

Expert Session

Water risk across asset classes

June 10th, 2021



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Expert speakers & agenda



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A TRANSFORMATIONAL FRAMEWORK FOR WATER RISK

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10 June 2021



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WATER RISK IS LINKED TO OTHER SUSTAINABILITY ISSUES

Water risk

- Water is a **scarce** resource
- **Extreme weather events** have water at their heart
- **Untreated** water and its impact on human health, biodiversity and climate change
- **Water risks have been exported** to emerging markets
- Water-related investments can be **unattractive**
- Water is **not priced correctly**

Climate change

- Climate change endangers **food security**
- **Sea level rise**, storms and floods threaten water-infrastructure
- **Oceans** are the single largest tank for CO₂ emissions¹ while carbon sinks in forests are being lost

Biodiversity loss

- Climate, pollution and changes in land and sea use are contributing to species loss
- **Freshwater species' populations have declined by 84% since 1970** compared to a 68% drop across all species²
- **70% of terrestrial biodiversity loss** is as a result of agriculture production²
- Agriculture accounts for 70% of freshwater withdrawals³

¹ Science (May 2019). The oceanic sink for anthropogenic CO₂ from 1994 to 2007; ² WWF (September 2020). Living Planet Report 2020; FAO (2017). Water for sustainable food and agriculture Source: DWS Investments GmbH (June 2021)

THE FINANCIAL MATERIALITY OF WATER RISK



- 51% of the world's population, 46% of global GDP and 40% of global grain production are forecast to be in areas facing high water risk by 2050¹
- The 100 cities expected to suffer the greatest rise in water risk by 2050, from Beijing, Jakarta, Johannesburg to Istanbul, Hong Kong and Rio de Janeiro, are home to at least 350 million people²
- Floods caused US\$45.9 billion in economic losses in 2019 with cumulative losses of over US\$1 trillion since 1980³
- Over 50% of the holdings in the S&P 500, Russell 3000, MSCI World and MSCI Emerging Markets indices were found to be in industries of medium to high water risk and notably those in the oil & gas, chemicals, semiconductors, food and beverage sectors⁴
- Companies risk losing up to a combined US\$301 billion in business value if they do not address water risks⁵
- 2.2 billion people do not have access to safe drinking water despite the United Nations declaration of the human right to water⁶

¹ WWF Water Risk Filter scenarios; World Development Report 2019; ² WWF (October 2020). Cities face alarming rise in water risks and must urgently invest in greater resilience; ³ WRI (April 2020). New data shows millions of people, trillions in property at risk from flooding; ⁴ Ceres (2017). Water footprinting analysis of major global indices; ⁵ CDP (April 2021). A wave of change: The role of companies in building a water-secure world; ⁶ WHO (June 2019). WHO and UNICEF update estimates for water, sanitation and hygiene

Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

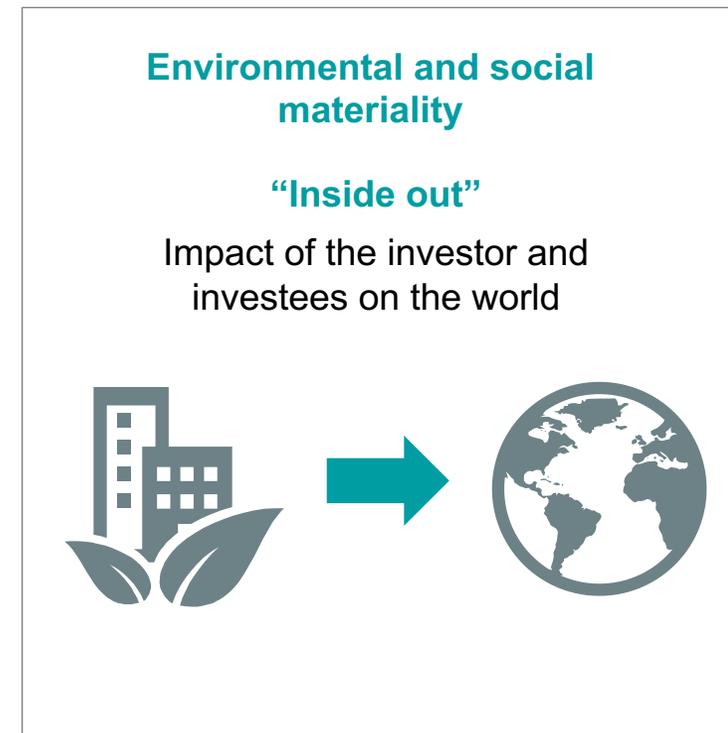
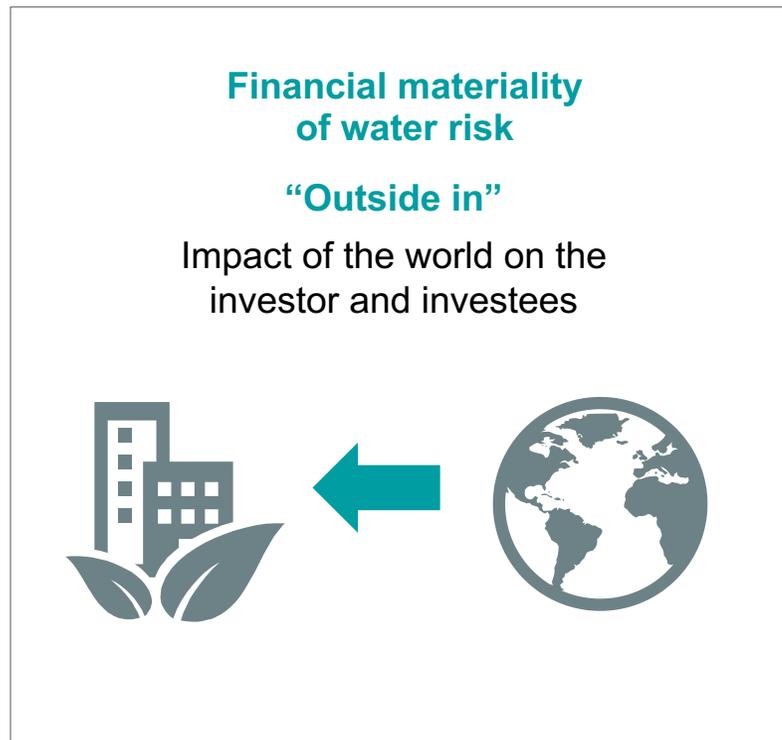
ADDRESSING THE CHALLENGES OF WATER RISK



- The **fragmented nature of water regulation**. 50 years after the EU's Charter on Water Resources, only marginal progress has been made on improving water risk
- The **characteristics of water investments**, which have long asset lives, low cash returns, high capital intensity and high financial leverage
- Misplaced belief that water is plentiful and cheap and **water risks are often offshored or ignored**
- **Little economic incentive** in buying ESG products or impact products in a world where investment product fees are important
- **Insufficient disclosure** and data providers who are unregulated and conflicted
- **Population growth and climate change** are making a bad situation even worse
- The importance of such issues demonstrates why **we need to change the mind-set of water** and move from a linear model of access to a circular life-cycle approach where the costs through the cycle are taken into account

Source: DWS Research Institute (November 2020). A transformational framework for water risk www.dws.com/insights/global-research-institute/a-transformational-framework-for-water-risk/; Forecasts are not a reliable indicator of future performance. Forecasts are based on assumptions, estimates, views and hypothetical models or analyses, which might prove inaccurate or incorrect.

MOVING FROM A RISK MANAGEMENT TO IMPACT APPROACH



Source: DWS Investments GmbH (June 2021)

WATER RISK FROM AN ASSET CLASS PERSPECTIVE



Strategy	Effective if...	Certainty of real world change
Impact or real asset investing	Focused where additional capital may make a difference	High
Equity engagement	Pursues realistic change with the correct targets, with sufficient depth	High
Fixed income tilting or divestment	The debt cost of capital for laggard companies may increase due to investors shunning their bonds, and if the debt cost of capital reduces for leading companies	Medium
Fixed income engagement	Sufficiently broad and deep engagement by investors, stronger fixed income investor rights	Medium
Sovereign bond engagement	Sufficiently broad and deep engagement by investors with governments	Medium
Equity tilting or divestment	Policy is made public and leads to a potential societal shift	Low
Equity best-in-class	Corporates change policies and capex decisions in response to investors	Low

Source: DWS analysis based on Preventable Surprises, June 2018

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BUILDING A TRANSFORMATIONAL FRAMEWORK



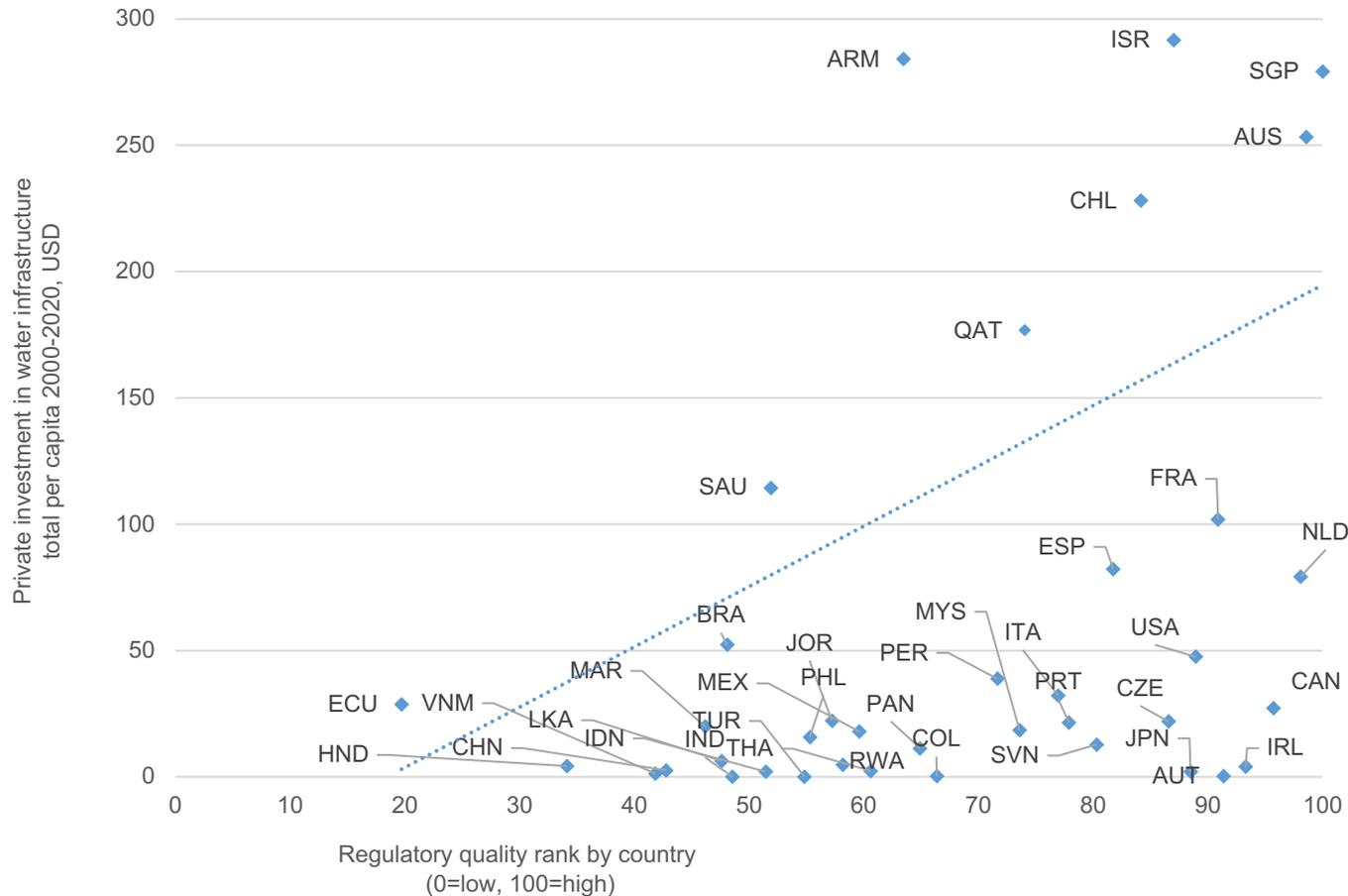
- We need to reassess and redefine the roles of the different functions along the ‘investment chain’ by bringing back the concept of the separation of powers:
 - **Governments should legislate:** using the EU Water Charter to guide policies
 - **Accountants should measure:** We need a full ESG Globally Accepted Accounting Principles (GAAP) with auditing of countries, companies and investors regarding their fully environmental and social impacts
 - **Investors should invest:** implement an investment framework across all asset classes with a clear distinction between ‘do nothing’, ESG integration (outside-in) and impact/transformational investment (inside out)
- Governments should apply a ‘sustainability fee’ to investment products that are not addressing the sustainability challenge

Source: DWS Research Institute (November 2020). A transformational framework for water risk <https://www.dws.com/en-gb/insights/global-research-institute/a-transformational-framework-for-water-risk/>
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GOVERNANCE, REGULATION AND PRIVATE CAPITAL



Regulatory quality* and private investment in water infrastructure



- The positive correlation between the quality and stability of regulation and private investment in water infrastructure

* Regulatory Quality captures perceptions of the ability of the government to formulate and implement sound policies and regulations that permit and promote private sector development. Percentile rank indicates the country's rank among all countries covered by the aggregate indicator, with 0 corresponding to lowest rank, and 100 to highest rank. Interactive tools for exploring the data, and full access to the underlying source data available at www.govindicators.org

Source: DWS Infrastructure Research (January 2021). The Shape of Water Infrastructure. How Governance, Regulation and Private Capital May Help Address the Global Water Security Challenge
 UK: Regulatory quality score 93.75; Private investment in water infrastructure total per capita USD808



Q&A

Michael Lewis





Valuing Water for Investors



Ambika Jindal, Lead Valuing Water Initiative
Water Risk across asset classes
10 June 2021

The UN Valuing Water Principles



Recognize and embrace water's multiple values to different groups and interests in all decisions affecting water.



Reconcile values and build trust – conduct all processes to reconcile values in ways that are equitable, transparent and inclusive.



Protect the sources, including watersheds, rivers, aquifers, associated ecosystems, and used water flows for current and future generations.



Educate to empower – promote education and awareness among all stakeholders about the intrinsic value of water and its essential role in all aspects of life.



Invest and innovate – ensure adequate investment in institutions, infrastructure, information and innovation to realize the many benefits derived from water and reduce risks.



The Valuing Water Initiative



Creating a **value proposition** to mobilize atypical and mainstream actors towards better decisions



Seeking **collaboration** to build on the work of others like partners rather than compete



Focusing on **realistic and pragmatic** areas of work

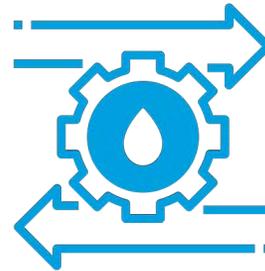


Looking at old things with a systemic change and values lens to gain **lessons learned** on bringing transformation

PRINCIPLES



SYSTEMIC CHANGE



DEEPLY PERSONAL



Have you ever felt this way

- ⦿ Water security is what governments need to do.
- ⦿ SDG 6, water security for all is about access to toilets and taps- that's not what investors do. That's what taxes are for.
- ⦿ I can invest in some water solutions but only if they're large enough, fit in my risk appetite and are financially sound. Somebody needs to make these bankable.
- ⦿ Extreme water events are too rare to make any impacts in the models we use to make decisions.
- ⦿ We are focussing on climate and thinking of biodiversity. I don't have time to add another topic.



What happens when governments fail

WALL STREET IS ABOUT TO START TRADING WATER FOR THE FIRST TIME



CDP: Water risk costs for corporates five times higher than cost of action

1 March 2021, source [edie newsroom](#)

Some \$301bn of business value is at risk because of water stewardship challenges, yet it would take corporates just \$55bn to deliver appropriate mitigation and adaptation initiatives.

WORLD | LATIN AMERICA

Vale Agrees to \$7 Billion Settlement for Brumadinho Dam Collapse

Biggest settlement in Brazil's history seen as victory against impunity following disaster that killed 270 people

BUSINESS | ASIA

Coca-Cola Closes Plant in India

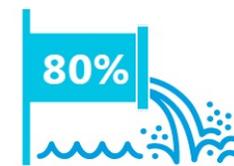
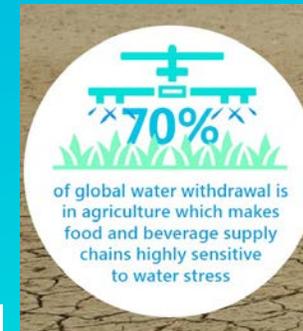
Activists had campaigned against facility, claiming it depleted groundwater in region and hurt local agriculture



3 bn
people affected
by floods and
droughts from
2001-2018



\$38.5 billion in
company losses due
to water challenges
in 2018



80%
of wastewater
flows back into the
ecosystem without
being treated
or reused



2.2
billion people lack
access to safely
managed drinking
water services



How is VWI mobilizing investors



- © With **Ceres**, **The Valuing Water Finance Task Force** endorse and communicate the Valuing Water Principles into actionable, investor-backed expectations for companies. This work will spark a large-scale global investor campaign and ensure thousands of companies are acting on the Valuing Water Expectations for Companies.
- © With **CDP** and **Water Footprint Network**, we are developing and implementing a new water-related disclosure framework for action and accountability focused on the financial sector, aligned with and beyond the TCFD recommendations. This will help to rank financiers, promote leaders and boost ambition amongst laggards.

Valuing Water Finance Taskforce: AustralianSuper, California State Controller Betty T. Yee, California State Teachers Retirement System (CalSTRS), Cathay Financial Holdings, Cathay Life Insurance, Government Employees Pension Fund of South Africa (GEPF), HESTA, Illinois State Treasurer Michael W. Frerichs, Local Authority Pension Fund Forum (LAPFF), New York State Comptroller Thomas P. DiNapoli, New York State Common Retirement Fund, New York City Comptroller Scott M. Stringer, PGGM Investments, Sweden's Sjunde AP-fonden (AP7), Sweden's Skandinaviska Enskilda Banken (SEB)



Because what VWI wants you to feel is

- © I see companies losing their license to operate, paying huge fines and having to move operations because they're running out of water. We need to set some investment criteria around this.
- © Water is not an isolated topic. Without water security, the financial profits I rely on are at risk- especially with companies in thirsty sectors like food, beverage, mining, textile, energy.
- © Washing hands was the first line of defense to keep company workforces healthy. Without water, they stood no chance. We have to engage with companies to ensure their workforces and supply chains are resilient and healthy.
- © Regulators and disclosures are increasingly asking questions about how we engage on water. We need to ensure we stay ahead of our peers





Government of the Netherlands

Questions..?

Thank you

**Valuing
Water
Initiative**



Contact: Ambika Jindal
Ambika.Jindal@minbuza.nl



Q&A

Ambika Jindal



Data, data everywhere!

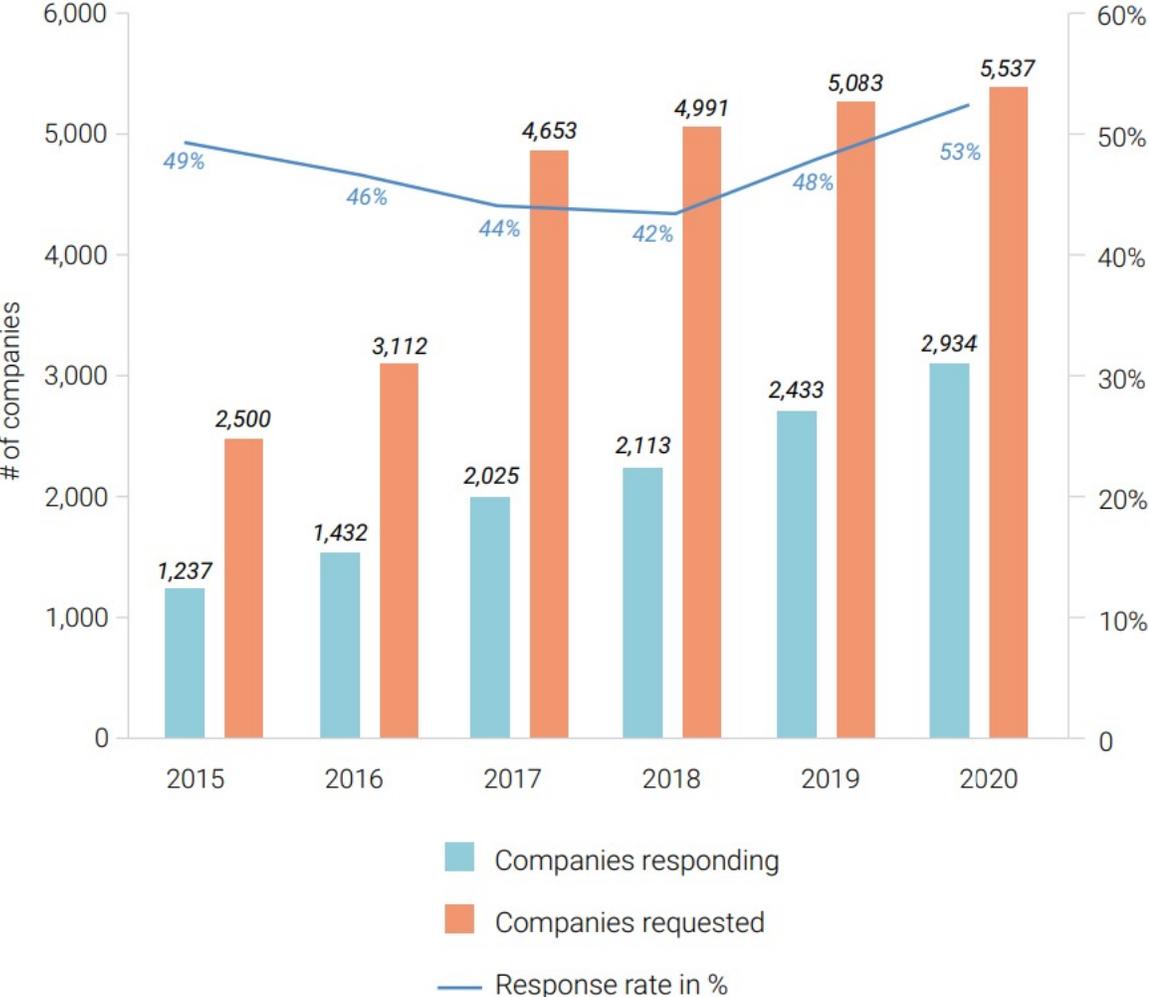
June, 2021

Cate Lamb – Global Director, Water Security

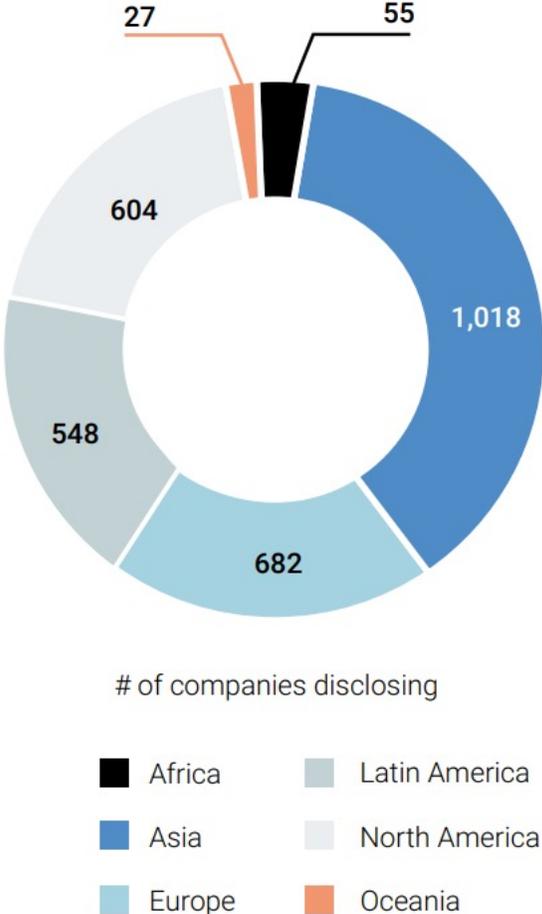
STATE OF WATER DISCLOSURE 2020



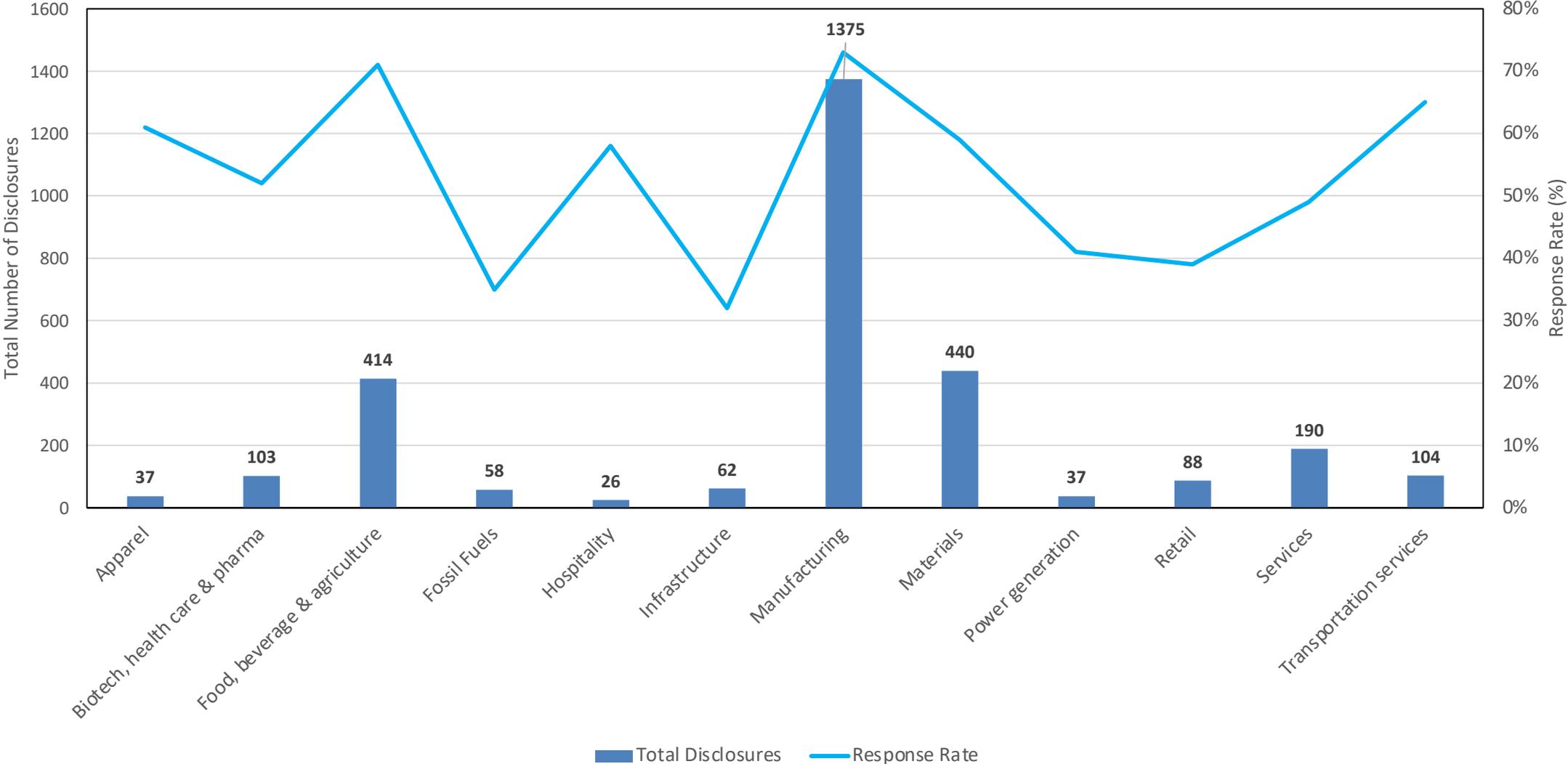
Disclosure response rate 2015-2020



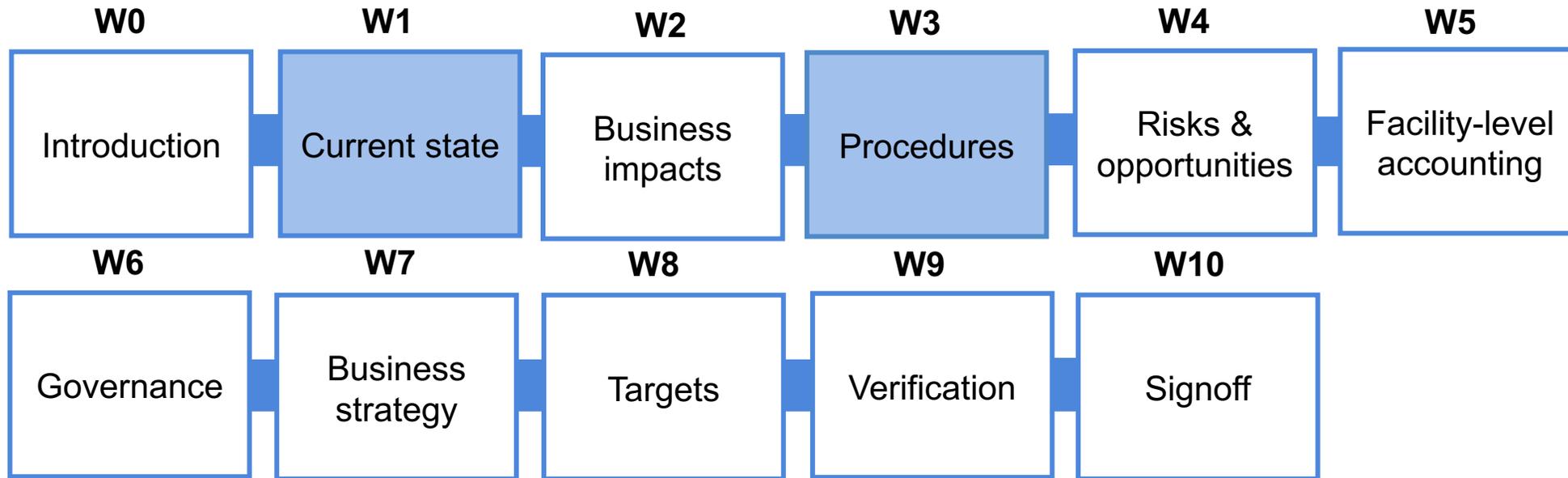
Disclosure per region in 2020



DISCLOSURE RATE PER SECTOR 2020



CDP'S WATER SECURITY QUESTIONNAIRE: a framework for action on water stewardship



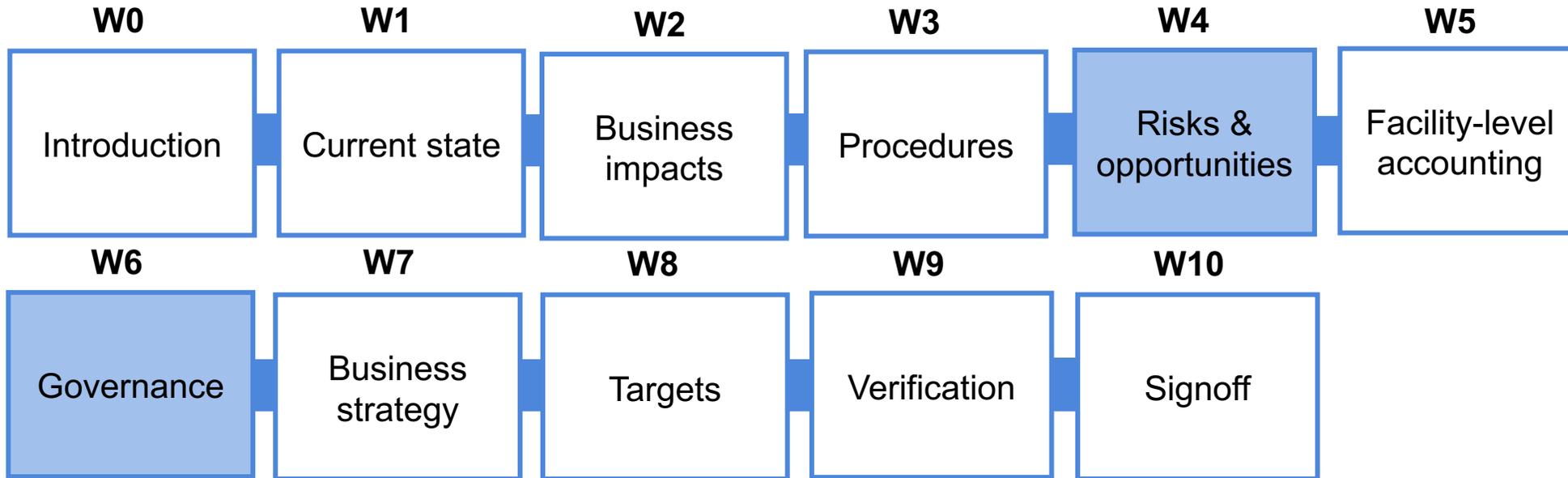
Current state:

- Dependence
- Company-wide water accounting
- Value chain engagement

Procedures:

- Water-related risk assessment?
 - ✓ Yes: describe process
 - ✓ No: explain why

CDP'S WATER SECURITY QUESTIONNAIRE: a framework for action on water stewardship



▼ Risks & Opportunities:

- Definition of substantive risk
- Water-related risks and response
- Water-related opportunities

▼ Governance:

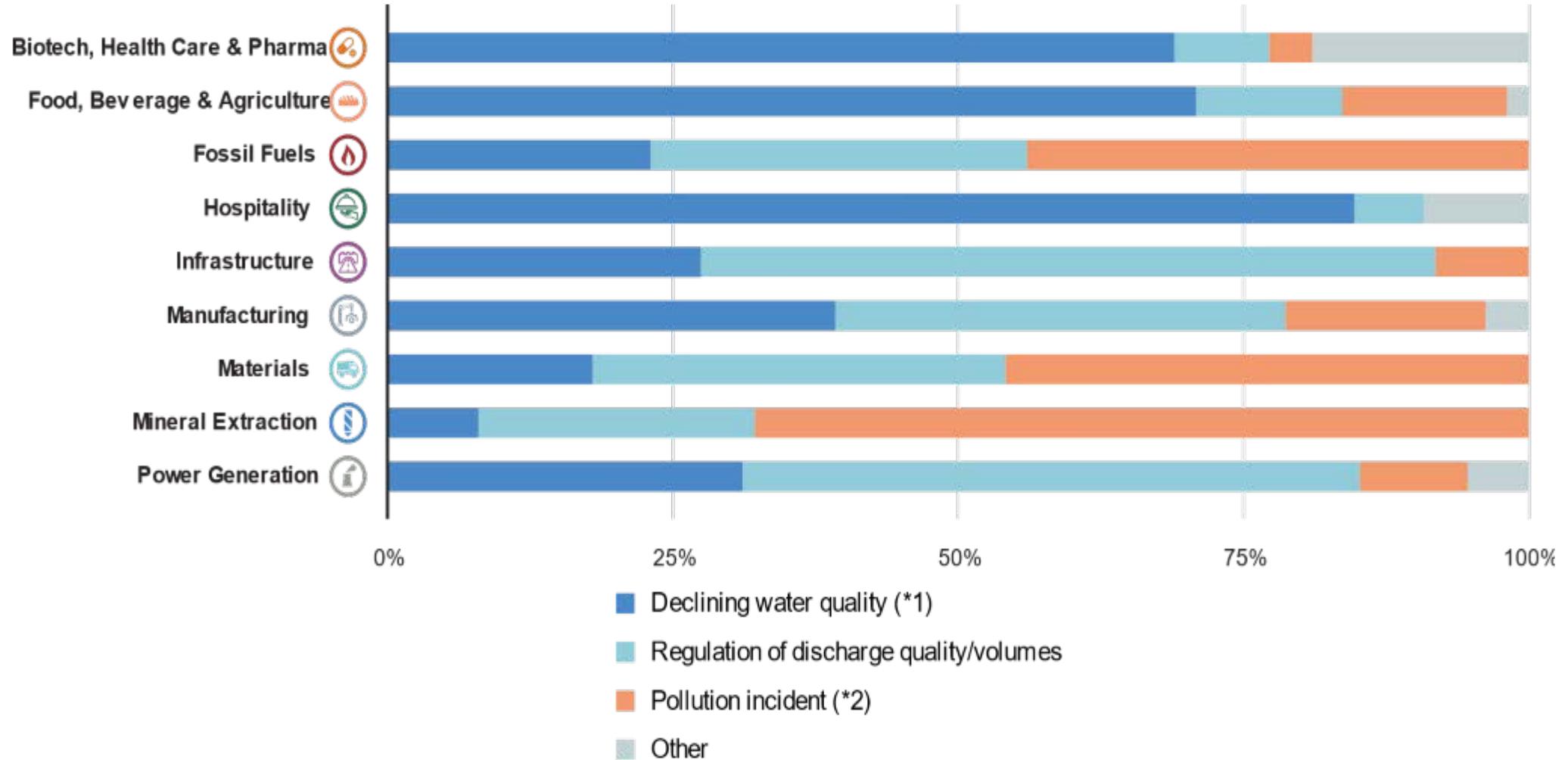
- Company's water policy
- Board oversight
- Employee incentives

FINANCIAL IMPLICATIONS CAN BE HUGE

- ▼ Vale Brumadinho Dam Collapse Brazil 2019, Clean-up costs US\$ 4.7 bn
- ▼ Tech Resources: plan US\$ 450-700m to mitigate pollution in Elk Valley, Canada
- ▼ Duke Energy Corporation: US\$ 4.4bn potential closure costs in response to coal ash regulations



CDP DATA INSIGHTS



CDP SCORES – A SINGLE INDICATOR OF PERFORMANCE



- ▼ Public methodologies incentivize and guide responders
- ▼ A to F scores published on CDP website
- ▼ Each responder and authority issued a feedback chart
- ▼ Scores are integrated into mainstream financial products e.g. Goldman Sachs CDP Environment World index

WATER 2018 CDP SCORE REPORT

OVERVIEW

With the largest and most complete collection of self-reported corporate water information, CDP is able to support companies facing challenges posed by water insecurity. The CDP Score Reports allows companies to benchmark and compare their environmental performance against peers, in order to continuously improve their environmental management. Investors will additionally receive a copy of the CDP Score report, where the score achieved by each company is comparable to companies from its region and sector.

COMPANY PROFILE

Region	
Country	USA
CDP Program	Investor
Sector	Electric Utilities
Questionnaire	Electric Utilities

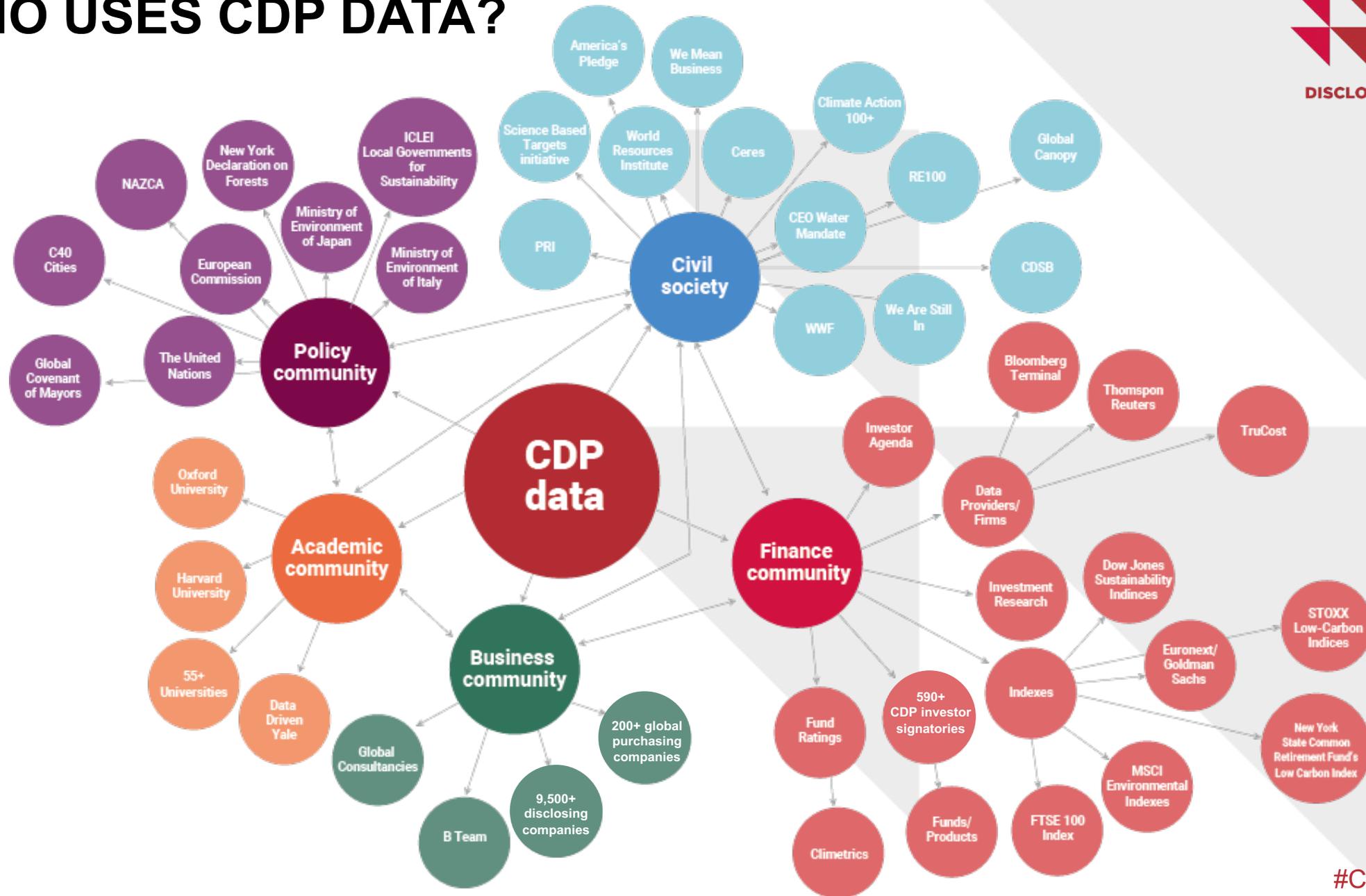
YOUR CDP WATER SCORE

MANAGEMENT B

Sector average: B
Regional average: A-

Understanding your CDP score. Your Scoring Level (Disclosure, Awareness, Management, Leadership) demonstrates your company's level of water stewardship, and your actions and approaches in managing water. has received a score of B which is within the MANAGEMENT band. This is EQUAL to the Electric Utilities average of B, and LOWER than the regional average of A-.

WHO USES CDP DATA?

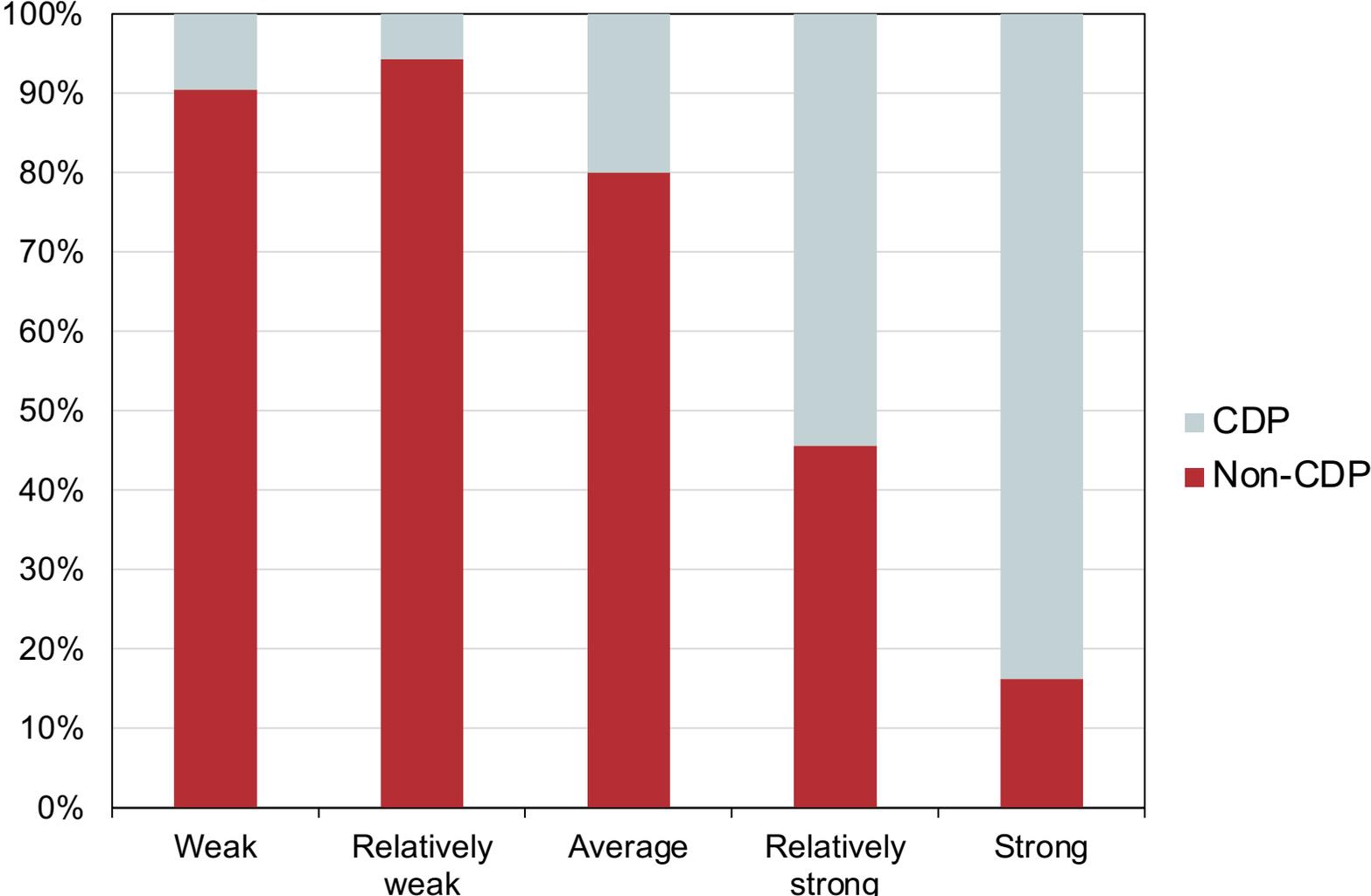


INVESTOR USE CASES



▼ NBIM found that the majority of companies with strong water performance reported through CDP's Water Security Questionnaire

% of companies per score bracket having responded to CDP, 2020



CDP WATER DATA IN INVESTMENT DECISIONS



▼ by 590+ CDP signatories

- to screen companies
- to assess the water risk/impact of their portfolio
- to engage companies: seek clarification, hold companies accountable and identify improvements
- to build “house ratings” (can be the “E” input to an internal ESG rating) or using it to complement other ratings

▼ in **financial indices** (e.g., Euronext CDP Water Eurozone Index)



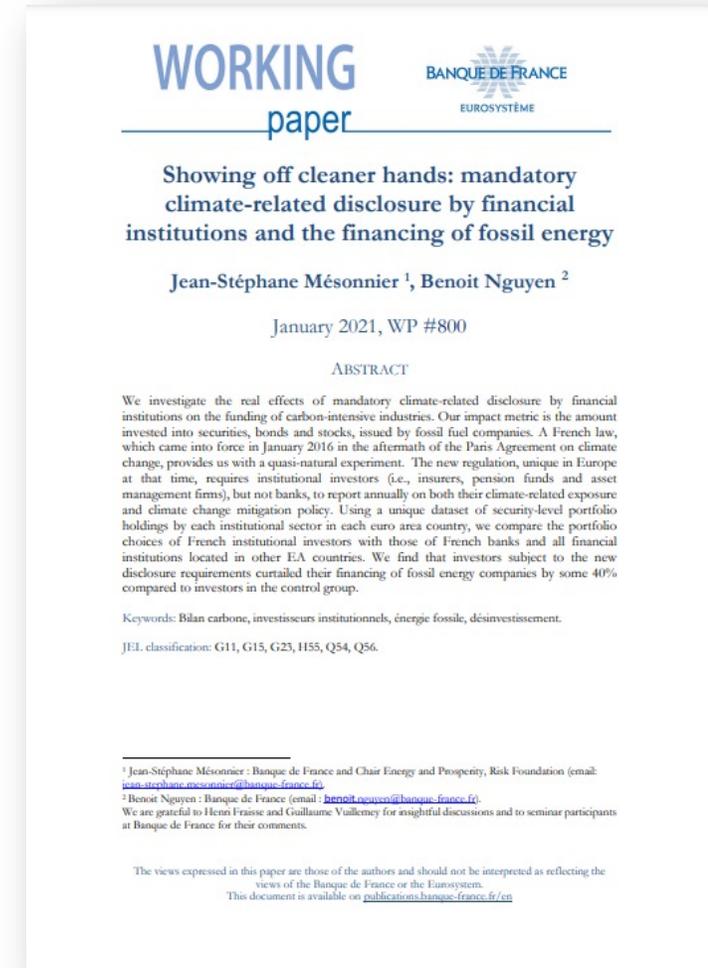
▼ in **research products and ratings**



THE POWER OF TRANSPARENCY



▼ ***Financial institutions subject to new disclosure requirements reduced their financing of fossil energy companies by 40%, when compared to investors in other European countries***

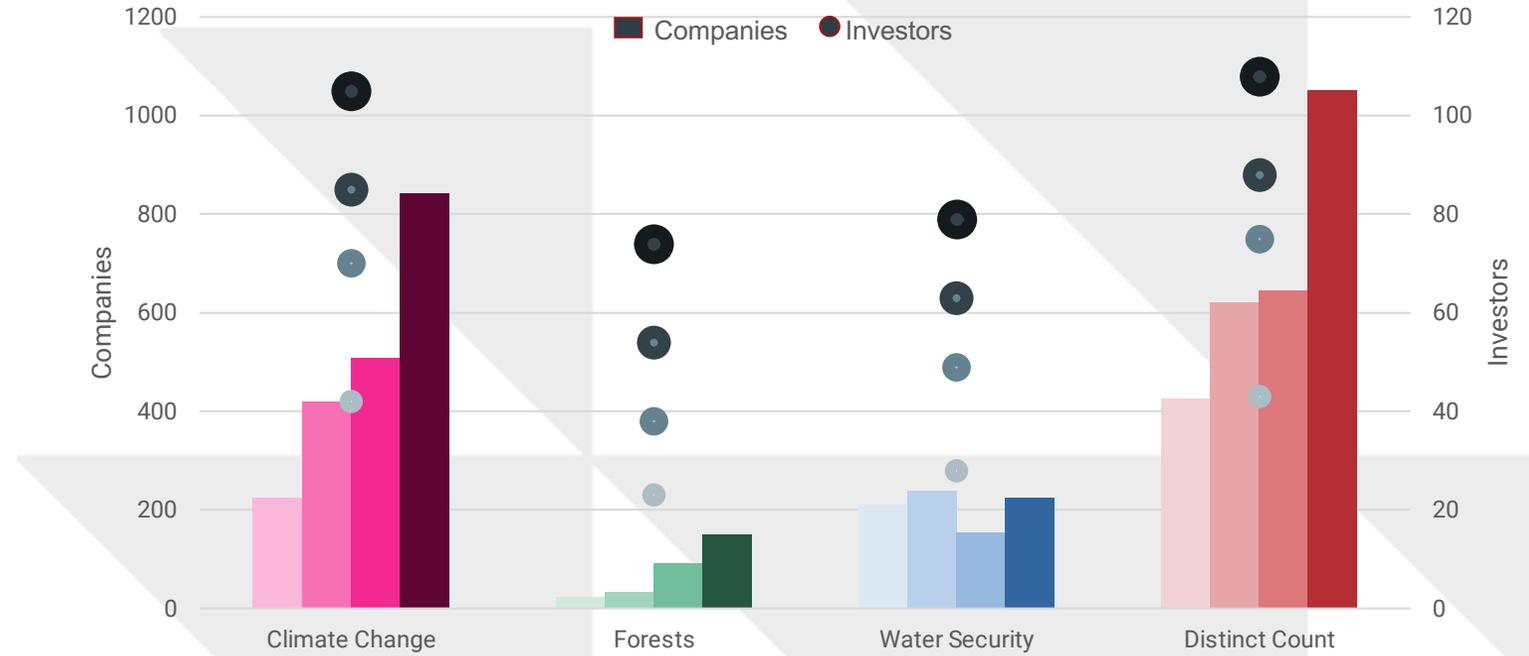


<https://publications.banque-france.fr/en/showing-cleaner-hands-mandatory-climate-related-disclosure-financial-institutions-and-financing>

Join CDP's Non-Disclosure Campaign



Non-Disclosure Campaign 2017-2020



▼ In 2020, **108 investors** engaged **1,025 companies**

▼ Companies engaged in the NDC were on average **2.3 times more likely to disclose**

▼ **25%** average YOY growth in participating investors & targeted companies

2020 response rates for targeted companies versus non-targeted

	19% vs 9%
	14% vs 5%
	20% vs 9%

THANK YOU!





Q&A

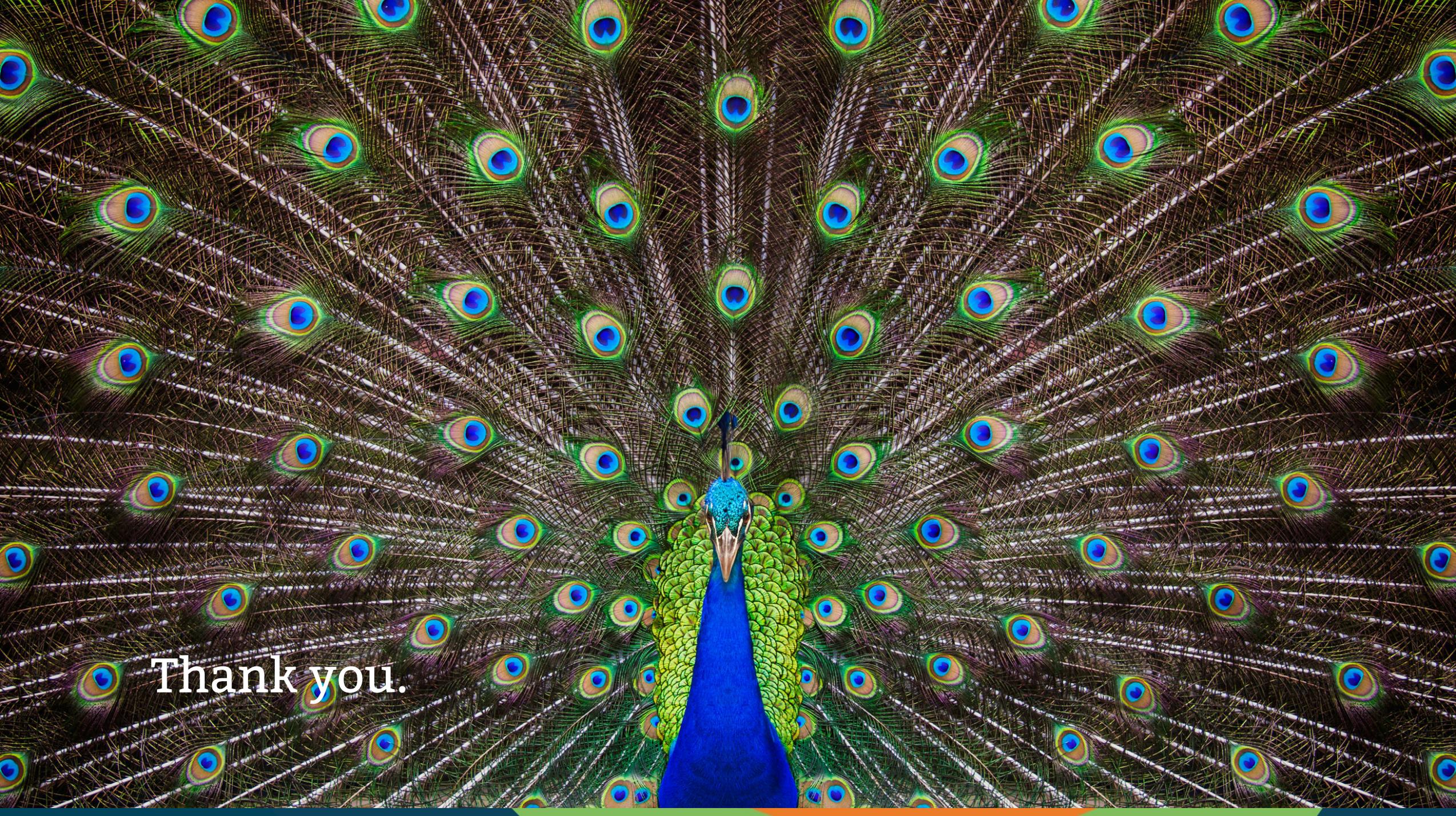
Cate Lamb





Q&A

Piet Klop



Thank you.

Additional slides



WHO'S WHO

Executive team



Ambika Jindal
Lead



Alexandra Freitas
Senior advisor



Joe Ray
Advisor



Ben Lamoree
Dutch programmes
advisor



Alex Gee
Communications
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Policy advisors



Maarten Gischler
Senior Water Advisor
Min. of Foreign Affairs



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Min. of Foreign Affairs



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Eleanor
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Project Officer,
World Waternet



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