparity of water prices across locations in Europe



Source: Watercomission.org. IBNET database (World Bank, 2022), The World Resources Institute (WRI), Aqueduct, DWS CROCI
Baseline water stress measures the ratio of total water demand to available renewable surface and groundwater supplies. Water demand include domestic, industrial, irrigation, and livestock uses. Available renewable water supplies include the impact of upstream consumptive water users and large dams on down-stream water availability. Higher values indicate more competition among users.
WRI also used the PCR-GLOBWB 2 model to project future sub-basin water supply, demand, stress, depletion, and variability using CMIP6 climate forcings. The projections centered around three periods (2030, 2050, and 2080) under three future scenarios (business-as-usual SSP 3 RCP 7.0, optimistic SSP 1 RCP 2.6, and pessimistic SSP 5 RCP 8.5).

Despite being a commodity, water prices have been inflating at a rate three times faster than general inflation[15] since the 1990s. Still, water is generally underpriced. Typically, water prices only cover the physical supply costs, neglecting the social, environmental, and costs associated with addressing water scarcity and pollution. Even in areas where freshwater is scarce, these additional costs are rarely accounted for. A Trucost study[16] found that if companies had to absorb the full costs of

[14] Water commission (February 2023), Water Pricing, Costs and Markets.
[15] The 2030 price of drinking water in Europe – Careforwater.org
[16] S&PGlobal (March 2018). How to Manage Water Risk in Your Growing Business.

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water availability and quality impairment, average profits would decrease by 18% in the chemicals industry, 44% in the utilities sector, and 116% in the food and beverage industry. Similarly, Ceres and DWS, ran an analysis on "Financial Implications of Addressing Water Externalities in the Apparel and Meat Industries,". The report[17] addresses the costs of mitigating harmful water impacts for leading publicly traded companies in the packaged meat and apparel sectors. The report helped to launch the Valuing Water Finance Initiative

When making financial decisions, companies should take into account the various water-related regulatory costs, environmental impacts, and social factors linked to local water catchments in the countries where they operate.

Water pricing policies in theory and in practice

The demand for water, a vital yet increasingly scarce resource, is rising daily. To ensure the sustainability and availability of water supplies, it is essential that users pay a price that accurately reflects both the direct and indirect costs associated with water consumption. Direct costs encompass the expenses related to delivering water to households and businesses, including both operational and capital expenditures. Additionally, all forms of water use produce externalities that impact water users, such as pollution and stress on aquatic ecosystems. The costs linked to these externalities are classified as indirect costs, often referred to as the social cost of water. Hence, to meet environmental goals and incorporate essential economic principles, water pricing policies must account for the following costs, including quality and pollution factors, ensuring that pricing structures provide incentives for sustainable water use.

- Financial costs: direct costs embracing the costs of supply and administration, operation and maintenance, and also capital costs.
- Environmental costs: cost of the waste caused by water use on the ecosystem, for example: salination or degradation of productive soils.
- Resource costs: cost of resource depletion leading to the disappearance of certain options for other users.

With many industries now facing high levels of water risk exposure, reporting is becoming more important than ever. Reporting on water risk enables companies to measure and manage this increasingly limited resource, which can boost revenue, cut costs, and enhance reputation. In the next section, we assess the reporting standards and frameworks for water-related risk assessment and examine the suitability of disclosures to address these risks.

[17]Ceres. (December 2021). Financial Implications of Addressing Water-Related Externalities in the Apparel Sector.

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2 / Ecosystem of water reporting and framework

2.1 The mainstreaming of water reporting is still in progress

Water as a relevant policy topic gained global momentum in 2023 during the United Nations Water Conference, where for the first time in half a century, governments worldwide came together to address water insecurity. Over 700 pledges and voluntary commitments were made to the 'Water Action Agenda' by governments, NGOs, the private sector, women's groups, and intergovernmental organizations, including various associations and community groups[18].

Nevertheless, global regulations concerning corporate water disclosure are notably behind expectations. Whilst the majority of G20 members have implemented or are in the process of implementing climate-related disclosure requirements, as evident in Figure 4, only 40% have introduced water-related disclosure requirements[19].

Figure 4: Water-related disclosure requirements in the G20+

Source: CDP. This research is based on data collected up to 30.06.2023 and only considers the most ambitious disclosure policies and regulations announced or already implemented within each jurisdiction. Therefore, the final mapping should be intended as purely indicative of a general trend and should not be considered exhaustive.

Different levels of water-related disclosure requirements can be observed across G20+ jurisdictions. In Europe, the Corporate Sustainability Reporting Directive (CSRD) requires companies to provide a comprehensive disclosure, aligned with the ESRS if water risk is material. Other jurisdictions such as India require companies to disclose only a small selection of water-related data, limited to enterprise-wide water usage, discharge and intensity metrics irrespective of whether water-related risks influence enterprise value[20].

While the mandatory disclosure landscape for water may be fragmented, companies are beginning to voluntarily disclose on this issue driven by the increasing demand from stakeholders and investors and it is no surprise that now more and more companies are reporting on water-related disclosures, through the CDP reporting framework. According to the disclosure from CDP 2023, the number of companies submitting responses to the water questionnaire has increased[21] by 64% since the

[18] The United Nations (UN) (2023). Summary by the president of the general assembly.
[19] CDP (September 2023). CDP Shaping High-Quality Mandatory Disclosure.
[20] CDP (September 2023). CDP Shaping High-Quality Mandatory Disclosure.
[21] CDP -Disclosure Data Factsheet 2023, State and trends of disclosure in 2023

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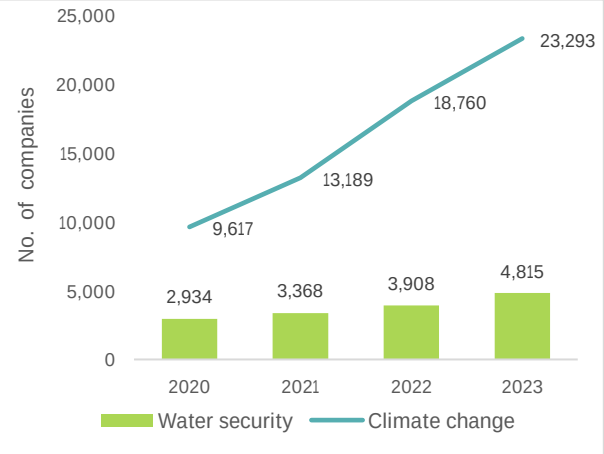
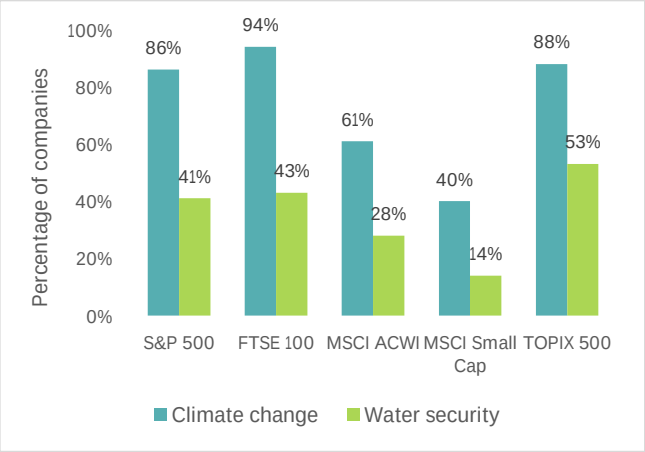
year 2000. However, this growth still falls significantly short when compared to climate disclosure. Figure 5 During the same period, climate reporting increased by 142%, and in 2023 the number of companies reporting on climate issues is five times greater than those reporting on water security.

Figure 5: Number of companies reporting to CDP



Source : CDP (2023), DWS CROCI

Figure 6: Percentage of companies reporting to CDP



Source : CDP (2023), DWS CROCI

When water reporting is analyzed using the CDP responses, we observe that only 28% of the companies in the MSCI ACWI index responded to the CDP questionnaire for 2023, as shown in Figure 6. In contrast, the response rate for climate reporting is significantly higher at 61%[22]. It's also important to note that while there is sufficient representation from most industry groups, the communication services and finance sectors are underrepresented, which is understandable, as they directly use less water on a relative basis (though Data Centers are increasingly in focus as we explain in this report).

2.2 Lack of alignment and interoperability of water reporting frameworks and standards

Let's now examine the key water-related reporting initiatives and standards to assess the suitability of disclosures for a proper risk assessment. Interoperability and alignment are two important concepts, especially in fields like sustainability reporting. They reduce the burden on companies that need to comply with multiple reporting requirements and provide asset owners and asset managers with consistent and comparable information for assessing water-risks at the portfolio level.

To assess the alignment and interoperability among water reporting frameworks and standards, we looked at major reporting standards viz, the European Union Sustainability Reporting Standards (ESRS) E3 Water and marine resources, the CDP water security questionnaire (CDP), the Sustainability Accounting Standards Board (SASB) Standards (with reference to Food and Beverage sector), the Global Reporting Initiative (GRI) - 303: Water and Effluents, and the Task Force on Nature-related Financial Disclosures (TNFD). (See Annex 1 for detailed comparison).

The main observation is that there is some kind of broad homogeneity across the evaluated reporting standards for governance, strategy, and risk management in relation to water-related disclosures. However, upon closer inspection, significant differences in reporting requirements emerge. For example, both the ESRS and CDP require companies to disclose the expected financial impact of material water-related risks and opportunities over short, medium, and long-term periods. In contrast, the GRI does not address this aspect.

An examination of the key aspects of disclosures, particularly metrics and targets, revealed significant inconsistencies. The reporting standards utilize varying definitions and scopes when addressing water use and wastewater information. This variation complicates comparisons and benchmarking based on the data reported by companies. See Figure 7.

[22] CDP (September 2023). CDP Shaping High-Quality Mandatory Disclosure.

Most inconsistencies arise from the different approaches to materiality adopted by each standard. The ESRS, CDP, and TNFD focus on double materiality[23], while the SASB follows a financial materiality approach[24]. In contrast, the GRI centers its stance around impact assessment[25]. DWS views the concept of double materiality as key to sustainability reporting standard-setting. Double materiality requires that both the impact of the corporate on the environment (inside-out impact) and the impact of the latter on in its financials (outside-in impact) are considered in their own right without ignoring their interactions.

Figure 7: A summary of the information and key performance indicators (KPIs) available to investors under the existing framework for analyzing water risk and opportunity

<table>
<tr><th></th><th>CDP</th><th>ESRS E3</th><th>GRI 303</th></tr>
<tr><td>Coverage</td><td>Water security</td><td>Water and Marine Resources</td><td>Water and Effluents</td></tr>
<tr><td colspan="4">KPI -Water Quantity</td></tr>
<tr><td>Water withdrawals – total volume</td><td rowspan="5">Own Operations and (or) Suppliers</td><td>Optional</td><td rowspan="3">Own Operations and (or) Suppliers</td></tr>
<tr><td>Water consumption – total volume</td><td>Own Operations and (or) Suppliers</td></tr>
<tr><td>Water withdrawals – volumes by source</td><td>Optional</td></tr>
<tr><td>Water recycled/reused</td><td rowspan="2">Own Operations and (or) Suppliers</td><td>No</td></tr>
<tr><td>Share of water withdrawn from water stress area</td><td>Own Operations and Suppliers</td></tr>
<tr><td colspan="4">KPI -Water Quality</td></tr>
<tr><td>Water withdrawals quality</td><td rowspan="3">Own Operations and (or) Suppliers</td><td>Own Operations and (or) Suppliers</td><td rowspan="4">Own Operations and (or) Suppliers</td></tr>
<tr><td>Water discharges – total volume</td><td>Optional</td></tr>
<tr><td>Water discharges – volumes by destination</td><td>Optional</td></tr>
<tr><td>Water discharges – volumes by treatment method</td><td rowspan="3">Yes</td><td rowspan="3">Partial</td></tr>
<tr><td>Water discharge quality – by standard effluent parameters</td><td>No</td></tr>
<tr><td>Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)</td><td>No</td></tr>
<tr><td colspan="4">Water Targets</td></tr>
<tr><td>Target on water withdrawals</td><td colspan="3">Own Operations and (or) Suppliers</td></tr>
<tr><td>Target on water pollution</td><td colspan="3">Own Operations and (or) Suppliers</td></tr>
</table>

Source: GRI, CDP, EFRAG, DWS CROCI. Data as available on 28 March 2025.

[23] TNFD (July 2024). Correspondence mapping: ESRS requirements and TNFD Disclosure Recommendations and metrics.
[24] SASB. IFRS (May 2021). Materiality: The Word that Launched a Thousand Debates.
[25] GRI (February 2022). Understanding materiality can unlock accountability.

Going further, we analyzed the reporting practices of sixty-three of the companies most vulnerable to water risk, as identified by CROCI in its coverage. These companies were selected based on the following specific criteria.

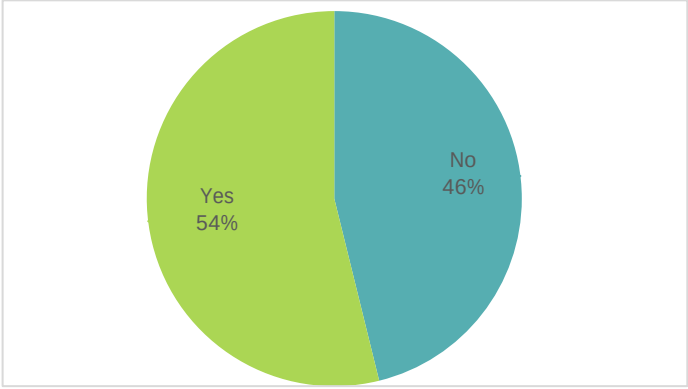
- Companies assigned 'E' and 'F' grades based on the DWS Water Risk and Opportunity grade (WROR). To expand the analysis, we also included companies from the lower end of the 'D' grade (Water Risk and Opportunity Score of less than 40), as well as some illustrative companies that are highly exposed to water risk due to their industry, business model, and the importance of water in their value chain.

The DWS Water Risk & Opportunity grade (WROR) assesses the risk and opportunity profile of an issuer concerning water. Typically, grades E (high risk) and F (excessive risk) are under scrutiny, while A/B (solution providers) are considered focus names. The grade comprises two main pillars: (i) the Water Risk Pillar and (ii) the Water Opportunity Pillar. The water risk score normalizes original vendor input scores, capturing the company's exposure to water-related risk. The water opportunity score identifies companies that contribute to SDG 6 (Water and Sanitation), thus making use of water opportunities.

The analysis of the selected sample of companies revealed significant inconsistencies and gaps in their corporate water reporting, including fragmented disclosures. Moreover, only sixty-two percent of the assessed companies have responded to the CDP water security questionnaire. Below are the key observations regarding the companies that were assessed.

Supply chain assessment is often overlooked: For many companies, the most significant water impacts and risks often originate within their supply chains. However, many standards and frameworks make reporting on supply chain-related indicators and targets optional. Due to the lack of standardization in reporting requirements, as well as complexities and issues with data availability, many companies limit their water disclosures to their own operations, excluding supply chain information. In fact, among assessed companies reporting to the CDP water security questionnaire, forty-six percent do not evaluate the impact of their suppliers on water security. Figure 8 This is despite the fact that companies including their supply chain in risk assessments are seven times more likely to report water-related supply chain risks[26].

Figure 8: Supply chain risk assessment by companies with highest exposure to water (CROCI Coverage)



Source : CDP (2023), DWS CROCI

Lack of common definition and terminologies: Despite ongoing efforts to standardize reporting frameworks, water foot printing terminologies and definitions remain inconsistent. For example, reporting on water withdrawal is optional under the ERRS E3 standard, whereas this parameter must be reported under both CDP and GRI 303. Additionally, metrics on water discharge quality (such as water discharge temperature and treatment methods) remain inconsistent across various standards. Parameters like changes in water storage are missing from the CDP framework. Approaches used by companies for characterizing watershed conditions are still largely underdeveloped. In fact, among assessed companies reporting to the CDP water security questionnaire, twenty-six percent do not provide basic details such as the total volume of water discharge by destination. Implementing common definitions and terminologies can make water-related disclosures more consistent, improving decision-making for various stakeholders.

Water recycling data is missing: While total water use, either in the form of water withdrawal or consumption, is mandated to be reported under various reporting frameworks, details on water recycling are not sought under the GRI 303 standard. Though, data on water recycling is crucial for sustainable water management, enabling companies to become more resilient and cost-effective.

[26] CDP (March 2024). Stewardship at the Source. Driving water action across supply chains.

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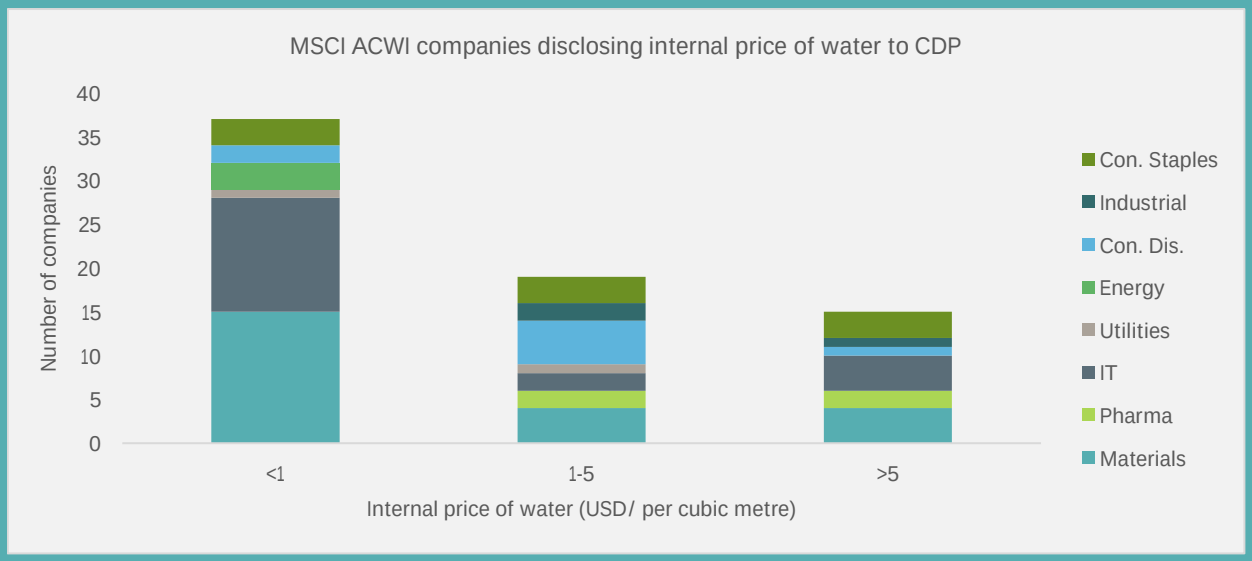
The true cost of water remains missing: Evaluating and reporting their "internal/shadow water price" could help companies manage water resources more effectively, reduce risks, and improve sustainability. However, defining this internal water price poses challenges. Current reporting standards lack clarity: should they reflect the total cost including treatment of polluted water, or an ideal price that ensures a net neutral impact on external communities and ecosystems? A precise definition is essential for effective assessment. Beyond the CDP framework, no other standards mandate companies to reveal their internal water pricing or its application. Notably, 72% of firms assessed through the CDP water security questionnaire did not disclose their internal water pricing. Additionally, a DWS study revealed that fewer companies incorporate internal water prices in decision-making processes compared to those using internal carbon prices[27].

To help companies and stakeholders evaluate corporate water risks, impacts, and performance, as well as to guide effective water stewardship practices, a standardized method for measuring and communicating water-related information is essential. This requires standardizing water reporting practices by identifying metrics that are relevant and meaningful for companies to assess and for various stakeholders to consider.

The shadow price of water assigns a monetary value to water where market prices are absent or inaccurate. This method estimates water's economic value by considering its social, economic, and environmental impacts. A previous DWS publication highlighted that the shadow water prices reported by companies are significantly lower than the true cost of water.

The below chart shows a range of internal water prices reported by companies, from USD 0.1 to more than USD 100. Although there is little agreement on water costs, which vary regionally, the significant price dispersion suggests that many companies may be underreporting their water pricing. This highlights the challenges in accurately assessing the true cost of water.



Source : CDP (2023), DWS CROCI

[27] DWS (March 2023). The hidden cost of water. https://www.dws.com/en-gb/insights/global-research-institute/world-water-day-2023/

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3 / Details for assessing financial impact are sparse

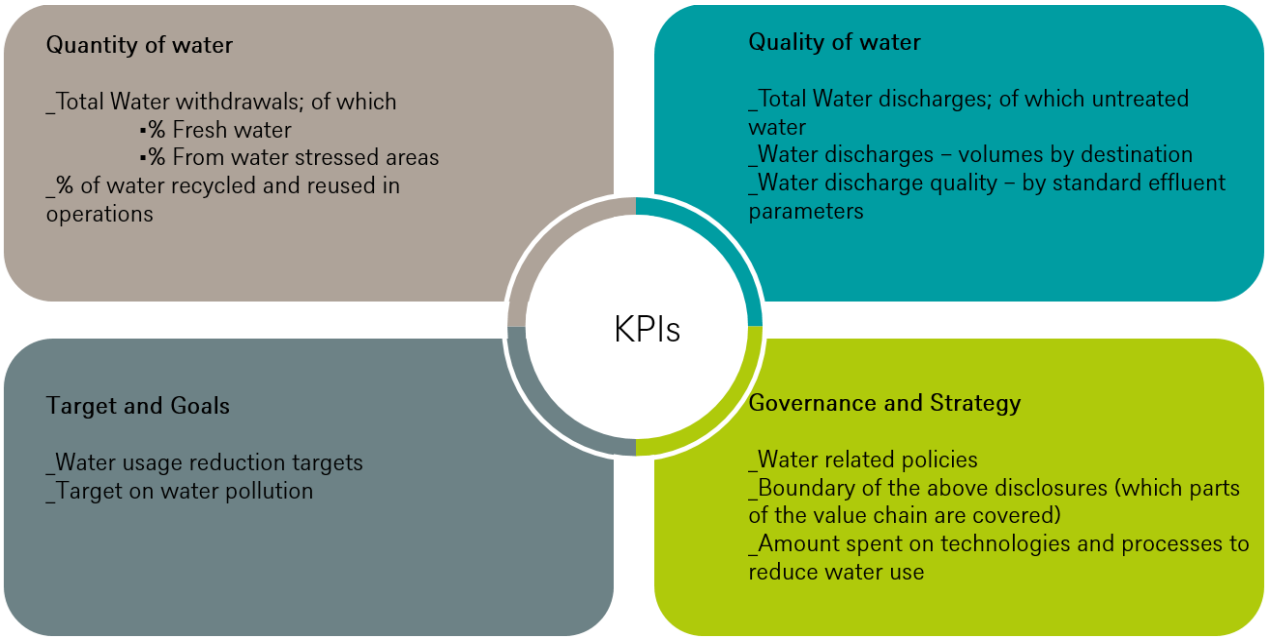
The primary goal of incorporating water-related risks into investment decisions is to mitigate these risks both across the investment portfolio and at the individual security level. Understanding water risk can be complex for both investable companies and asset managers due to the multifaceted nature of water itself. A company's water risk exposure stems from a combination of basin water risk influenced by climate change, biodiversity, and ecosystem factors, as well as external pressures from regulations and social factors (outside-in impact) and operational water risk (inside-out impact) throughout the company's own operations and value chain. These risks can lower revenues, increase costs and/or capex, endanger business sustainability, and raise cost of capital, which can in turn hurt financial ratios and company valuation.

However, assessing the financial impact of water risk on corporate earnings remains complex. Unlike carbon costs, the true cost of water is difficult to quantify due to its localized nature. Many companies still lack effective water management and consistent disclosure practices. Additionally, translating all important qualitative aspects into financial impacts is a persistent challenge.

Even with comprehensive data disclosure on water withdrawals and discharges, further work is necessary to conceptualize and contextualize water risk exposure. For example, TNFD's LEAP approach helps organizations identify and assess nature-related impacts, dependencies, risks, and opportunities. Indicators such as water intensity–the amount of water used to generate one dollar of revenue–can offer insights into a company's potential water dependency but does not fully account for external basin water risks which include aspects such as exposure to water stress at individual basin level. Ultimately, it's essential to assess all relevant qualitative and quantitative indicators within the local context of basin risk and social factors to determine how different water risks impact a company's financial performance.

While there is no one-size-fits-all approach, the key performance indicators (KPIs) highlighted in Figure 9 together appear to us as critical to assess the financial impact of the water-related risks and opportunities at both investee company and portfolio levels.

Figure 9: Important KPIs to assess the financial impact of water risks



Source : MSCI, CDP, DWS CROCI

In the next section, we examine how investee companies disclose what we determine as relevant and needed KPIs and disclosures to assess the financial impact.

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3.1 Income Statement: Determining the impact of increase in operating costs.

Water-related externalities can directly affect operating charges through increased water tariffs and rising costs for water treatment and wastewater management. Additionally, companies may need to increase their spending to restore local water catchments. Stricter regulations could also lead to higher compliance costs and penalties for non-compliance.

(a) Incremental rise in water withdrawal cost: We primarily aim to determine the 'true' cost of a company's actual water consumption throughout its supply chain, given that current water tariffs are often subsidized and do not reflect their true economic cost. This assessment involves multiplying the volumes of water used by a shadow price for water. By applying these shadow water prices to the consumption figures for each site, one can quantify the additional costs that may arise in the future as water-related risks start to materialise. Notwithstanding the fact that the ultimate impact on individual companies may vary due to factors like price elasticity, this calculation relies on the availability of consistent, complete, and reliable disclosures.

We examined the disclosure of information in the beverage sector where water is utilized at every stage of the production value chain. According to the Water Footprint Network[28], it takes at least 70 litres of water to produce 0.5 litres of soda, 74 litres for a 0.25-litre glass of beer, and 132 litres for a 0.125-litre cup of coffee.

Our analysis of beverage companies within CROCI's coverage reveals that their disclosures are inadequate for assessing the financial impact of rising water costs on CROCI cash flows. These companies provide limited information about their supply chain despite the latter accounting for more than 90% of their water footprint thanks to the heavy reliance on water-intensive crops. Figure 10.

Figure 10: Disclosures practices in beverage companies: A comparative study

	AB InBev	Heineken	Carls-berg	Molson Coors	Constella-tion Brands	Diageo	Pernod-Ricard
Main Business	Beer	Beer	Beer	Beer	Beer + Spir-its	Spirits	Spirits
CDP Water Scoring (2023)	A	A-	A-	B	A-	A-	A-
Reporting boundary	Own	Own	Own	Own	Own	Own	Own
KPI - Water Quantity	Yes	Yes	Yes	Yes	Yes	Yes	Yes
KPI - Water Quality	Yes	Yes	Yes	Partial	Partial	Yes	Partial
Supply Chain Engagement*	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Internal price on water disclosed	No	No	No	No	No	No	No
Water Targets	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Verification	Yes	Yes	Yes	Partial	Yes	Yes	Yes

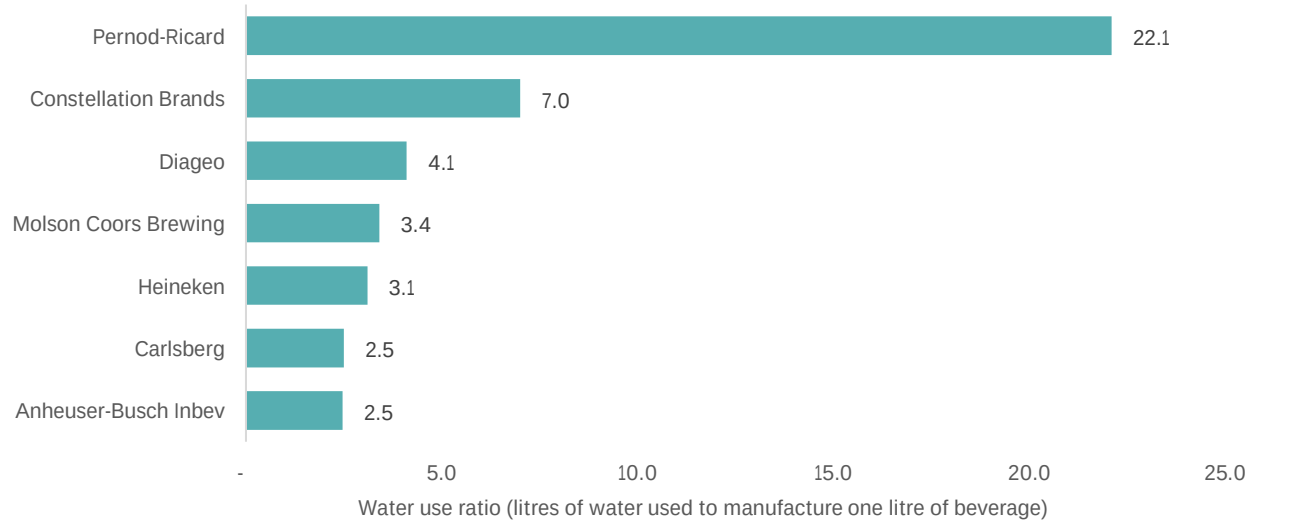
* Companies have started engaging with value chains to improve sustainability, but supply chain risks are still not integrated, like in the case of climate reporting.

Source: Company data as available on 28 March 2025, CDP (2023), DWS CROCI.

Consider the case of Pernod Ricard and Diageo. As shown in Figure 11 below, both companies manufacture spirits, but they have significantly different water use ratio, defined as the litres of water used to produce one litre of spirits. Diageo's water use ratio is 4 litres, while Pernod Ricard's is a staggering 22 litres for the same volume of spirits. While some of this difference can be attributed to economies of scale and supply chain dependencies, a significant portion is also due to discrepancies in water reporting and scope between the two companies. This variation could be standardized if a common reporting standard were adopted seeking information on water withdrawals across value chain.

[28] Global Institute for Water Security. **The Global Assessment of Private Sector Impacts on Water.**

Figure 11: Gaps in water use ratio reporting



Source: Company data as available on 28 March 2025, CDP (2023), DWS CROCI. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or a solicitation.

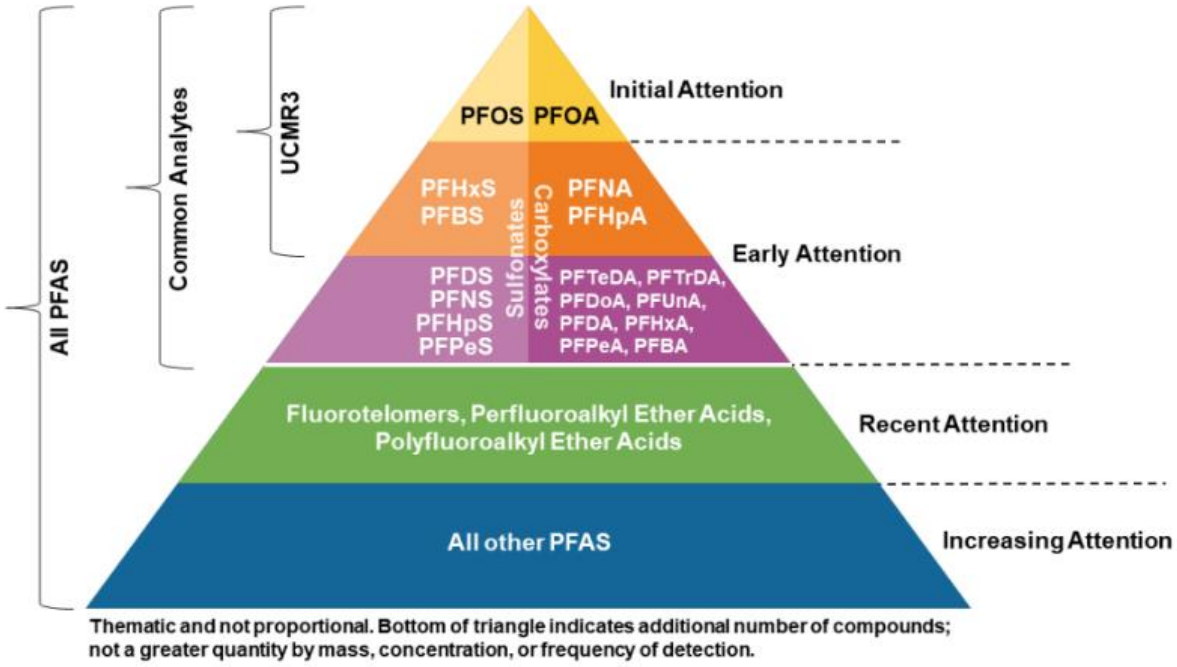
Further, none of the beverage companies assessed disclosed how they use an internal price for water in their decision-making processes. However, a few of them plan to implement an internal water pricing strategy in the coming years. Overall, the limited information regarding water withdrawal throughout the supply chain, combined with the lack of details about the internal water price, makes it challenging to quantify future water use costs based on the companies' disclosures.

(b) Rising water waste treatment and compliance cost: Water quality aspects are rising on the agenda of regulators like the U.S. Environmental Protection Agency (EPA) and European Commission. This along with a growing awareness of PFAS contamination are anticipated to result in an increase in litigation and compliance cost in the years ahead Figure 12. PFAS chemicals have been used across various industries, including aerospace, automotive, aviation, food contact materials, textiles, and construction, due to their beneficial properties. In recent years, manufacturers have begun replacing certain PFAS with alternatives, yet contamination of groundwater, surface water, and soil by PFAS remains prevalent.

In April 2024, the U.S. EPA has issued its first-ever national, legally enforceable drinking-water standards[29] for "forever chemicals" which sets limits for five individual Per- and polyfluoroalkyl substances (PFAS): PFOA, PFOS, PFNA, PFHxS, and HFPO-DA (known as "GenX chemicals"). This is part of the proposed EPA regulations which have been delayed following a January 2025 memorandum titled "Regulatory Freeze Pending Review" from the current U.S. administration. And subsequently, on March 12, 2025, the EPA announced nearly three dozen deregulatory actions rolling back regulations seen as burdensome to industry, many of which target environmental protections for clean air and water. However considering the potential financial impact on companies and pending more details on these deregulatory actions , we dig into more details below on PFAS considering the potential financial implications on the most exposed companies. The U.S. EPA anticipates that the compliance costs for public water systems and primacy agencies to implement this regulation will be about USD 1.55 billion annually[30]. Lawsuits accusing major chemical companies[31] of polluting U.S. drinking water with toxic PFAS chemicals have already led to over USD 11 billion in settlements in 2023.

[29] The U.S. Environmental Protection Agency (EPA). (April 2024). Biden-Harris Administration Finalizes First-Ever National Drinking Water Standard to Protect 100M People from PFAS Pollution.
[30] The U.S. Environmental Protection Agency (EPA). Final PFAS National Primary Drinking Water Regulation.
[31] Reuters (December 2023). 'Forever chemicals' were everywhere in 2023. Expect more litigation in 2024.

Figure 12: Regulators are focusing more on environmental impact of PFAS and related perfluoroalkyl and polyfluoroalkyl substances



Source: J. Hale, Kleinfelder, Emerging awareness and emphasis on PFAS occurrence in the environment, The Interstate Technology & Regulatory Council (ITRC)

Chemsec, a Sweden-based NGO collaborating with industry and policymakers to reduce toxic chemicals, reports that the average market price of PFAS is EUR 19 per kilogram. However, when societal costs are factored in, this price soars to EUR 18,734 per kilogram. The global societal costs of PFAS, encompassing remediation and healthcare, amount to EUR 16 trillion each year[32]. Banning non-essential uses could remove these chemicals from many consumer products, significantly impacting industry profitability.

To understand the companies vulnerable to future non-compliance risks and any business opportunities regarding PFAS alternatives/detection/clean-up, it is necessary to obtain company-level information on the quantity and quality of water waste discharge, water pollution targets, and a company's governance and strategy for managing water pollution risks.

We analyzed U.S.-based specialty chemical companies in our coverage to determine whether they disclose essential information regarding their vulnerability to rising costs associated with water treatment and wastewater management. We observed that while all the companies assessed provided data on the volume of waste discharged, only Ecolab and PPG Industries disclosed information about the quality of the discharged water. Despite the criticality of water to their operations, water-related risk assessments for most companies appear inadequate beyond their own operations. In fact, seventy percent of the companies assessed have not established any targets for reducing water pollution. Figure 13

[32] Chemsec (May 2023). ChemSec identifies the top 12 PFAS producers in the world and reveals shocking societal costs.

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Figure 13: Water Disclosures in the U.S. based specialty chemical companies

Conventional Name	CDP water Score (2023)	Chemsec Score (2023)	Water discharges – Volume	Water discharges – Quality	Water-related risk assessment		Water impact target	
					Own	Supply Chain	Water Withdrawals	Water pollution
Ecolab	A	C	Yes	Yes	Yes	Partial	Yes	No
DuPont	B+	F	Yes	No	Yes	No	No	No
Sherwin-Williams	C	C-	Yes	No	Yes	No	No	No
International Flavors & Fragrances Inc	B	-	Yes	No	Yes	Partial	Yes	Yes
Albemarle	B-	-	Yes	No	Yes	Yes	Yes	No
Eastman Chemical	B	C-	Yes	No	Yes	Partial	No	No
PPG Industries	C	C-	Yes	Yes	Yes	Partial	Yes	Yes

Source: Company data as available on 28 March 2025, CDP (2023), Chemsec, DWS CROCI. This information is intended for informational purposes only and does not constitute investment advice, a recommendation, an offer or a solicitation.

The lack of detailed information on discharged water quality and the absence of forward-looking KPIs, such as water pollution reduction targets, make it challenging to evaluate these companies' vulnerability to regulatory risks associated with water pollution. Enlarging our scope, data on water pollution remains limited across sectors, even outside the specialty chemical sector: according to a CDP report from 2022, only 12 percent of respondents have set water pollution-related targets that are monitored at the corporate level.

3.2 Balance sheet: Assessing the risk of impairment and/or incremental capex

The implications arising out of water scarcity are often shared between government, businesses and society at large. The growing scarcity of water is increasingly jeopardizing business operations, often leading to public backlash and ultimately to the potential loss of the social license to utilize local water sources. This situation can necessitate restructuring and relocating business activities, along with incurring additional costs related to water treatment. Additionally, events like floods or droughts cause property damage and impairments. This ultimately leads to higher capex and could result in stranded assets. The recent CDP's report[33] 'High and Dry: How Water Issues are Stranding Assets' found that around USD 13.5 billion has already been stranded as a result of water risks, and a further USD 2 billion is at risk on four major infrastructure projects in the gas, coal, mining and power generation sectors.

Rising temperatures caused by climate change are making already dry regions drier and wet regions wetter. Yet as per CDP data[34] 2022, sixty percent of the companies responding to CDP do not provide details around withdrawals from water-stressed areas, leading to difficulty in assessing the exposure of companies' operations to water-stressed areas. A further fifty-eight percent of the companies responding to CDP do not integrate water-related issues into financial planning even though organizations that integrate water into their long-term business strategy realize four times more water-related opportunities[35].

[33] CDP (May 2022). High and Dry. How water issues are stranding assets.
[34] CDP (March 2023). Riding the Wave. How the private sector is seizing opportunities to accelerate progress on water security.
[35] CDP (March 2023). Riding the Wave. How the private sector is seizing opportunities to accelerate progress on water security.

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Case study: Data centres magnifying water-related risks

Data centres are rapidly increasing in number and are having a significant environmental impact, particularly concerning water usage. The United States has the highest number of data centres globally, accounting for 39% of the total. Research shows that one-third of these data centres are situated in areas experiencing high or extremely high-water stress^. Moreover, many servers are powered by facilities located in water-stressed regions. The growing demand for data centres could further strain water resources, potentially leading to the risk of stranded assets in the future.

Virginia, home to 474 data centres, accounts for 16 percent of the U.S.'s total, making it one of the largest concentrations of data centres in the world. This includes data centre facilities used by major companies like Amazon, Google, and Microsoft. In 2023, Virginia faced record-breaking dry spells and significant drought conditions, as reported by the U.S. National Integrated Drought Information System.

Microsoft indicated that 42 percent of its global water consumption comes from water-stressed areas. Similarly, Google and Meta reported that 15 percent and 26 percent of their water withdrawals, respectively, are sourced from regions with high water scarcity. These companies are taking steps to address water stress challenges, such as Amazon's commitment to being a responsible water steward. Amazon aims to make its data centre operations "water positive" by 2030, meaning it intends to return more water to local communities than it consumes. However, detailed information on their capital allocation plans for climate solutions is scarce, making it difficult to assess the additional capital expenditure requirements for the future.

Assessing the exposure of investee companies to external risk factors relating to water (water scarcity, flooding, and water quality issues) should be part of the larger risk assessment made by investors. Analyzing the geospatial locations of facilities is needed to identify emerging hotspots. For example, examining the proportion of operations in water-stressed basins and understanding water withdrawal practices can reveal a company's exposure to water scarcity risks. This evaluation is especially critical when considering the potential need to relocate facilities and the associated risk of asset impairments along with potential for rising water costs. Hence, it is essential for companies to maintain transparency regarding the locations of their major facilities, as well as their strategy in relation to water risk management as well as their financial capital allocation. This transparency is vital for making informed investment decisions.

^ Planet Tracker (August 2024). AI needs to reduce its water dependency.

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4 / Conclusion

Enhancing disclosure standards and frameworks concerning water issues is crucial for obtaining more consistent and comprehensive data from companies, enabling investors to assess risks and evaluate associated financial impacts. Furthermore, improved alignment and interoperability among various organizations, including CDP, GRI, TNFD, and others, is necessary. Recently, many of these organizations have been collaborating to further standardize reporting and disclosure practices.[36],[37].

While there has been a significant increase in corporate climate disclosures, there is still a notable sluggishness in company reporting on water. However, it is important to highlight that water has emerged as a crucial policy topic, gaining global momentum. This has led to growing support for mandatory reporting requirements, such as the Corporate Sustainability Reporting Directive. The consultation[38] on streamlining CSRD should strengthen and not weaken water related disclosures by companies. With improved disclosures, financial institutions can expect improved data sets on water risk, similar to the progress seen with climate data.

Engagement is a quintessential strategy that ensures the obligations and mandates of various stakeholders are effectively met. Corporates must be encouraged to set and get their targets validated by the Science Based Targets Network (SBTN)[39] for both their direct operations and supply chains. This approach, like what has been adopted for climate initiatives, would foster companies to address water-related risks and promote transparency in their reporting.

In the meantime, a variety of tools have emerged to help investors assess the financial implications of water-related risks when making investment decisions. For instance, the Ceres Investor Water Toolkit[40], developed in collaboration with institutional investors, provides comprehensive databases, and case studies to drive informed investment choices. The publication by DWS and Ceres, titled "Financial Implications of Addressing Water Externalities in the Apparel and Meat Industries," is part of this initiative.

Ceres Investor Water Toolkit: The Investor Water Toolkit is an investor resource on water integration. Developed in collaboration with more than 40 institutional investors from The Investor Water Hub–a working group of the Ceres Investor Network–the Toolkit is a comprehensive resource enabling investors to evaluate and tackle the water risks in their investment portfolios.

Effective water-focused engagement with diverse stakeholders and specialized tools helps investors address critical hotspots in their portfolios, positively impacting local water catchments and improving investment performance and sustainable water management practices.

[36] TNFD (July 2024). Interoperability mapping between the GRI Standards and the TNFD Recommended Disclosures and metrics.
[37] CDP. CDP's Alignment with Disclosure Frameworks and Standards.
[38] EFRAG (April 2024) Public call for for input on ESRS Set 1 Revision
[39] Sciencebasedtargetsnetwork. Target validation.
[40] Ceses, Investor WaterToolkit

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Annexure 1: Main water reporting standards/Framework

Framework	ESRS E3 (2023)	CDP Water questionnaire (2023)	GRI 303 (2018)	SASB (with reference to Food and Beverage industry) (2011)	The Taskforce on Nature-related Financial Disclosures (2023)
About	The European Sustainability Reporting Standards (ESRSs) will be the standard of sustainability reporting on sustainability topic's (ESRS E3 for water) that companies will have to adopt in the coming years according to the deadlines set for different categories of companies, under CSRD.	CDP's water program provides the global platform for corporate water disclosure and action to address the global water crisis.	This Standard is part of the set of GRI Sustainability Reporting Standards (GRI Standards). The Standards are designed to be used by organizations to report about their impacts on the economy, the environment, and society.	SASB Standards enable organizations to provide industry-based sustainability disclosures about risks and opportunities that affect enterprise value. The ISSB has committed to building on the industry-based SASB Standards and adopting SASB's approach to standards development.	The TNFD framework emphasizes the importance of water-related metrics as part of its broader nature-related risk and impact disclosures. Specifically, the TNFD recommends that organizations disclose metrics related to their dependencies and impacts on water resources.
Business context	Disclosures to enable users of the sustainability statement to understand material positive and negative actual or potential impacts and dependencies on water, material risks and opportunities arising from impact and dependencies, and any actions taken to mitigate material impacts and to protect water resources.	Disclosures to assist companies on a water stewardship journey and providing relevant data to investors, policy makers and others. In particular data on how water-related issues are addressed in companies' governance, strategy, risk management, and metrics and targets.	Disclosures on how the organization interacts with water, including how and where water is withdrawn, consumed, and discharged, and the water-related impacts the organization has caused or contributed to, or that are directly linked to its operations, products, or services by its business relationships (e.g., impacts caused by runoff).	SASB Standards identify the subset of ESG issues most relevant to financial performance and enterprise value for specific industries. These issues are supplemented with activity metrics which convey contextual information that would not otherwise be apparent from SASB accounting metrics.	The TNFD recommendations aim to inform better decision making by companies and capital providers, and contribute to a shift in global financial flows toward nature-positive outcomes. Freshwater represents one of the four essential realms of the nature.
Governance around water-related risk and opportunities					
Board's oversight	Yes	Yes	Yes	Yes	Yes

Framework	ESRS E3 (2023)	CDP Water questionnaire (2023)	GRI 303 (2018)	SASB (with reference to Food and Beverage industry) (2011)	The Taskforce on Nature-related Financial Disclosures (2023)
Sustainability linked compensation	Yes	Yes	Yes	No	Yes
Strategy around water-related risk and opportunities					
Impact on business model, strategy and financial planning	Disclosure on: _ Impacts, risks and opportunities and how they interact with its strategy and business model. _The effects of material impacts, risks and opportunities on its strategy and decision-making, including how the undertaking is responding to these effects. _The anticipated financial effects on the undertaking's financial position, financial performance and cash flows over the short-, medium- and long- term. (ESRS 2/ ESRS E3)	Disclosures on: _Inherent water-related risks with the potential to have a substantive financial or strategic impact on business. _Risks identified within the value chain (beyond direct operations) with the potential to have a substantive financial or strategic impact on business, and response to those risks.	_The description of how the organization interacts with water can include information on specific catchments where water is withdrawn, consumed, and discharged, and information on what the water is used for in direct operations and elsewhere in the value chain. _The impact of sustainability trends, risks, and opportunities on the long-term prospects and financial performance of the organization (GRI 102 -15).	_The registrant's strategic approach regarding actual and potential impacts of topic-related risks and opportunities on the organization's businesses, strategy, and financial planning, over the short, medium, and long term.	_Disclose the effects of nature-related dependencies, impacts, risks and opportunities on the organisation's business model, strategy and financial planning where such information is material. _Disclose the locations of assets and/or activities in the organisation's direct operations and, where possible, upstream and downstream value chain(s) that meet the criteria for priority locations.
Materiality concept	Double materiality	Double materiality	Impact materiality	Financial materiality	Jurisdiction's regulatory approach or financial materiality and impact materiality

Framework	ESRS E3 (2023)	CDP Water questionnaire (2023)	GRI 303 (2018)	SASB (with reference to Food and Beverage industry) (2011)	The Taskforce on Nature-related Financial Disclosures (2023)
Linkage to Financial statement	_the current financial effects of the undertaking's material risks and opportunities on its financial position, financial performance and cash flows and the material risks and opportunities for which there is a significant risk of a material adjustment within the next annual reporting period to the carrying amounts of assets and liabilities reported in the related financial statements. (ESRS 2)	_Requires disclosure on trend in water-related CAPEX and OPEX , and the anticipated trend for the next reporting year. _Total financial impact of water-related detrimental impacts _Potential financial impact of identified risk within direct operation and value chain	No	_A discussion of the potential impacts that these risks may have on its operations and the timeline over which such risks are expected to manifest. _Impacts may include, but are not limited to, those associated with costs, revenues, liabilities, continuity of operations, and reputation.	_Value of assets, liabilities, revenue and expenses that are assessed as vulnerable to nature-related transition and physical risks. _Amount of capex, financing or investment deployed towards nature-related opportunities. _Increase and proportion of revenue from products and services producing demonstrable positive impacts on nature with a description of impacts.
Scenario Analysis	No	Yes	Yes	No	Yes
Risk Management of water related risks					
Identification and assessment of water risk	_Requires disclosure on the processes to identify, assess and the management of its material water-related impacts, risks and opportunities in addition to actions taken to achieve the water-related policy objectives and targets. _The undertaking shall assess the materiality of water and marine resources in its own operations and its value chain using LEAP approach.	Describe the organization's process for identifying, assessing, and responding to water-related risks within the direct operations and other stages of value chain.	A description of the approach used to identify water-related impacts, including the scope of assessments, their timeframe, and any tools or methodologies used.	The entity's process to identify, assess, and manage topic-related risks, and how these risks are integrated into the entity's overall risk management process.	_Describe the processes used by the organisation to identify, assess, prioritise and monitor nature-related dependencies, impacts, risks and opportunities. _Describe how processes for identifying, assessing, prioritising and monitoring nature-related risks are integrated into and inform the organisation's overall risk management processes.

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Framework	ESRS E3 (2023)	CDP Water questionnaire (2023)	GRI 303 (2018)	SASB (with reference to Food and Beverage industry) (2011)	The Taskforce on Nature-related Financial Disclosures (2023)
Actions and resources	Disclosure of its water and marine resources-related actions and the resources allocated to achieve the water and marine resources-related policy objectives and targets.	_ How water-related issues integrated into any aspects of long-term strategic business plan. _ Provide details of the scenario analysis, what water-related outcomes were identified, and how they have influenced organization's business strategy.	A description of how water-related impacts are addressed, including how the organization works with stakeholders to steward water as a shared resource, and how it engages with suppliers or customers with significant water-related impacts.	_The activities and investments to achieve the water risk management plan and targets, and any risks or limiting factors that might affect achievement of it. _The activities and investments required to achieve water discharges, and improving the quality of water discharges.	_Describe the organisation's processes for managing nature-related dependencies, impacts, risks and opportunities. _The organisation should describe the processes and actions it has put in place to respond to the material dependencies, impacts, risks and opportunities it has identified.
Stakeholder Engagement	Describe the process for conducting consultations, in particular, with affected communities.	Provide details of any water-related engagement activity with customers or other value chain partners.	The organization can describe how it participates in discussions with stakeholders, the frequency of this engagement, and its role in these discussions.	No specific mention of engagement on water.	The TNFD guides corporates and financial institutions to engaged with Indigenous Peoples, Local Communities, affected and other stakeholders for the assessment, management and disclosure of nature-related dependencies, impacts, risks and opportunities.
Target and Metrics used to assess and manage water-related risk and opportunities					
Target	_Disclose the target related to the reduction of water consumption, including an explanation of how those targets relate to areas at water risk, including areas of high water-stress. _The undertaking may provide targets relating to: (a) the reduction of water withdrawals; and (b) the reduction of water discharges.	_ Describe the approach to setting and monitoring water-related targets and/or goals. _Provide details of water targets that are monitored at the corporate level, and the progress made.	Targets for managing water-related impacts: (a) account for the local context where water is withdrawn and discharged; (b) are scientifically informed; (c) align with public sector efforts, such as SDG 6, or targets set by national and local government institutions.	_Disclose water management targets, and an analysis of performance against those targets. _Targets can include, but are not limited to, those for associated with reducing aquatic impingements, water withdrawals and/or consumption., water discharges, and improving the quality of water discharges.	_Describe the targets and goals used by the organisation to manage nature-related dependencies, impacts, risks and opportunities and its performance against these. _The Science Based Targets for Nature (SBTN) guidance provides guidance by realm on setting targets for impacts in direct operations and upstream.

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Framework	ESRS E3 (2023)	CDP Water questionnaire (2023)	GRI 303 (2018)	SASB (with reference to Food and Beverage industry) (2011)	The Taskforce on Nature-related Financial Disclosures (2023)
Metrics	_Disclose information on water consumption performance related to its material impacts, risks and opportunities, including in areas of high-water stress _Any contextual information necessary regarding the water basins' water quality and quantity, how the data have been compiled, such as any standards, methodologies, and assumptions use.	The total volumes of water withdrawn, discharged, and consumed across all operations, and how do these volumes compare to the previous reporting year.	_The amount of water withdrawn and consumed by an organization and the quality of its discharges including direct impacts on a catchment. _The organization is encouraged to include information about upstream as well as downstream water use (e.g., use of water for consumer products, such as soaps, shampoos, and cleaning solutions).	_Total water withdrawn, and _Total water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	_Water withdrawal and consumption (m3) from areas of water scarcity, including identification of water source _Volume of water discharged (m3), split into: ● Total; ● Freshwater; and ● Other. _Volume of wastewater treated, reused or recycled (m3)
Forward looking	Yes	Yes	Yes	Partially	Yes
Reporting on compliance/fines with water quality and quantity	No disclosure required	Requires disclosing any fines, enforcement orders, and/or other penalties for water-related regulatory violations.	Requires disclosing number of incidents of non-compliance with discharge limits.	Number of incidents of non-compliance with water -quality and/or quantity permits, standards, and regulations.	Description and value of significant fines/penalties received/litigation action in the year due to negative nature-related impacts.

Source: EFRAG, GRI, CDP, SASB, CEO Water Mandate, DWS CROCI, Data as available on 28 March 2025

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