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Water Risk and Disclosure in Korean Companies : Status and Challenges

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Water Risk and Disclosure in Korean Companies: Status and Challenges

Summary

As global water risks intensify, demands for corporate water disclosure are expanding across supply chains, finance, and regulation. This issue brief examines water risks and its business impacts, the state of water disclosure in Korea and globally, and the internal and external pressures driving disclosure, and presents a practical approach through CDP Water Security¹. CDP Water Security aligns with approximately 50–80% of the core requirements of ESRS E3, GRI 303, TNFD, and IFRS S2, making it the most efficient water disclosure framework in terms of disclosure alignment, universality, usability, scoring, and public availability.

1. Growing Demand for Water Disclosure from Global Stakeholders

Water Disclosure Requests from Major Global Companies

- As requests for water disclosure have intensified, the number of global companies responding to CDP Water Security has risen nearly sevenfold over a decade, from 1,426 in 2016 to 9,922 in 2025, and it continues to grow year on year
- In Japan, participation in CDP Water Security rose 11% in 2025 from the previous year, and Japanese companies accounted for 22% of all companies in the global leadership grade (A/A-), the highest share of any country
- Major global companies in every sector, from semiconductors and IT to consumer goods and automotive, are requiring their key supply chain partners, including suppliers in Korea, to disclose environmental information such as water use, wastewater management, and water risk response systems

¹Water security is a concept defined by UN-Water (2013) as “the capacity of a society to secure sustainable access to water of adequate quantity and quality,” operationalized at the corporate level. As an official UN-Water partner, CDP has operated a global system since 2010 under the name “CDP Water Disclosure”, through which companies measure and disclose water management within their own organizational boundaries (withdrawal, discharge, and consumption) as well as their exposure to water sources, water quality, and water stress.

Table 1. Major Global Companies Requesting Water Disclosure from Suppliers

Type of Requirement	Major Companies	Details	Impact on Domestic Suppliers
CDP Water Security	Semiconductors (TSMC, Intel), Consumer goods (L'Oréal, Unilever), IT (Dell), Chemicals (Dow Chemical), Consumer Discretionary (Ford Motor) etc.	Request to respond to CDP Water Security (Requester channel)	All industries
Reflected in supplier standards	Microsoft	Requires suppliers not only to manage water use (monitoring use and wastewater treatment) but also to reduce water consumption	IT, Hardware manufacturing
Supplier program operation	Apple	Implementation of the Clean Water Program; mandatory water disclosure; improved water reuse rates	Semiconductors, Components

- Through its Supplier Code of Conduct, Microsoft requires suppliers to comply with environmental protection rules and regulations in order to cut carbon emissions and water consumption and to minimize waste. In particular, it asks them to document, characterize, and monitor their water use and wastewater treatment
- Through its Supplier Code of Conduct and Supplier Responsibility Standards, Apple requires all suppliers to comply with the relevant regulations and to set targets for reducing water consumption, reusing water, managing wastewater and stormwater, and providing water, sanitation and hygiene (WASH). Suppliers that breach these standards are subject to corrective action
- For water-intensive suppliers located in water-stressed areas, Apple collects water data annually through its Supplier Clean Water Program and requires them to submit water-saving data and a water balance every six months. Whether a supplier publicly discloses its water data is itself a key evaluation metric, and the results are compiled and published in Apple's Environmental Progress Report and its People and Environment in Our Supply Chain Report

Table 2. Comparison of CDP Water Security Responses among Major Companies by Industry¹

Industry	Top Responding Companies in Korea	Top Responding Companies Globally	Major Non-Responding Companies in Korea
IT / Semiconductors	• Samsung Electronics • SK hynix • Samsung Electro-Mechanics	• Microsoft • NVIDIA • Alphabet (Google)	• Hanmi Semiconductor
Consumer Discretionary (Automotive & Batteries)	• Hyundai Motor • Kia • LG Electronics	• Toyota • BMW • Honda	• LG Energy Solution • Hyundai Mobis • HL Mando
Industrials	• Hyundai E&C • Hyundai Rotem • Hanwha	• Siemens • ABB • Robert Bosch	• Hanwha Aerospace • Samsung C&T • HD Hyundai Heavy Industries
Materials	• POSCO Holdings • LG Chem • Lotte Chemical	• BASF • Dow Chemical • Tata Steel	• POSCO Future M • Hyundai Steel • OCI Holdings
Energy & Utilities	• SK Innovation • Korea Western Power	• TotalEnergies • NTPC • EnBW	• KEPCO • KOGAS • SK Gas
Communication Services	• Naver • NCSoft	• Deutsche Telekom • Vodafone • NTT DATA	• SK Telecom • KT • LG Uplus
Financials	• NH Investment & Securities • JB Financial Group	• HSBC • Mitsubishi UFJ • Deutsche Bank	• KB Financial Group • Shinhan Financial Group • Hana Financial Group
Pharmaceutical / Health	• Samsung Biologics • Yuhan	• J&J • Novartis • Pfizer	• Hanmi Pharmaceutical • Chong Kun Dang • HK inno.N
Consumer Staples	• Amorepacific • LG H&H • Lotte Chilsung Beverage	• P&G • Unilever • Danone	• E-Mart • GS Retail • Ottogi

¹ Based on companies that responded to CDP in 2025 and the top one to three companies by market capitalization in each industry. Whether a given company responded is based on CDP's publicly disclosed data

Water Disclosure Requests from Global Financial Institutions and Investors

- As water risk is analyzed as a macroeconomic factor that threatens 7–9% of global GDP, financial institutions are coming to assess it not as a simple environmental issue but as a “systemic financial risk”

- As regulations and frameworks such as the EU CSRD (ESRS E3), IFRS, and TNFD take full effect, investors and financial institutions increasingly require data on a company's water withdrawal, water pollution, and exposure to water-stressed areas in order to value its assets
- Companies that manage water risk poorly, or that are reluctant to disclose information, may be judged unfavorably in future credit ratings, lending terms, and investment screening. In some cases, they may face divestment², falling asset values, and the risk of stranded assets
- Major central banks, including the European Central Bank (ECB) and the Bank of England (BoE), are running climate stress tests on financial institutions that include water risk. This creates a cascade in which the financial institutions answering these tests press the companies they lend to and invest in to disclose water information

Case Study: Water Risk Stress Testing by the BoE and the ECB

- Bank of England (2021): ran a stress test, under a 2050 climate scenario of frequent floods and windstorms, of the impact on general insurers and on mortgage lending for homes in flood-prone areas
 - European Central Bank (2022): ran a one-year stress test assuming severe drought and heatwave, and severe floods across Europe from January 1, 2022, assessing productivity losses in sectors such as construction and farming and flood impacts on residential and commercial real estate, and translating these shocks into bank-level loan losses
 - The Dutch central bank (DNB) has also run a coastal flood stress test, and the Central Bank of Brazil (BCB) has run drought and heavy-rainfall risk stress tests
- CDP Capital Markets Signatories, a global investor initiative of more than 540 institutions representing more than a quarter of all institutional assets, requests disclosure of water-related environmental information through CDP Water Security. It also runs the CDP Non-Disclosure Campaign, in which participating institutions write directly to companies to request the disclosure of water data
 - The OECD Roundtable on Financing Water is a global multi-stakeholder platform for policy and financial governance. It was established jointly by the OECD, the World Water Council (WWC), the Dutch government, the World Bank, and others to mitigate the global economic losses and financial instability that arise from water insecurity³, and to mobilize the water-related investment that is currently lacking
 - Drawing on discussions with CDP, the Network for Greening the Financial System (NGFS), and related bodies, the OECD has recently begun treating water risk as a financial system risk. It has set out a three-step Supervisory Framework through which central banks and financial supervisors

² Responsible Investment: Government Pension Fund Global 2024, Norges Bank (the central bank of Norway), 2025.02

³ Water insecurity: a condition in which water of sufficient quantity and quality is not secured for human health, economic activity, and ecosystem preservation, or in which people are not safe from water-related disasters (floods, droughts, etc.). It can give rise to physical, transition, and liability risks, which in turn act as a fundamental threat to financial stability (Embedding Water-related Risks in Financial Stability Frameworks, OECD Roundtable on Financing Water, 2025)

can use corporate water data to identify risks (Step 1), analyze their economic impact (Step 2), and assess their financial impact (Step 3). This can serve as a basis for financial institutions to factor the water data of borrowers and investees into risk assessment, and to request disclosure

- Alongside these financial supervisory frameworks, the market itself is seeing the spread of sustainability-linked products (SLLs and SLBs) that tie corporate water disclosure data directly to lending terms
- A Sustainability-Linked Loan (SLL) adjusts the interest rate according to whether a company meets water-related KPIs, such as reducing water use or maintaining its CDP Water Security score. The BBVA-Iberdrola SLL was the world's first to link a CDP Water Security score to a KPI. In Korea, the Industrial Bank of Korea (IBK) offers an SME loan product in which reducing water use can be chosen as a KPI

Case Study: Water-KPI-Linked SLLs of BBVA-Iberdrola and the Industrial Bank of Korea (IBK)

BBVA Sustainability-Linked Loan (SLL): EUR 2.5 billion loan to Iberdrola

- KPIs: Water consumption in energy generation, with a 50% reduction target by 2030; and its CDP Water Security score which assesses disclosure, awareness, and management of water risks, as well as best practices
- Incentive: a sustainability margin discount if target levels are met, a premium if they are not

IBK SME loans: 189.5 billion KRW lent in total to 363 manufacturing and service companies

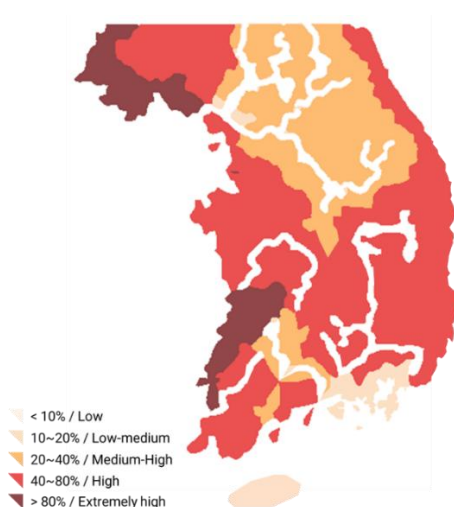
- KPI: reduction in water use (optional; one of nine KPIs)
- Incentive: one-way incentive if achieved (interest rate reduction of up to 100 bp)

2. Current Status of Water Risk

- A recent report by UNU-INWEH warned that the world has entered an era of "Global Water Bankruptcy," crossing an irreversible threshold well beyond simple water stress or a temporary crisis. This suggests that the depletion of basin water resources and the destruction of ecosystems have become chronic. Water risk is therefore materializing across industries and has escalated into a core financial risk that bears directly procurement costs and production continuity
 - During Taiwan's 2021 drought, water shortages turned water risk into a real threat of halted semiconductor production at TSMC, and in 2022 POSCO was forced to suspend operations after Typhoon Hinnamnor flooded its production lines
 - In 2022–2023, the Gwangju and Jeonnam region suffered its longest drought on record, and water levels fell sharply at the Juam and Dongbok Dams, which supply the region's industrial water. No full-scale shutdowns followed, but in its 2023 Q1 Regional Economic Trends Report the Yeosu Chamber of Commerce and Industry cited drought-driven water shortages as one factor behind a 9% decline in output and exports

- In Gangneung in 2025, an extreme drought drove Obong Reservoir — the city's main water source and the supplier of 86% of its domestic and industrial water — to a record low storage level of 11.5%, prompting the first disaster declaration ever issued in Korea for a drought
- Water risk of this kind is no longer an exceptional event affecting a few companies or regions; it is emerging as a practical risk that industry across Korea must manage. According to 2025 CDP data, 77% of domestic respondents identified substantive water risks, and the physical risks they named were, in order, floods (51 cases), water stress (48 cases), and droughts (39 cases), with multiple responses allowed
- Korea is geographically a highly water-stressed⁴ country, and the location of its water-intensive industries carries structural vulnerabilities
- In June, when summer water demand and rainfall variability both rise, most of the country falls into the High grade or above on WRI Aqueduct's monthly water stress indicator

Figure 1. WRI Aqueduct Water Stress Map (Korea, June)



- Against this geographic backdrop, a new industrial complex on this scale needs water infrastructure built out to match it — yet the Yongin Semiconductor Cluster, an investment of more than 900 trillion KRW (Samsung Electronics' 360 trillion KRW national industrial complex and SK hynix's 600 trillion KRW general industrial complex, per Yongin City's December 2025 announcement), is already moving ahead, and the water risk that follows is a live concern

⁴ Water Stress (Baseline Water Stress) refers to the ratio of actual water withdrawn for human activities (industrial, agricultural, and domestic use) to the renewable water resources naturally circulating and replenished within a given basin. Under international standards such as WRI's, areas where this ratio is 40% or higher are rated "High Stress."

Case Study: Yongin Semiconductor Cluster — Water Risk at Korea's Largest Industrial Water User

- The Yongin Semiconductor Cluster is expected to become Korea's largest industrial water user, with full build-out demand estimated at roughly 1.7 million m³/day⁵
- (Physical risk) Key water-source systems for the cluster — Soyang, Chungju, and Hwacheon dams — as well as major semiconductor production and demand centers including Yongin, Hwaseong, and Pyeongtaek, are rated Medium-High for water stress under WRI Aqueduct. This indicates elevated water stress across both the supply and demand sides of the semiconductor water system.
- (Structural risk) The first phase relies partly on reallocating existing supply, including reductions of 120,000 m³/day in Hwaseong and 110,000 m³/day in Pyeongtaek, creating potential for inter-regional conflict. Of the 762,000 m³/day planned for the second phase by 2035, 454,000 m³/day depends on converting hydropower water from Hwacheon Dam and 308,000 m³/day on the Soyang and Chungju dam systems. The Hwacheon conversion remains uncertain because it requires local consent and agreement on compensation.
- The delay risk has already materialized. At the Yongin general industrial complex (SK hynix), construction of the water pipeline laying from the Yeoju Weir on the Namhan River to the site was held up by permitting and regional-benefit disputes with Yeoju City
- Even if the government's full supply plan of 1.337 million m³/day, including 265,000 m³/day from the Yeoju Weir, is secured, it still falls more 363,000 m³/day short of estimated full build-out demand. Any delay in the Hwacheon conversion would further increase risks to both project stability and equitable regional water allocation

3. Financial Impact of Water Risk

- Locating operations in water-stressed areas of this kind is not merely an environmental issue. It reduces the stability of water withdrawal and raises the cost of responding, and so is turning into real financial risk
- According to 2025 CDP data, 49% of domestic respondents withdraw water in water-stressed areas. Among major Korean companies, water withdrawal rose 21% over the five years from 2020 to 2024, from 725,367 to 876,167 megaliters (ML), and discharge rose 17%, from 483,125 to 565,517 ML. The discharge-to-withdrawal ratio fell by an annual average of 0.52 percentage points, which suggests that a growing share of the water withdrawn is not returned, being consumed on site, lost to evaporation, or embedded in products
- Measured by the average share of water withdrawn in water-stressed areas, exposure exceeds 50% in pharmaceutical/health (88.5%), industrials (61.2%), IT (60.4%), and consumer

⁵ Policy Initiative: There Is No Available Water in the Han River, Gyeonggi Research Institute (Sep. 2024). The 1.7 million m³/day figure refers to estimated full build-out demand and is not directly comparable with the government's committed supply plan of 1.337 million m³/day; the gap shown here is the difference between the two

discretionary (50.8%). Korea's core export industries are therefore structurally exposed to water risk

- Semiconductors, batteries, and steel — the industries at the heart of Korea's export portfolio — are rated "Critical/Very high" on the CDP Water Impact Index, meaning that their water impact is very high or that they are vulnerable to it. This points to an industrial structure heavily dependent on water

Table 3. Share of Water Withdrawal in Water-Stressed Areas by Industry
(2025 CDP; water-stressed areas defined as above 40% under WRI)

Industry	Share (%) ¹	Risk Level
Pharmaceutical / Health	88.5	Very high
Industrials	61.2	High
IT	60.4	High
Consumer Discretionary	50.8	High
Energy	49.1	Moderately high
Materials	35.6	Medium
Consumer Staples	29.6	Low-Medium
Utilities	2.3	-

¹ Compiled from 2025 CDP data for domestic respondents

- Domestic companies show higher water risk exposure than the global average, but their level of financial quantification appears relatively low compared with climate change risk. According to the 2025 CDP Korea Report, the average financial impact per reported water risk was approximately 33 million KRW, a wide gap from the roughly 11.4 billion KRW reported per climate change risk⁶. This indicates that the financial quantification of water risk is still at an early stage relative to climate change, and that the risks may be under-identified or under-assessed
- Water-related CapEx at domestic companies rose 95.0% year on year, behind Japan's 110.4% but well above the global average of 56%. This suggests that capital investment tied to water risk is already expanding

⁶ Based on the 2025 CDP Korea Report, 77% of companies responding on water risk reported a total of 88 cases; the figure is the financial impact divided by the number of cases reported for the reporting year. For climate change risk, 93% of respondents reported a total of 642 cases, using the same calculation method

- CDP data also show the financial upside of treating water risk management as an opportunity. The expected long-term financial impact of water recycling and reuse reaches approximately 2.7 trillion KRW, the highest of any water opportunity type. Companies recognize that proactive water management can open medium- to long-term financial opportunities rather than simply absorb costs
- All of the financial impact figures above are self-assessed by companies that responded to CDP voluntarily, which makes disclosure itself the starting point for measuring risk and making it visible. A risk that is not disclosed cannot be measured, managed, or communicated
- Taking into account the water dependence of their industrial portfolios and the response costs they are already incurring, Korean companies' exposure to water risk appears to be above the global average⁷
- As these risks become visible, stakeholders — investors, customers, and financial institutions — have begun to demand disclosure in earnest, and this forms the basis on which the global disclosure and financial mechanisms discussed in the next section operate

4. Trends in Water Disclosure Regulation

- The water risks and financial impacts reviewed above become manageable information only once disclosure measures them and makes them visible. In the global regulatory environment, led by the EU, water-related information is being built into sustainability disclosure as a core item, whereas Korea remains at a stage centered on voluntary disclosure

Global: Mandatory ESRS E3 Water Disclosure and Alignment with TNFD and IFRS

- ESRS E3 is the standard that companies subject to the CSRD (Corporate Sustainability Reporting Directive) use when disclosing information on water and marine resources. Its detailed disclosure requirements apply only where a company determines, through a materiality assessment, that it has a material impact on water and marine resources or that related risks and opportunities exist
- The current ESRS E3 sets out five main disclosure requirements: policies (E3-1), actions and resources (E3-2), targets (E3-3), water consumption (E3-4), and anticipated financial effects (E3-5)
- ESRS E3-4 requires companies to disclose total water consumption in their own operations, water consumption in areas at water risk, water recycled and reused, water stored and changes in storage, and water intensity relative to net revenue

⁷ Based on 2025 CDP respondents, the average share of water withdrawal in water-stressed areas is calculated at 49% for domestic companies and 42% globally

[Reference] Excerpt from ESRS E3-4 – Water Consumption (as of November 2025)

[Example of disclosure standard] Disclosure Requirement E3-4 – Water consumption

26 The undertaking shall disclose information on its **water consumption performance** related to its **material impacts, risks and opportunities**

27 The objective of this Disclosure Requirement is to provide an understanding of the undertaking's **water consumption and any progress by the undertaking in relation to its targets**

28 The disclosure required by paragraph 26 relates to own operations and shall include:

- (a) total **water consumption** in m³;
- (b) total **water consumption** in m³ in **areas at water risk, including areas of high water stress**;
- (c) total water recycled and reused in m³;
- (d) total water stored and changes in storage in m³; and
- (e) any contextual information necessary regarding points (a) to (d), including the water basins' water quality and quantity, how the data have been compiled, such as any standards, methodologies, and assumptions used, including whether the information is calculated, estimated, modelled, or sourced from direct measurements, and the approach taken for this, such as the use of any sector-specific factors

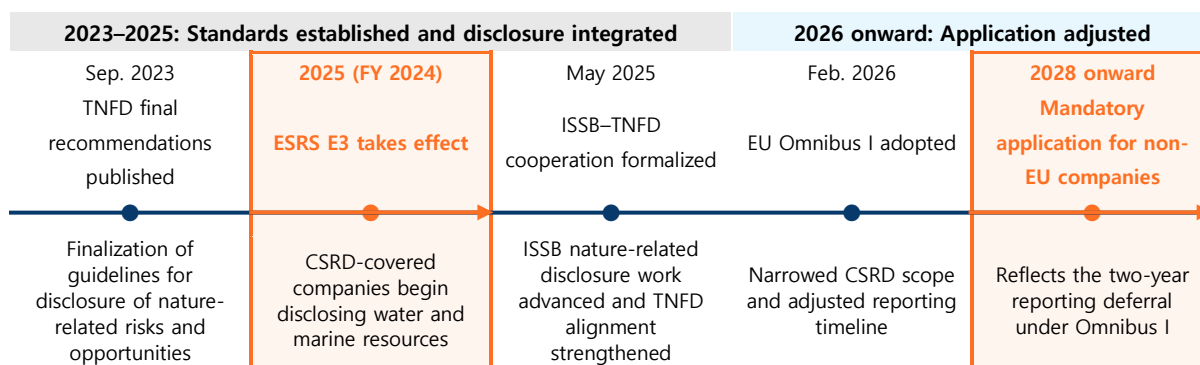
29 The undertaking shall provide information on its **water intensity: total water consumption in its own operations in m³ per million EUR net revenues**

- The EU Omnibus I has adjusted both the scope of the CSRD and its reporting timeline. The companies covered are (1) large EU companies with more than 1,000 employees and net turnover above EUR 450 million, and (2) non-EU companies with net turnover in the EU above EUR 450 million whose EU subsidiaries or branches generate turnover above EUR 200 million
- Under the "Stop-the-clock" measure, the reporting start dates for large companies and listed SMEs that have not yet begun CSRD reporting have been postponed by two years
- For the scope and reporting timeline of the CSRD, this issue brief reflects the EU Omnibus I adopted and in force in 2026, as of April 30, 2026. For the detailed disclosure requirements of ESRS E3, it follows the current ESRS standards in the Knowledge Hub of EFRAG (the European Financial Reporting Advisory Group). Should the Draft Simplified ESRS⁸ that EFRAG published in December 2025 later be adopted by the EC (European Commission), the paragraph structure and detailed disclosure items of ESRS E3 may change in part
- TNFD is a voluntary framework for disclosing nature-related risks and opportunities. Drawing on TNFD and other existing nature disclosure frameworks, the ISSB is developing nature-related disclosure guidance linked to IFRS S1 and S2. TNFD will pause new guidance development after completing its current work by Q3 2026
- As of April 2026, the ISSB has decided not to issue a separate mandatory standard on nature-related disclosure straight away, and to develop instead a non-mandatory IFRS Practice Statement

⁸ The Draft Simplified ESRS published by EFRAG in December 2025 is not yet a final standard adopted by the EC; this material is therefore organized based on the currently applicable 2023 ESRS. EFRAG has stated that it will not issue separate implementation guidance on the Draft Simplified ESRS until it is adopted by the EC

that guides companies applying IFRS S1 on how to identify and disclose nature-related risks and opportunities. This does not mean that nature-related information is unimportant. It can be seen as a step toward application guidance, so that nature-related risks and opportunities can be disclosed consistently within the existing principles of IFRS S1. The ISSB plans to publish an exposure draft of the Practice Statement in October 2026

Figure 2. Key Timeline of Global Water Disclosure Mandates (2023 onward)



- In sum, global water reporting is moving from a voluntary footing into statutory sustainability disclosure systems. With the EU CSRD as the starting point, non-EU companies may fall within the direct reach of these rules, and even companies that do not meet the applicable thresholds are increasingly likely to face disclosure requests through supply chains, investors, and financial institutions

Korea: Primarily Voluntary Disclosure

- CDP Water Security: the number of Korean respondents rose steadily for years but has stalled and then fallen over the last three (135 in 2023, 116 in 2024, and 113 in 2025). Globally, the number kept rising over the same period (4,815 in 2023, 9,666 in 2024, and 9,922 in 2025)
- Institutionally, Korea captures some water-related information through its green taxonomy and its environmental information disclosure system, but this amounts to partial reporting by public institutions and certain listed companies and differs from the scope required by global water disclosure standards. Korea therefore remains within a system centered on public institutions and voluntary disclosure, with no integrated, mandatory water disclosure rules for private-sector companies

[Reference] Current Status of Domestic Water-Related Disclosure Systems

- **Korean Green Taxonomy (K-Taxonomy, 한국형 녹색분류체계)**: includes “the sustainable conservation of water” as one of six environmental objectives and classifies eight water-related economic activities as green: water supply, water demand management, sewage and wastewater and livestock manure treatment, groundwater pollution prevention and remediation, use of runoff groundwater, water reuse, alternative water resources, and non-point source pollution reduction. It imposes no direct disclosure obligation
- **Integrated Disclosure of Public Institutions (공공기관 ALIO 통합공시)**: divides environment disclosure into air, resources, and environmental protection; the resource category includes energy use, waste generation, and water use
- **Environmental Information Disclosure System (환경정보공개제도)**: covers 1,971 companies and institutions across 4,247 business sites (end-2025), including public institutions, companies subject to GHG target management, companies allocated emission allowances under the emissions trading scheme(ETS), and listed companies with total assets of 2 trillion KRW or more. Disclosure requirements vary by sector from 19 to 27; manufacturing and other industries disclose 27 items (13 mandatory and 14 voluntary), including water use. It does not apply to all private companies

5. Implications: Response Priorities for Korean Companies

- As mandatory global disclosure gets under way, companies must satisfy the requirements of several frameworks at once: ESRS E3 (mandatory, where applicable), TNFD (investor demand), GRI 303 (the water-related sustainability reporting standard, driven by supply chain requests), and IFRS S2 (climate-linked). Because each framework differs in its data items, formats, and timing, answering them one by one drives up reporting costs and administrative burden
- In this fragmented disclosure environment, companies have two broad options: (1) responding to each framework individually, or (2) using an integrated response channel. CDP Water Security is the leading example of the latter

CDP Water Security

- **Disclosure alignment**: a single dataset can address requirements under ESRS, GRI, TNFD, and IFRS
- **Universality**: its standardized global structure allows comparison across companies regardless of industry or size
- **Usability for customers and investors**: global customers and investors can view response data directly through the CDP Requester portal

- **Scoring:** companies are assigned a score from A to D-, which feeds directly into the ESG assessments of investors and financial institutions and is published annually on the CDP website
- **Public availability:** public responses and the CDP platform improve access to information for investors, regulators, and customers

Table 4. Coverage of Global Water Disclosure Frameworks through CDP Water Security

Framework	Type	Key Requirements	Alignment with CDP Water Security ¹
ESRS E3 (EU CSRD)	Legal obligation	Withdrawal and consumption volumes, financial impacts, targets, policies	~50%
GRI 303	De facto standard	All items on withdrawal, discharge, and consumption	~80%
TNFD	Voluntary (being integrated into IFRS)	Freshwater Strategy A/B/D; Metrics A/B/C (LEAP approach)	~60%
IFRS S2	Climate disclosure standard	Financial impacts of physical risks; governance	~50%

¹ These alignment levels are not official figures published by any standard-setter. They are KoSIF's own estimates, based on an item-by-item comparison of the CDP Water Security questionnaire against the main disclosure requirements of each framework, and should be read as a reference for gauging how much ground a company can cover in practice

- A single CDP Water Security response can satisfy the core requirements of ESRS E3, TNFD, GRI 303, and IFRS S2 at once, which makes it a highly useful route to meeting mandatory global disclosure

Conclusion

- Considering together the makeup of Korean companies' industrial portfolios, the scale of the financial impact from water risk, and the move toward mandatory global disclosure, building a system to measure, manage, and communicate water risk is no longer a voluntary choice; it is becoming a basic condition of global competitiveness
- Where multiple disclosure frameworks coexist, an integrated channel that meets mandatory global requirements while minimizing a company's reporting burden is worth considering as a cost-effective strategy. Given how exposed Korean industry is to water risk, this is the moment when moving early on water disclosure can secure a strategic advantage
- As the BBVA-Iberdrola SLL and IBK's SME ESG SLL show, water disclosure data is already tied directly to the KPIs of financial products such as SLLs. Water disclosure is turning from a cost into a way of lowering financing costs
- Ultimately, water disclosure has shifted from a question of "whether to do it" to a question of "how to do it." A company's rational selection criteria converge on three axes: (1) integration across multiple frameworks, (2) alignment with global standards, and (3) universality regardless of industry and size. A channel that satisfies multi-layered disclosure requirements with a single response can be seen as a realistic way to manage reporting costs, administrative burden, and evaluation risk together
- 2026 and 2027, when mandatory global disclosure takes full effect, are expected to be a turning point for how Korean companies respond on water. Moving early goes beyond mere regulatory compliance: it is a strategic means of securing supply chain trust, investor communication, and competitiveness in financing, and an opportunity for Korean companies to lead the global disclosure trend

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