esgbook EthiFinance

Uncharted waters*

* The status quo of water-related corporate disclosure

Dr Roan du Feu and Yurui Kang

ESG Book is now part of EthiFinance. This document was originally published by ESG Book prior to the integration and may reference ESG Book branding, products, or services that are being transitioned to EthiFinance. Please visit ethifinance.com for more details.

Uncharted Waters*

*The status quo of water-related disclosure.

By Dr Roan du Feu and Yurui Kang

Introduction

Water is a crucial part of Earth's climate system and, as a result, is intrinsically linked to climate change. While water is a victim of climate change, the way we manage and use water can contribute to it. Climate change affects the availability, quality and quantity of water required to meet basic human needs and threatens our human right to access clean water and sanitation. Water-related risks are becoming more immediate and significant, potentially adversely affecting all water users across the globe[1]. On the other hand, energy use and greenhouse gas emissions in water supply, treatment and desalination can be significant contributors to global warming.

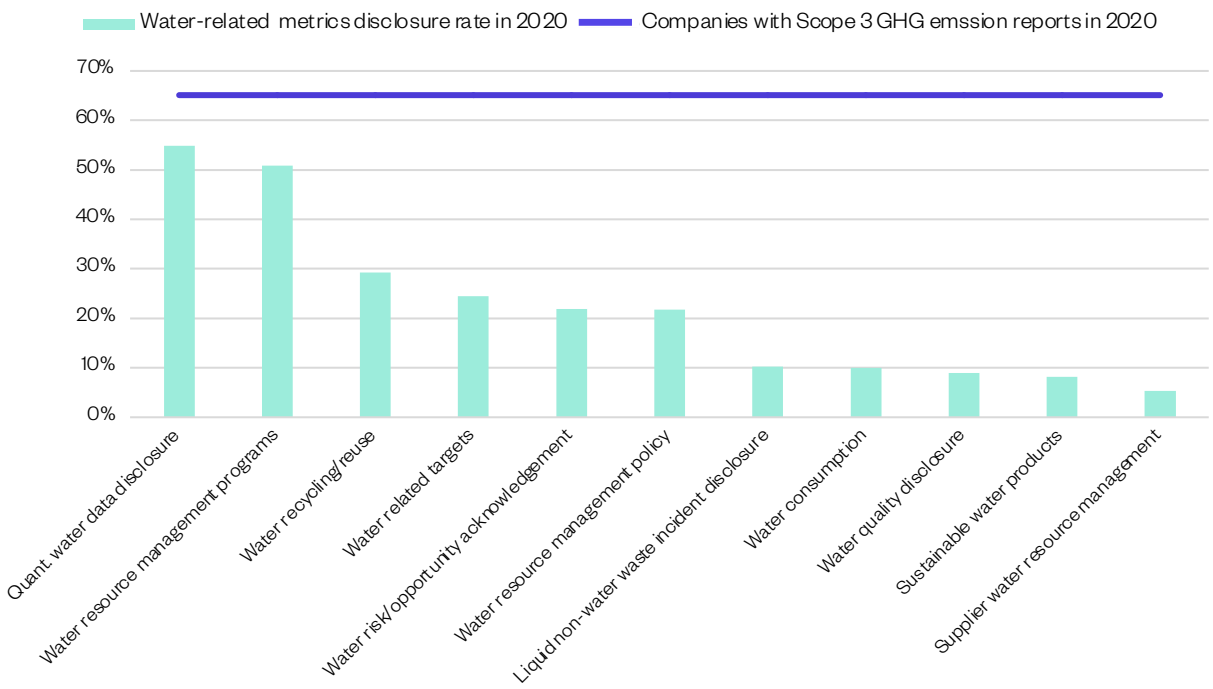
Water is input to almost all production activities. While specific sectors have unique KPIs, dependency on water is universal. In this landscape, water-resilient investments will be vital, and water data will be necessary for decision-making. Water is an important area for impact investors because water delivers a positive, clear, measurable impact - the trade-off between the benefits and sustainability of water is unambiguous[2]. Water extraction, consumption and discharge are all closely interlinked, and good practice will have a positive chain effect.

> **Water is an important area for impact investors because water delivers a positive, clear, measurable impact.**

Despite its importance, water reporting lags behind carbon reporting with information deficit and disclosure insufficiency. Many companies are still new and ineffective in water management and reporting[3]. The proprietary ESG Book dataset shows that even the most frequently disclosed metric for water (Quantitative Water Data Disclosure) has a coverage of only 54.91% in 2020, lower than the 65.11% coverage for Scope 3 GHG emissions (Figure 1). Moreover, the carbon reporting paradigm may not apply to water reporting due to water's multifaceted, unidirectional, and localised nature. Unlike carbon, which can transport and accumulate worldwide, water issues are confined to certain times and geographical areas.

Furthermore, with spiritual and cultural values, water has a broader impact on communities and requires multi-stakeholder engagement. Therefore, water reporting is unique. Insightful water reporting is supposed to describe localised physical and regulatory risks and deliver targeted objectives and policies.

Water-related disclosure lags behind carbon reporting



Data and Regulation is required to separate fact from fiction

Sufficient information disclosure will enable and accelerate thematic water investment. Reporting frameworks are designed to facilitate comparable, relevant, and reliable data disclosure. However, existing ESG reporting frameworks have been criticised for under-representing water as a significant risk and opportunity[4]. The metrics of mainstream reporting frameworks (Table 1) largely fall into the categories of water-related risks (including dependency, operation at water stress areas, etc.) and responses (including water usage, discharge, management, and policies, etc.). It is worth noting that unlike GHG emissions, which can be quantified as the same unit, water-related indicators are significantly diverse and have different narratives across the frameworks. Metrics on risk response are difficult to quantify and compare. And water is still a niche area at the corporate level. Awareness and expertise are still lacking. For ratings agencies and investors, the spatial and temporal granularity of current water datasets is still insufficient to fully understand the corporate risk exposure and water management, which would enable evidence-based decision-making.

> **Reporting frameworks are designed to facilitate comparable, relevant, and reliable data disclosure. However, existing ESG reporting frameworks have been criticised for under-representing water as a significant risk and opportunity.**

Unlike most ESG and climate funds, the worst performing funds have less weight in lower temperature scores, such as 1.5 and 2 degrees Celsius, than the universal average as seen in Figure 2. In fact, these funds have almost a quarter of their market value on average invested into assets contributing to a temperature scenario of above 2.7 degrees by 2050, a scenario that has been widely predicted to cause widespread environmental degradation, with extreme global climatic events. These funds are also largely passive, with some stating that they are investing in companies with 'sustainable financial models'. The underlying data demonstrates the opposite.

Table 1. Water-related metrics in sustainability reporting frameworks

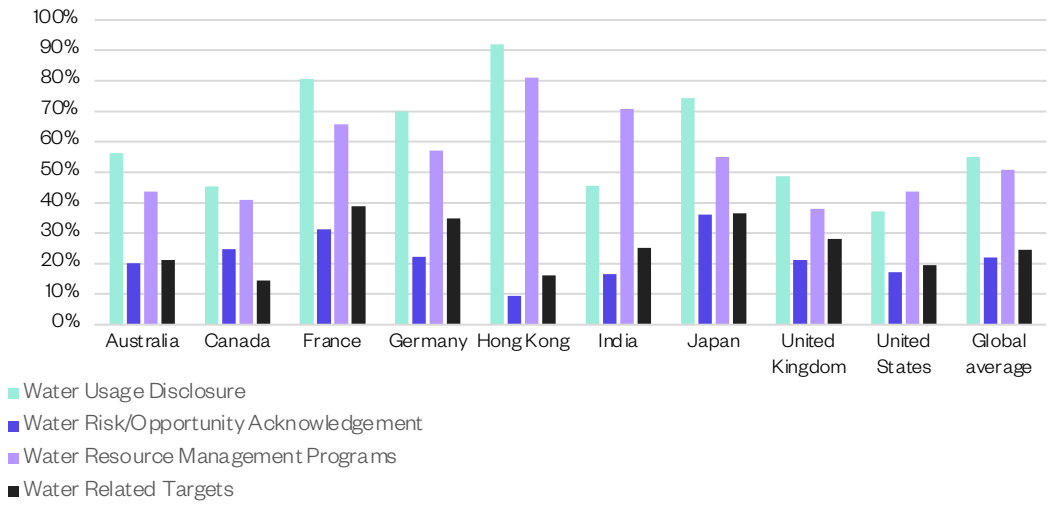
Reporting Framework	Risk Exposure Metrics	Risk Response Metrics
CDSB	REQ-3 (risks and opportunities); REQ-6 (outlook – future water scenarios)	REQ-1 (governance responsibilities); REQ-2 (management policies, strategy & targets); REQ-4 (sources of impact – e.g., withdrawals, consumption, discharge); REQ-5 (performance & comparative analysis – i.e., contextualization of results)
SASB (Energy Minerals as a sectoral example)	EM-EP-140a.1 (Percentage of water withdrawn and consumption in regions with High or Extremely High Baseline Water Stress)	EM-EP-140a.1 (Total fresh water withdrawn, total fresh water consumed); EM-EP-140a.2 (Volume of produced water and flowback generated; percentage discharged, injected, recycled; hydrocarbon content in discharged water); EM-EP-140a.3 (Percentage of hydraulically fractured wells for which there is public disclosure of all fracturing fluid chemicals used); EM-EP-140a.4 (Percentage of hydraulic fracturing sites where ground or surface water quality deteriorated compared to a baseline)
CEO Water Mandate	Current state (context; performance; compliance); implication (business risks; business opportunities; external impacts); Response (Policies, governance, and targets; internal actions; external engagement)	
GRI 303	303-1 (information on water sources & impacts; assessment process/ tools)	303-1 (shared efforts; targets); 303-2 (effluent discharge quality); 303-3 (withdrawals by source type and status; additional context – NB: water stress uses either WRI "baseline water stress" or WRF "water depletion"); 303-4 (discharge by body; substances of concern; additional context); 303-5 (consumption – overall & for water stressed areas; additional context)

Both geographical location and industrial differences must be considered when evaluating corporate disclosure and measuring corporate performance. According to the WWF Water Risk Filter[5] and the WRI Aqueduct Water Risk Atlas[6], physical, regulatory, and reputational water risks can vary from country to country and even from basin to basin. Water risk is not a number that can be simply calculated and compared but a wide range of meaningful information that flows along the supply chain. Furthermore, the UN's CEO Water Mandate and SASB both point out that companies in different sectors or industries have varying water-related risks and opportunities, and so disclosure practices will vary from company to company. The prerequisite for uniformed disclosures is identifying the industries where water is material and standardising the disclosure metrics.

Reflection of global water reporting

France, Germany, and Japan outperformed the global average on chosen water metrics for companies covered by the ESG Book in 2020, whereas the United States underperformed on all four metrics (Figure 2). For some of the high water-risk regions highlighted by the WRI Aqueduct (Figure 3), such as Africa and the Middle East, there are currently insufficient data to conduct statistically significant analyses. According to available data, no significant correlation was found between the disclosure rate in a region and its overall water risk. Additionally, in countries with enormous local markets, such as India and China, there is little motivation to go above national requirements and draw international interest by disclosing or acting in compliance with international disclosure standards. However, one shortcoming of the existing regional analysis is the simplification of operating areas, which, due to lack of narrative and disclosure, do not and cannot consider the localised aspects along the supply chain.

Figure 2. National or regional disclosure of water metrics in 2020



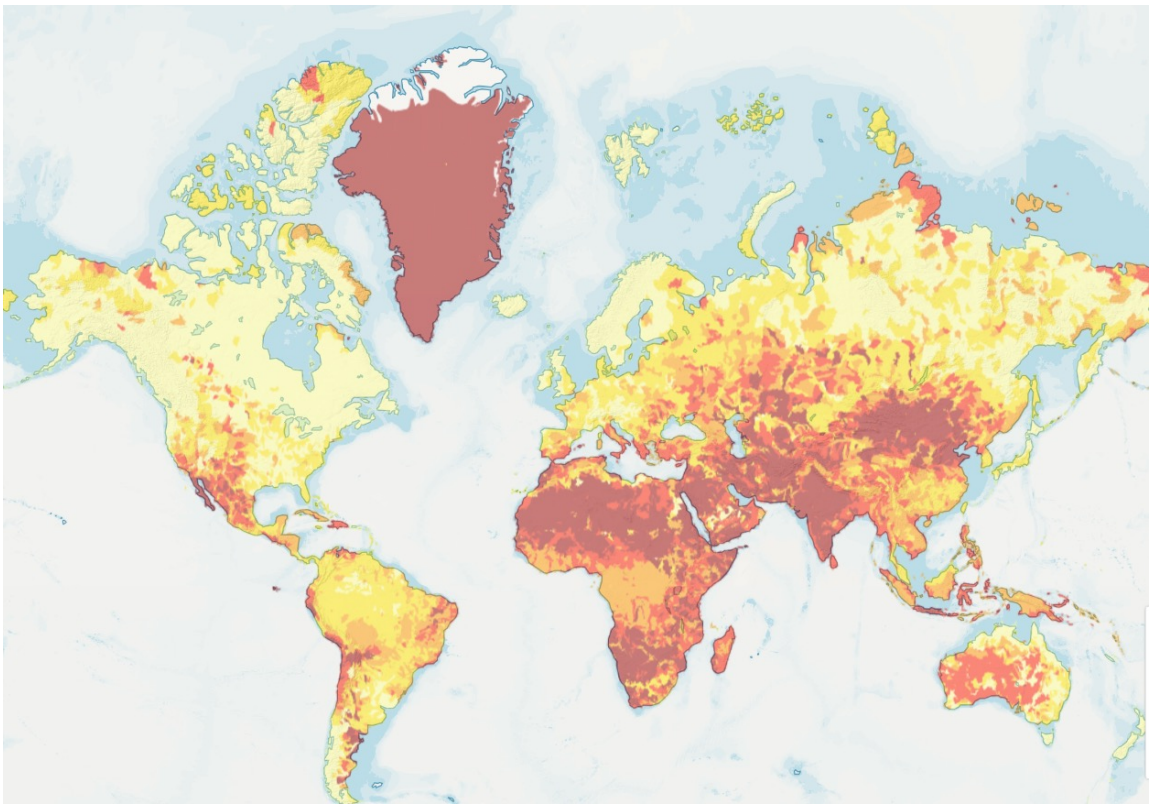


Figure 3. Overall water risk around the world according to WRI Aqueduct [6]

Focusing on industries where water is material

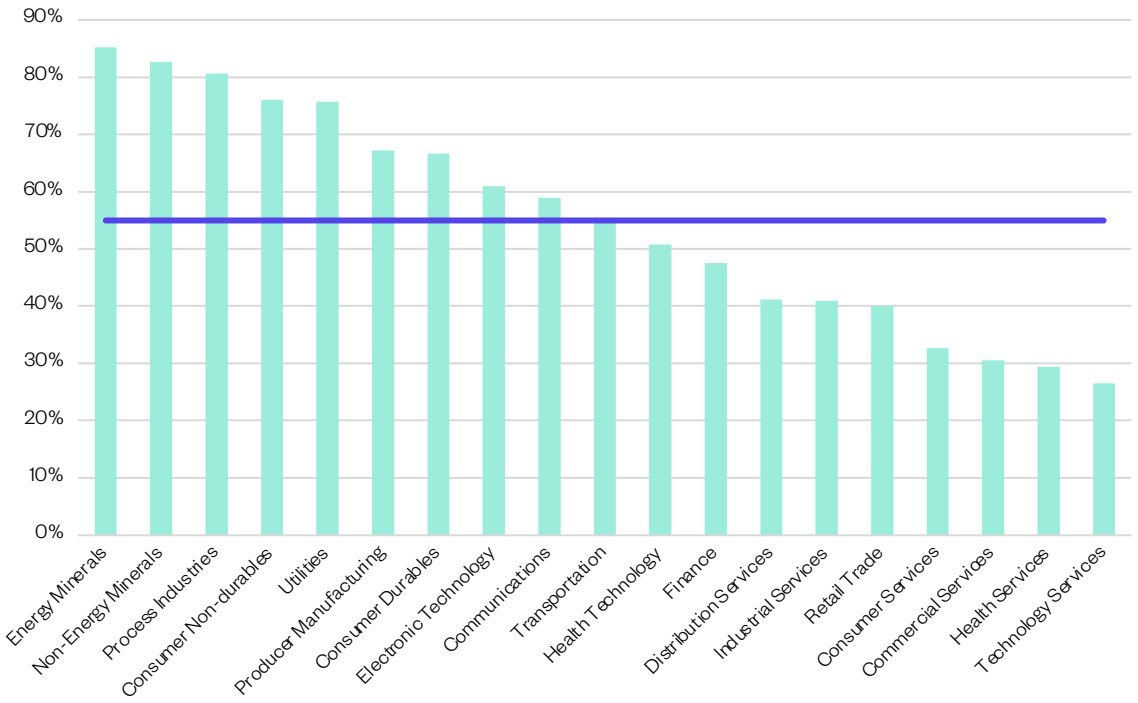
According to SASB Materiality Finder[7], the sectors and industries where Water & Wastewater Management is a material issue are diversified (Table 2). Due to the varying materiality, it would be unfair and inefficient to push each company to disclose all metrics at this stage. Meanwhile, a complete quantification of the value of the enterprise in solving water-related problems is required. For example, a company that uses digital technology to promote smart water management may not have a significant performance in terms of water consumption or water management targets, but it surely delivers a significant positive impact on efficiency.

Table 2. Where Water & Wastewater Management is material according to SASB

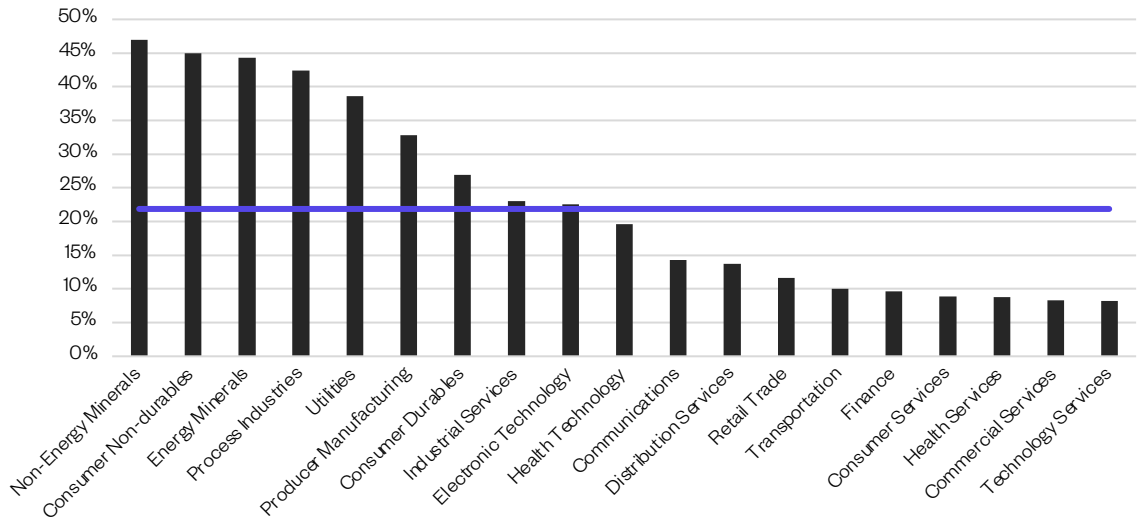
Sector	Industry
Consumer Durables	Electronics/Appliances
Energy Minerals	Coal; Construction Materials; Steel; Aluminium; Marine Shipping
Consumer Non-Durables	Food; Major Diversified; Beverages: Alcoholic; Marine Shipping; Beverages: Non-Alcoholic; Food: Specialty/Candy; Other Consumer Services
Consumer Durables	Electric Utilities; Real Estate Investment Trusts; Water Utilities
Non-Energy Minerals	Commercial Printing/Forms; Pulp & Paper; Gas Distributors
Electronic Technology	Chemicals: Agricultural; Containers/Packaging
Commercial Services	Hotels/Resorts/Cruise lines
Communications	Airlines; Semiconductors

It is acknowledged that disclosure for industries of water materiality should be specific and prioritised[8], and these industries can be the focus of scoring and judgement. Considering two key water risk metrics and two key water management/response metrics (Figure 4), we see that an analysis of ESG Book's proprietary data confirms this. The sectors with the highest water-related disclosures are Consumer Non-durables, Process Industries, Energy Minerals and Consumer Durables. Except for the Process Industries, SASB defines Water & Wastewater Management as a material issue for all these sectors. Interestingly, Technology Services shows amongst the lowest disclosure despite their massive reliance on water for data storage and cloud services.

Risk Metric 1: Water Usage Disclosure



Risk Metric 2: Water risk/opportunity acknowledgement



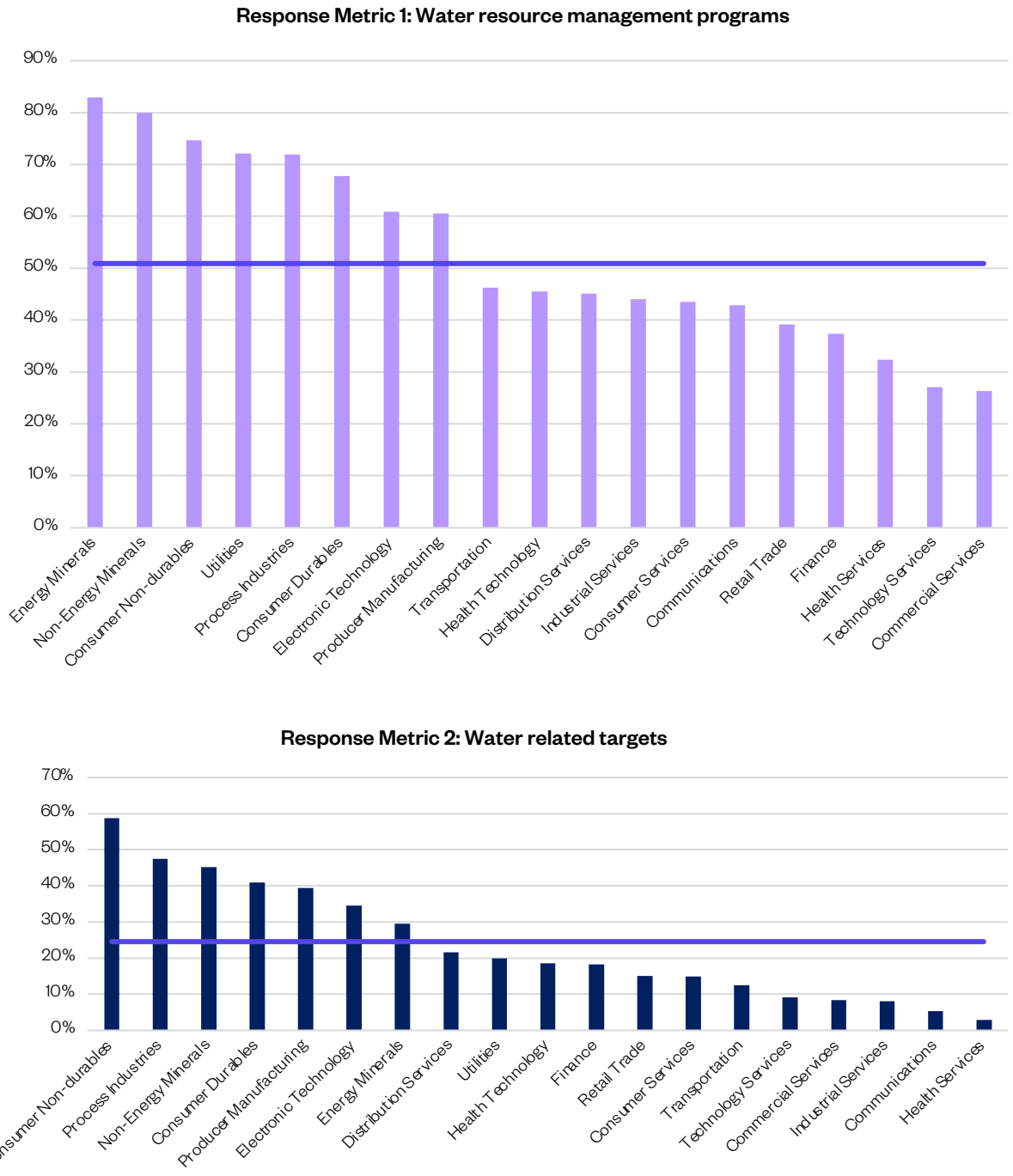


Figure 4. Disclosure results by sector, for four key water indicators, against the universe average.

The results remain satisfactory in examining specific metric disclosures for water-material industries. Overall, industries with water materiality report more for relevant metrics required by SASB, with the exceptions of Oil and Gas Services and Restaurants. and in metrics relating to "water stressed areas". This could be used as a signal to call for efforts by specific industries to pay more attention to identifying physical water risks.

Consider 'Food & Beverage' and 'Extractive & Minerals Processing ', two sectors where water is universally agreed to be highly material. We see that while both have better than average disclosure rates, the Food & Beverage sector outperforms the Extractive & Minerals Processing sector overall, especially regarding response-related metric units. This may be related to risk awareness and cooperative action at the industry level. Interestingly, the extractive industries outperformed on 'water withdrawal from water stressed areas', a metric that could bear particular importance in calculating water risk.

It is worth noting that coverage rates in water-related metrics remain poor even in these sectors, and for some industries (e.g., Iron & Steel Producers), available reporting is limited indeed. At this stage, more rational and transparent disclosure is imperative.

Table 3. Extractives & Minerals Processing: disclosure rate of SASB material metrics, where green indicates that the disclosure rate is above the universal average

Metrics/Industries	Coal Operations	Construction Materials	Iron & Steel Producers	Metals & Mining	Oil and Gas Exploration and Production	Oil and Gas Refining and Marketing
Liquid non-water waste incident disclosure	41.67%			36.36%		76.92%
Water withdrawn	0.00%	7.14%	0.00%	7.79%	13.64%	15.38%
Water discharged					9.09%	
Water withdrawal from water stressed areas	0.00%	0.00%	0.00%	2.60%	6.06%	7.69%
Water discharged into water stressed areas	0.00%	0.00%	0.00%	0.00%	1.52%	0.00%
Water consumption				5.19%	21.21%	
Water recycling/reuse	58.33%	69.05%	65.00%		66.67%	76.92%
Water quantity recycled/reused disclosure	0.00%	2.38%	0.00%		9.09%	15.38%
Water discharge non-compliance	16.67%			12.99%		23.08%
Water pollutants					1.52%	
Water quality disclosure					19.70%	

Table 4. Food & Beverage: disclosure rate of SASB material metrics, where green indicates that the disclosure rate is above the universal average

Metrics/Industries	Agricultural Products	Alcoholic Beverages	Meat Poultry and Dairy	Non-Alcoholic Beverages	Processed Foods	Restaurants
Liquid non-water waste incident disclosure	7.41%		16.67%		0.00%	
Water resource management policy	37.04%	38.89%	16.67%	63.64%	45.83%	
Water related targets	33.33%	66.67%	50.00%	90.91%	41.67%	
Water resource management programs	70.37%	88.89%	66.67%	81.82%	70.83%	
Water withdrawn	7.41%	11.11%	0.00%	9.09%	4.17%	2.63%
Water withdrawal from water stressed areas	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Water discharged into water stressed areas	0.00%	0.00%	0.00%	0.00%	0.00%	0.00%
Water consumption	7.41%	22.22%	16.67%	9.09%	0.00%	2.63%
Water discharge non-compliance	7.41%		0.00%		12.50%	
Water risk/opportunity acknowledgement	55.56%	61.11%	58.33%	54.55%	29.17%	

* Blanks indicate that the metric is not a SASB requirement for that industry, while red-shaded grids indicate that the industrial coverage rate is lower than the general rate, green indicates a higher rate

See the unseen value of water

Water is a unique and fundamental planetary resource, and the disclosure of water-related metrics is a critical challenge in the fight against climate change. The risks and opportunities associated with water cannot be disregarded any longer. We have seen that comprehensive reporting frameworks are available and that industries with imminent water risks are already responding in their reporting. But it is not yet enough, and even in the sectors most likely to be exposed to water risk, discloser rates of many metrics are low. Considering other sectors, the picture would be worse. This is, as they say, the tip of the iceberg. All companies across all sectors should at a minimum have an awareness of their water risks and report on basic water usage metrics. Scoring a company concerning its disclosure practices could be a valid first step in encouraging further disclosure and increasing transparency, thereby providing data much needed in the increasingly important task of building water-resilient investments.

References

1. Siska, E. M., & Takara, K. (2015). Achieving water security in global change: Dealing with associated risk in water investment. Procedia Environmental Sciences, 28, 743-749.
2. WWF, BRIDGING THE GAPS IN ESG WATER DATA TO CREATE OPPORTUNITIES https://wwfint.awsassets.panda.org/downloads/water__esg__wwf_discussion_paper__march_2022.pdf
3. Matthew Howard, Will Sarni, As the Environmental, Social and Governance (ESG) reporting frenzy accelerates, meaningful performance metrics lag: The use of digital technologies in water-related reporting can lead the way. http://sustainablefinanceblog.com/2021/04/30/as-the-environmental-social-and-governance-esg-reporting-frenzy-accelerates-meaningful-performance-metrics-lag-the-use-of-digital-technologies-in-water-related-reporting-can-lead-the-way/
4. Will Sarni. We need to rethink ESG to ensure access to water and sanitation for all. https://www.weforum.org/agenda/2021/08/rethink-esg-to-ensure-access-to-water-and-sanitation-for-all/
5. WWF Water Risk Filter. WWF Water Risk Filter
6. WRI Aqueduct Water Risk Atlas. Aqueduct Water Risk Atlas (wri.org)
7. SASB Materiality Finder. https://www.sasb.org/standards/materiality-finder/find/?lang=en-us
8. CDP. Setting the high-water mark for mandatory disclosure. https://cdn.cdp.net/cdp-production/cms/policy_briefings/documents/000/006/409/original/Setting_the_high_water_mark_for_mandatory_disclosure.pdf?1660576398

esgbook EthiFinance

ESG Book is now part of EthiFinance. This document was originally published by ESG Book prior to the integration and may reference ESG Book branding, products, or services that are being transitioned to EthiFinance. Please visit ethifinance.com for more details.

