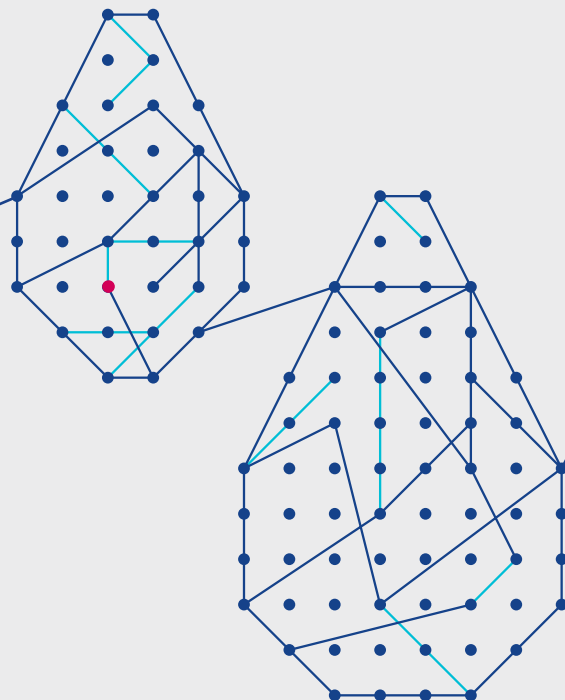
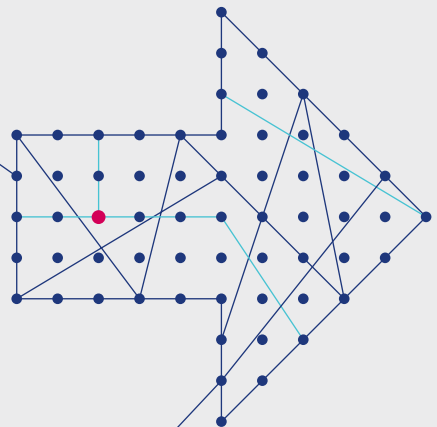


CDSB Framework

Application guidance for water-related disclosures



About the Climate Disclosure Standards Board



The Climate Disclosure Standards Board (CDSB) would like to thank the members of the CDSB Technical Working Group on Water-related disclosures and the CDP Water Security Team for their guidance and feedback on the content of this publication:

- Adam Leaver, Ecometrica
- Andrew Roby, FCDO UK
- Ariane Laporte-Bisquit, WWF Germany
- Junguo Liu, SUSTech
- Arnout van Soesbergen, PhD, UNEP WCMC
- Kata Molnar, Sustainalytics
- Ashok Chapagain, Pacific Institute
- Katarina Hammar, Nordea
- Atsushi Nishiwaki, Ono Pharmaceutical Co.,Ltd
- Katrin Gronemeier, GIZ
- Belynda Petrie, OneWorld Sustainable Investments
- Kazuhiro Teranishi, PhD, Sekisui House
- Bertil Abbing, Ecometrica
- Lisa Beauvilain, Impax Asset Management
- Cate Lamb, CDP
- Marta Antonelli, PhD, CMCC
- Catherine Moncrieff, CDP
- Michael Alexander, Diageo
- Chisaki Ito, Sony Corporation
- Michael Becker, Nature Invest
- Chris Perry, Agricultural Water Management journal
- Michael J. Wilson, Diageo
- Colin Strong, WRI
- Miriam Denis Le Seve, CDP
- Daniel Crewe, CDP
- Mitsuhiro Yonehara, Shionogi & Co., Ltd.
- David Greenall, VIRIDI
- Monika Freyman, Mercer
- David Parham, SASB
- Muriel Jaujou, Danone
- Debra Tan, CWR
- Nick Hepworth, Water Witness International
- Diana Bach, SCS Global Services
- Nick Martin, Antea Group; BIER
- Dieter Rothenberger, GIZ
- Nicole Dando, CDP
- Donna Laviolette, Xylem Inc.
- Paul Reig, Bluerisk
- Eivind Fliflet, NBIM
- Piet Klop, PGGM Investment
- Eliza Roberts, WSP USA
- Rafael Camargo, WWF Germany
- Florence Brocard, Total S.A.
- Rami Narte, Nordic Agency for Sustainable Impact
- Fredrik Hellman, AstraZeneca
- Renata De Souza Leao, PhD, CDP
- Gemma James, PRI
- Ria Bakshi, Olam
- Hans Buchholz, L'Oréal
- Rochi Khemka, World Bank (2030 WRG)
- James Dalton, IUCN
- Scott McCready, Alliance for Water Stewardship
- Jayne Godfrey, PhD, Australian National University
- Stephanie Hime, PhD, Little Blue Research Ltd.
- Jean Pierre Maugendre, SUEZ
- Taeko Suzuki, LIXIL
- Jean-Christophe Bligny, PhD, Independent
- Tatiana Fedotova, Independent
- Jed Youngs, BHP
- Therese Rudebeck. PhD, SIWI
- Jehanne Fabre, Danone
- Theresia Trommer, SBD Inc.
- Jennifer Cogburn, BloombergNEF
- Tom Williams, WBCSD
- Jens Hönerhoff, DEG
- William Sarni, Water Foundry
- Jill Buckley, NRG Energy
- Yui Kamikawa, Coca-Cola Company

The Climate Disclosure Standards Board (CDSB) is an international consortium of business and environmental NGOs. We are committed to advancing and aligning the global mainstream corporate reporting model to equate natural and social capital with financial capital.

We do this by offering companies a [framework for reporting environmental and social information](#) with the same rigour as financial information. In turn this helps them to provide investors with decision-useful environmental information via the mainstream corporate report, enhancing the efficient allocation of capital. Regulators have also benefited from CDSB's compliance-ready materials. Recognising that information about natural, social and financial capital is equally essential for an understanding of corporate performance, our work builds trust and transparency needed to foster resilient capital markets. Collectively, we aim to contribute to more sustainable economic, social and environmental systems.

For more information, visit cdsb.net, follow us on [Twitter](#), [LinkedIn](#) and [YouTube](#) and subscribe to our newsletter. Visit the [TCFD Knowledge Hub](#) for free e-learning online courses.

We welcome your input and discussions. If you would like to comment on this document, please contact us at info@cdsb.net.

Contents

About the Climate Disclosure Standards Board	03
--	----

Chapter 1

About this guidance

1. The CDSB Framework and the Application Guidance	07
1.1 CDSB Framework	07
1.1.1 Materiality	09
1.2 Application Guidance	09
1.2.1. Water Application Guidance	10
2. Mainstreaming water Reporting	11
3. Structure of the Water Guidance	12

Chapter 2

Water and business

1. Key characteristics	14
2. Water-related risks and opportunities	16

Chapter 3

Application guidance for water-related disclosures

1. Reporting expectations and important considerations	19
1.1 Applying materiality	19
1.2 Providing contextualised and business-specific water-related information and clarifying methods	19
1.3 Reporting boundaries and period	20
1.4 Using existing disclosures and resources, and ensuring connectivity	20
2. Roadmap and checklist for water-related disclosures	21
3. Application guidance	24
REQ-01 Governance	24
REQ-02 Management's environmental policies, strategy and targets	27
REQ-03 Risks and opportunities	32
REQ-04 Sources of environmental impact	40
REQ-05 Performance and comparative analysis	45
REQ-06 Outlook	47
4. Basis for conclusions	50

Chapter 4

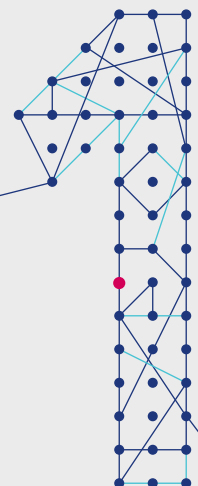
Appendices

1. CDSB Framework – Guiding principles and reporting requirements	52
2. Mapping of the CDSB Framework to the TCFD and water reporting standards	53
3. Key resources	54

References	55
------------	----

Chapter 1

About this guidance



The CDSB Framework application guidance for water-related disclosures (the Water Guidance) has been produced by the CDSB to assist companies in the disclosure of water-related financial information in the mainstream report.^a It is designed to supplement the CDSB Framework¹ for reporting environmental and climate change information (CDSB Framework) to investors. The Water Guidance offers companies a means of developing their reporting practices and ensuring that investors are receiving the material water-related information needed for effective capital allocation to drive the transition to a sustainable, resilient, and water secure economy. The intended users of this Guidance are organisations, both single companies and corporate groups, and in particular those responsible for financial, governance and sustainability reporting.

1. The CDSB Framework and the Application Guidance

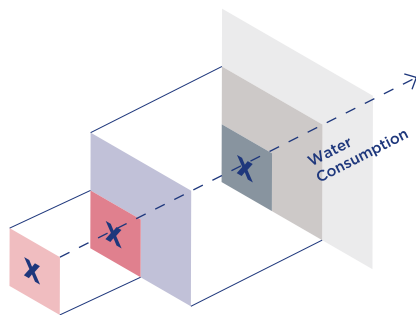
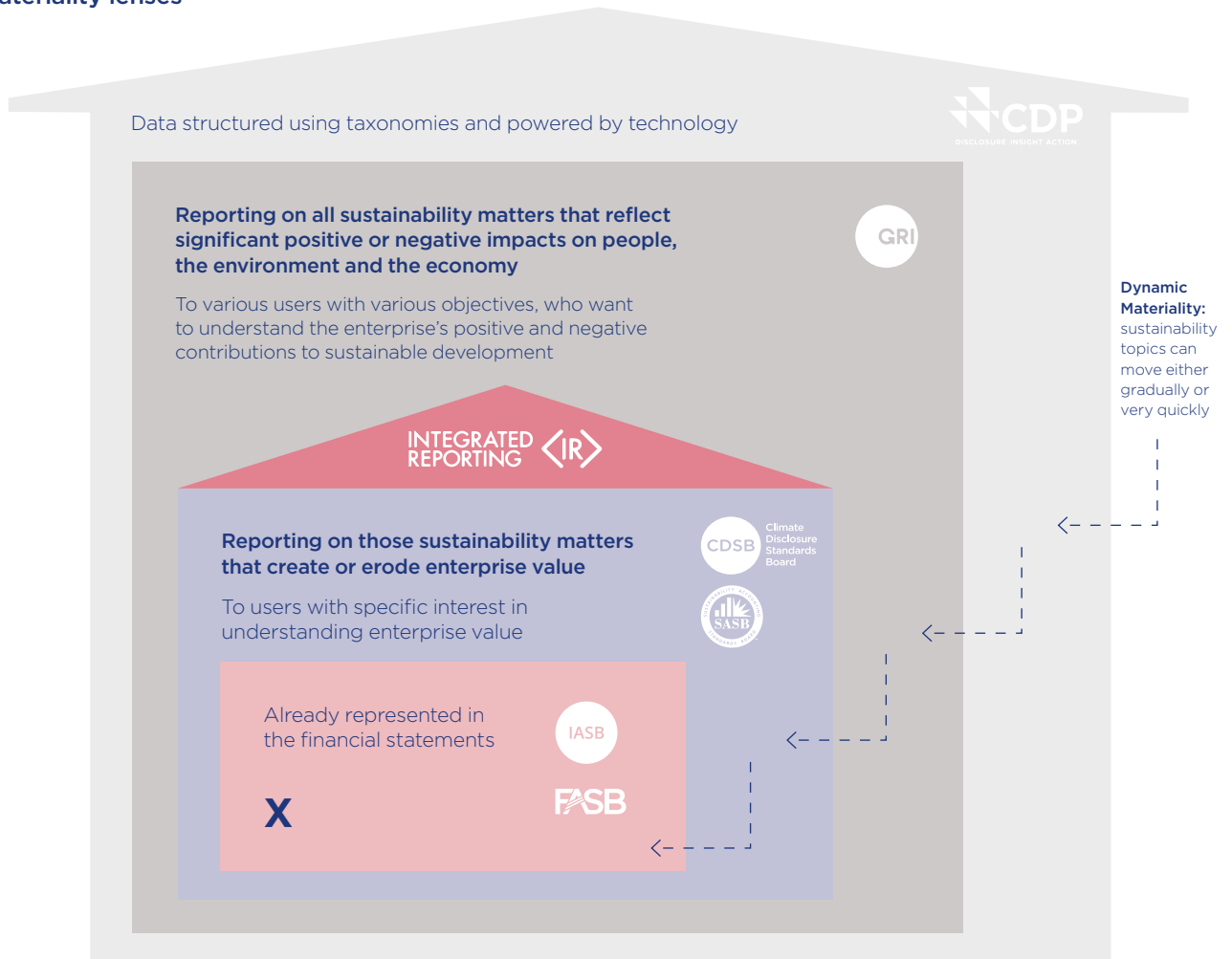
1.1 CDSB Framework

The CDSB Framework is focused on reporting material environmental information in mainstream reports to investors. This built directly on the International Accounting Standard Board's (IASB's) Conceptual Framework², applying financial reporting principles. CDSB's Framework has evolved over time, with the first version, the Climate Change Reporting Framework, released in 2010, focused on the risks and opportunities that climate change presents to an organisation's strategy, financial performance, and condition. In 2013 CDSB's Board agreed to expand the scope of the Framework beyond climate change and Greenhouse Gas (GHG) emissions to encompass environmental information and natural capital, with this revision published in 2015.

The CDSB Framework represented one of the main resources from which the recommendations of the Task Force on Climate-related Disclosure (TCFD)³, published in 2017, were drawn. Therefore, the CDSB Framework and its reporting principles and requirements are aligned with the TCFD recommendations ([Table 3](#)). TCFD has advanced the narrative on organisational board-level financial and risk management considerations of environmental impacts to the business, particularly those likely to result from climate change.

^a Mainstream reports are the annual reporting packages in which companies are required to deliver their audited financial results under the corporate, compliance or securities laws of the country in which they operate, e.g. the annual report in the UK and the 10-K in the USA

Sustainability reporting via various materiality lenses



X Sustainability matter:
e.g. water consumption

Dynamic materiality: Sustainability matters can move between boxes over time. For example, water consumption enters the big box perspective as society becomes aware of water scarcity, the middle box as investors start to factor in water net positive transition into capital market pricing, and the small box as financial consequences are felt in net asset values

Sustainability Reporting

E.g., Water pollution including source of the emission factor, standards methodologies, assumptions and tools used to determine contribution (destruction) to sustainable development

Enterprise value Reporting

Sustainability-related financial disclosure
E.g., Trend and scenario analysis of water consumption, including sales-weighted water consumption of products. Companies and investors can thus understand the business levers available to change water consumption and the likely effect of improving performance on the company's enterprise value by reducing / avoiding remediation expenses or improved reputation thanks to the reduction of impacts on water resources

Financial accounting and disclosure
E.g., Monetary impact on the statement of profit or loss due to remediation expenses or fines related to regulation on water use

Figure 1. Materiality of sustainability matters is dynamic, and the three forms of sustainability reporting are nested. The CDSB Framework and Water Guidance focus on sustainability matters that create or erode enterprise value. This figure is an adapted version from the publication [Reporting on enterprise value](#) by CDP, CDSB, GRI, IIRC and SASB (IIRC and SASB have merged into the [Value Reporting Foundation](#)).

1.1.1 Materiality

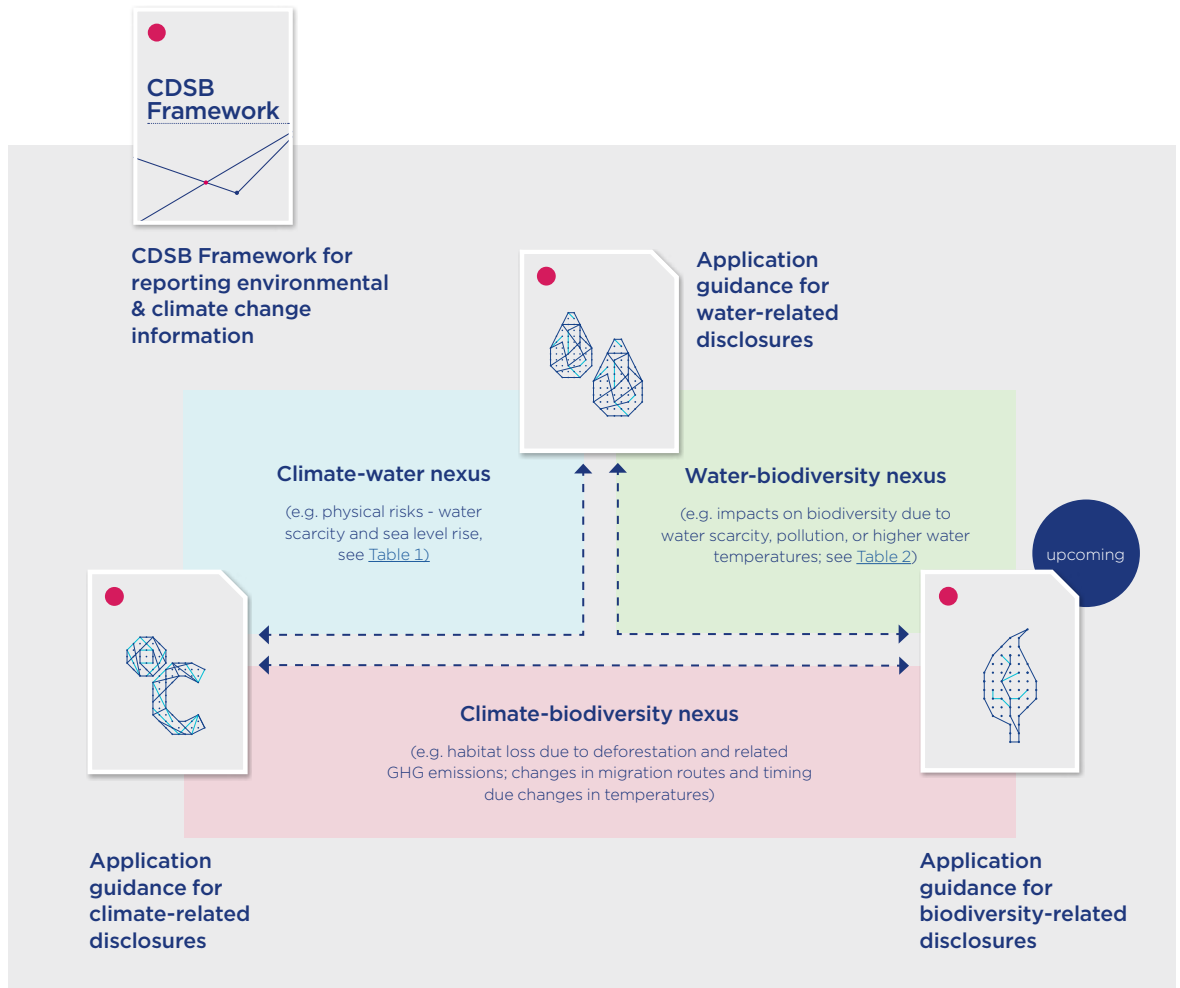
Principle 1 of the CDSB Framework states that **information is material** if:

- The impacts or results it describes are, due to their size and nature, expected to have a significant positive or negative impact on the company's financial condition and operational results and its ability to execute its strategy; or
- Omitting, misstating, or obscuring the information could reasonably be expected to influence the decisions that users of mainstream reports make on the basis of that mainstream report, which provides information about a specific reporting company.

The materiality of sustainability issues, including water, is dynamic on account of changing environmental conditions and their interactions with the business, and of the societal expectations.⁴ Therefore, depending on its materiality for a specific organisation at a given time, sustainability-related information falls under one of the three forms of distinct, but nested, reporting: sustainability reporting, sustainability-related financial disclosure, and financial accounting. Dynamic materiality means that the concerns of one stakeholder group may quickly become material for financial decision-makers (Figure 1). As such, the application of a range of standards and frameworks, such as the CDP questionnaire, GRI Standards, and the Capitals Coalition's Natural Capital protocol are important to ensure reciprocity and responsiveness in the reporting landscape (Figure 1). Given the dynamic nature of these issues, companies should regularly reassess the materiality of sustainability matters to their business and reflect this selection in the sustainability-related financial disclosures (and financial accounting) included in their mainstream report.

1.2 Application Guidance

The Water Guidance is part of a series of CDSB Framework application guidance, which aims to extend the TCFD recommendations to natural capital. It is designed to support the intended users in applying the CDSB Framework to the natural capital elements of climate change, water, and biodiversity. Following the guidance on climate-related disclosures,⁵ the Water Guidance is the second supplementary document that is designed to enhance the quality of disclosures for such material matters. Working in conjunction with the reporting principles and requirements of the CDSB Framework, each application guidance supports companies with developing clear, concise, consistent, and comparable disclosures, enhancing the decision-usefulness of their mainstream reporting on sustainability related financial matters to investors (Figure 2). Given the interconnected nature of environmental topics, the Application Guidance documents are complementary with some overlapping sub-topics (Figure 2).



1.2.1. Water Application Guidance

The objective of the Water Guidance is to support organisations in (1) embarking on the necessary process of identifying and assessing water-related financial information for mainstream reporting, including risks and opportunities; and (2) preparing high-quality disclosures that enable users of mainstream reports to assess material water-related financial information.

By aligning with the main water-related reporting standards and frameworks (see [Table 3](#)), this Guidance helps organisations in:

1. Integrating water-related financial information in mainstream reports;
2. Minimising the reporting burden and/or avoiding the need for additional data collection; and
3. Communicating an enhanced understanding and awareness of water-related issues and their links to natural capital.

The **scope** of the Water Guidance covers water-related information to be included in the mainstream report with a focus on water (1) governance; (2) policies, strategies and targets and related management; (3) risks and opportunities; (4) sources of environmental impact; (5) performance and comparative analysis; and (6) outlook. Additionally, this Guidance focuses on the quantity and quality of freshwater resources (both surface and groundwater). Preliminary reporting elements addressing issues regarding biodiversity and aquatic (fresh- and non-freshwater) ecosystems loss and degradation are also provided. For additional resources on disclosure of water-related information, such as reporting templates, please visit www.cdsb.net/water.

Figure 2. The relationship of the CDSB Framework for reporting environmental and climate change information, the Water Guidance and other guidance in the series. The dashed lines between Application Guidance documents illustrate their interconnected nature and the presence of overlapping topics.

2. Mainstreaming water reporting

International initiatives such as the Sustainable Development Goals (SDGs) and the Planetary Boundaries⁶ highlight water resources and ecosystems as essential for the sustainability of natural and socio-economic systems. Within these initiatives, direct water-related considerations include (but are not limited to) clean water and sanitation (SDG 6), life below water (SDG 14), and ocean acidification and freshwater use, respectively. Additionally, water plays a pivotal role in tackling hunger (SDG 2) and gender equality (SDG 5), promoting responsible consumption and production (SDG 12), climate action (SDG 13), and life on land (SDG 15), as well as in biosphere integrity and in the adaptation to climate change (in Planetary Boundaries).

Existing sustainability reporting organisations and initiatives provide standards, guidelines, and recommendations on corporate water reporting, but none provide specific non-sectoral recommendations for mainstream reports like the TCFD recommendations have done on climate-related financial risks and opportunities.

With a growing understanding of the significant risks environmental issues can pose to the stability of the financial system and to broader society, an increasing number of regulators are prioritising environmental and climate-related disclosures^b in an effort to drive climate action and to mitigate environmental impacts and related risks.

Businesses are already experiencing the financially-material impacts related to the competition for water resources and its associated degradation of ecosystems,^{7, 8, 9, 10, 11, 12} representing a risk to greater financial and societal systems. Investors are reacting^{13, 14} by collating corporate water-related data and including it in their portfolio risk assessment,^{15, 16} by creating investment funds dedicated to water, and developing initiatives aimed at raising awareness of water-related risks and opportunities.¹⁷

Despite the concrete steps that have been taken by heavily water-reliant sectors, such as beverage¹⁸ and mining¹⁹, more work is needed to ensure that reporting on material water-related financial issues in mainstream reports is of sufficient quality and detail to support decision-making by investors and other stakeholders, as the TCFD recommendations encouraged for climate. Additionally, given ongoing initiatives on the interactions between business and natural capital and related corporate disclosure,^c it appears that there could be a policy response that constitutes mandatory corporate disclosure, focusing on water as a core element.

At present, there is an information deficit for investors and other stakeholders on the reporting of material water-related financial risks and opportunities in mainstream corporate reports.^{20, 21, 22, 23} This shortfall in high quality, decision-useful material water-related financial information means that investors are unable to allocate capital that can effectively instigate change and enforce resilience across economies and societies.

This Guidance aims to fill the information gap and to prepare companies to new regulations by illustrating how the CDSB Framework can be applied to water-related reporting in mainstream reports through the integration of elements from existing water reporting standards and frameworks, and alignment with the TCFD recommendations.

^b For example, EU initiatives related to the [Corporate Sustainability Reporting Directive](#), to the [EU Taxonomy Regulation](#), and to the [Sustainable Finance Disclosure Regulation](#), announcement of mandatory adoption of TCFD by national regulators (e.g. New Zealand, UK, Hong Kong, Switzerland), developments and publications by the [IFRS](#) and [FASB](#), in particular, the intention to establish a new board for setting sustainability reporting standards that meet the needs of the capital markets (the [International Sustainability Standard Board](#)).

^c For example: [Science-Based Target Network](#), [Business for nature](#), [EU Corporate Sustainability Reporting Directive](#), [IFRS and International Sustainability Standards Board](#), and the [Taskforce on Nature-related Financial Disclosures \(TNFD\)](#).

3. Structure of the Water Guidance

The Water Guidance is designed around the first six reporting requirements of the CDSB Framework ([Appendix 1](#)):

- **REQ-01** Governance
- **REQ-02** Management's environmental policies, strategies and targets
- **REQ-03** Risks and opportunities
- **REQ-04** Sources of environmental impact
- **REQ-05** Performance and comparative analysis
- **REQ-06** Outlook

These six reporting requirements set out the key content elements for reporting material environmental information in the mainstream report. For each of the six reporting requirements, the Water Guidance provides:

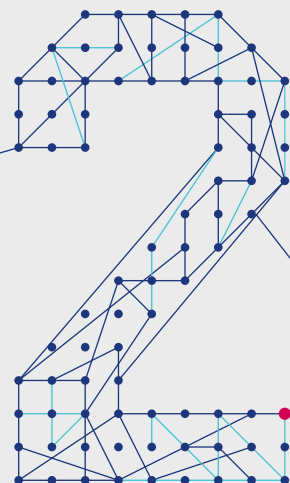
- A checklist including suggestions for making effective water-related disclosures;
- Detailed reporting suggestions and guidance to complement the CDSB reporting requirements in relation to water-related issues;
- A selection of external resources to assist companies in developing their mainstream water reporting; and
- Explained examples of good practice in mainstream water reporting.

In addition, the Water Guidance provides:

- An overview of the significance of water to businesses, explaining the importance of water-related risks, and highlighting the key characteristics of water resources and ecosystems and their importance to corporate reporting (see [Chapter 2](#)).
- Reporting expectations on material and contextual water-related disclosures from companies and provides further considerations covering aspects of the reporting principles and the remaining six requirements of the CDSB Framework (see [Reporting expectations and important considerations](#)).
- A table mapping the TCFD Recommendations and water-related reporting frameworks and standards with the reporting requirements of the CDSB Framework ([Appendix 2](#)).
- A list of additional resources for preparing effective water-related disclosures ([Appendix 3](#)).

Chapter 2

Water and business



Water is a key resource for our livelihood, recognised by the United Nations as a human right. It is used for drinking, agricultural production, and cooling processes, as well as for natural processes such as evapotranspiration from vegetation. But water is a **finite** resource that different water users **share** and compete for to fulfil their needs and purposes. In a given area, a water basin,^d the competition for water can be exacerbated by a multitude of natural and anthropogenic factors that affect water supply and/or demand, including (but not limited to): demographics, industrial and agricultural activities, pollution, and climate change.

These water-related characteristics and dynamics pose risks to businesses. **Water-related risks** are ranked at the top of global environmental and societal risks^{24, 25} and businesses are increasingly experiencing significant financial impacts associated with those risks.^{26, 27, 28, 29, 30} Water resources are fundamental for **businesses**, whether it be as an input to production processes and/or a destination for wastewater, for instance. For this reason, water-related risks entail potential damages for organisations' operations, reputation, legal, and financial performance, and should be reflected in the financial statements and notes to the financial statements. Nevertheless, **businesses can play a pivotal role in mitigating water-related risk** by directing actions through their operations and/or supply chains, but also at the wider water basin scale.³¹ Withdrawals, consumption, and discharge impact the functionality of natural ecosystems and the socio-economic conditions of local communities within basins. Therefore, **corporate water strategies and policies** should target and foster improvements through pollution reduction and increased efficiency for operational water use but also incorporate a water basin approach, tackling water as a shared resource and considering the local environmental, regulatory, and socio-economic context through engaging with other stakeholders^e where possible.

^d Basin or catchment: the area of land that drains all the streams and precipitation to a common outlet such as the outflow of a reservoir, mouth of a bay, or any point along a stream channel (e.g. river). It includes associated groundwater areas and may include portions of water bodies, such as lakes or rivers. Catchment areas are also referred to as watersheds, (drainage) basins (or sub-basins).

^e Those who have an interest or "stake" in water resources and in the outcome of any water management plan or policy. These include individuals, other organisations or interest groups, such as local communities, and regulators. Environment and natural ecosystems are water-related stakeholders since they require water to function and provide the ecosystem services to our society (Loucks et al., 2017; Alliance for Water Stewardship, 2019)

1. Key Characteristics

The interactions between water and business are characterised by key aspects that are important for organisations to properly comprehend and consider as they seek to understand water-related risks and opportunities, develop and implement adequate strategies, and select material water-related information to be included in their mainstream reports. In particular, organisations should consider:

- Site-specificity of water issues;
- Value chain in water-related assessments, i.e. from supply chain to customers;^f
- Engagement and cooperation with stakeholders in water management; and
- Multifaceted and interconnected nature of water risks and issues.

Firstly, water dependencies, impacts, risks and opportunities are **site specific**, whether they occur in an organisation's operations or along its value chain. The **water-related context** in a given location, or more specifically in a given water basin,^g concerns not only the physical status of water resources, in terms of quantity, quality, and time patterns (e.g. seasonality), but also (1) water-related infrastructures and their management; (2) social conditions, including community traditions and livelihoods; (3) economic conditions, such as water-related productivity, employment, and income; (4) governance and regulation addressing water management; (5) geopolitical dimensions (e.g. in transboundary basins^h); and (6) ongoing regional cooperation initiatives.

^f The [Biological Diversity Protocol](#) first recognises three major parts of the value chain: (1) Direct operations (gate-to-gate), which cover activities over which your business holds ownership or control; (2) Upstream (cradle-to-gate), which covers the activities of suppliers; (3) Downstream (gate-to-grave), which covers activities linked to the purchase, use, reuse, recovery, recycling, and final disposal of your business' products and services.

^g Basin or catchment area is the appropriate scale to assess and manage water since it represents the hydrological units or/and hydrogeological units (the limits of both units could be different, due to underground structure) within which stress conditions occur.

^h Transboundary basins are basins of transboundary waters, that is, of any surface waters (notably rivers, lakes) or groundwaters which mark, cross or are located on boundaries between by two or more states. Available from: <https://unstats.un.org/sdgs/metadata/files/Metadata-06-05-02.pdf>

Secondly, given the globalised nature of **value chains**, water dependencies, impacts, risks, and opportunities are often most significant outside the organisation's fences. Water issues may affect the entire lifecycle in the value chain, from water use for raw materials to waste management. For this reason, companies should **include their value chains in the assessment of water-related dependencies, impacts, risks, and opportunities**.

Collaborative action, and engagement with value chain stakeholders at the basin scale is fundamental for effective water managementⁱ and water stewardship (see [Appendix 3](#)). Single actions at the operational level (e.g. to increase water efficiency) do not improve the status of water resources if other water users within the same basin are degrading the water resources and ecosystems, and/or regulators are not implementing basin plans or regulating water use and discharge.

Finally, water-related issues are **multi-faceted and interconnected**. Companies can rely on different types of water resources and ecosystems (e.g. freshwater, seawater) and can interact with water in different ways, from consumptive (e.g. irrigation) to non-consumptive use (e.g. hydropower), and pollution.

The **main water-related issues** can be classified as follows:

- **Too Little Water** – insufficient quantity to meet the demand of all users, which includes infrastructure, distribution, and access issues;
- **Too Much Water** – excessive volumes of water in terms of flooding or extreme and intense weather; and
- **Polluted/Dirty Water** – water is polluted or otherwise altered to a state that makes it inappropriate for its intended use.

In addition to the interconnection of water systems, availability and quality of water resources also depends on other environmental systems such as climate, land cover and use, and on socio-economic factors, for example in regions where there is a significant lack of access to water resources. **Developing effective and resilient water strategies** therefore requires companies to consider many dynamic and interconnecting systems.

ⁱ Description of Integrated Water Resources Management framework and principles-based approach and process are available from: [https://www.gwp.org/en/GWP-CEE/about/why/what-is-iwrm/#:~:text=Integrated%20Water%20Resources%20Management%20\(IWRM,vital%20ecosystems%20and%20the%20environment](https://www.gwp.org/en/GWP-CEE/about/why/what-is-iwrm/#:~:text=Integrated%20Water%20Resources%20Management%20(IWRM,vital%20ecosystems%20and%20the%20environment).

2. Water-related risks and opportunities

Organisations can experience different types of financial water-related risks and opportunities, such as: physical, reputational, policy and legal (or regulatory), technological, and market risk. **Physical risks** are linked to the quantity of available water, as well as water that is unfit for use (e.g. contaminated from pollution) or inaccessible. This category includes risks posed to businesses from impacts on water resources and on other environmental systems and processes, such as climate change. Physical risks therefore encapsulate the increased likelihood and severity of extreme water-related weather events, contamination of water bodies, sea-level rise, permanent changes in precipitation patterns, expansion and exacerbation of water stress, ecosystem change and biodiversity loss, for instance. Additionally, corporates may face risks linked to the transition to a water secure future, including: the impact of regulation on withdrawals and effluents (**regulatory**), shifts in market preferences (**market**) and stakeholders' perceptions of a organisation's impact on water resources (**reputational**), and the impact of new technologies (**technological**). Addressing water-related risks can turn into business opportunities and related financial benefits linked to, for example, improved water efficiency, development of new products and services, and foster the conservation and restoration of ecosystems the organisation relies on through the engagement of and collaboration with stakeholders.

Finally, all these types of risks can be caused by both (1) the organisation's **specific business** and the water dependencies and impacts of its operations or value chain and/or (2) or by the **context**^{32, 33, 34, 35, 36} in which its activities are located, i.e. both due to mismanagement of other water users (e.g. excessive water pollution) and to socio-economic conditions in the basin of operation, such as political instability ([Table 1](#)).

Additionally, **water-related risks are linked to other environmental issues, such as land use and climate change**. For instance, water-related impacts linked to climate change have begun to materialise through more frequent floods, droughts, and registered storms, alongside rising sea levels,³⁷ and will continue to materialise whichever climatic trajectory the world follows.³⁸ Considering such aggregated risks, including interlinkages between water and other environmental and socio-economic risks, is critical to drive business continuity and resilience to future scenarios.

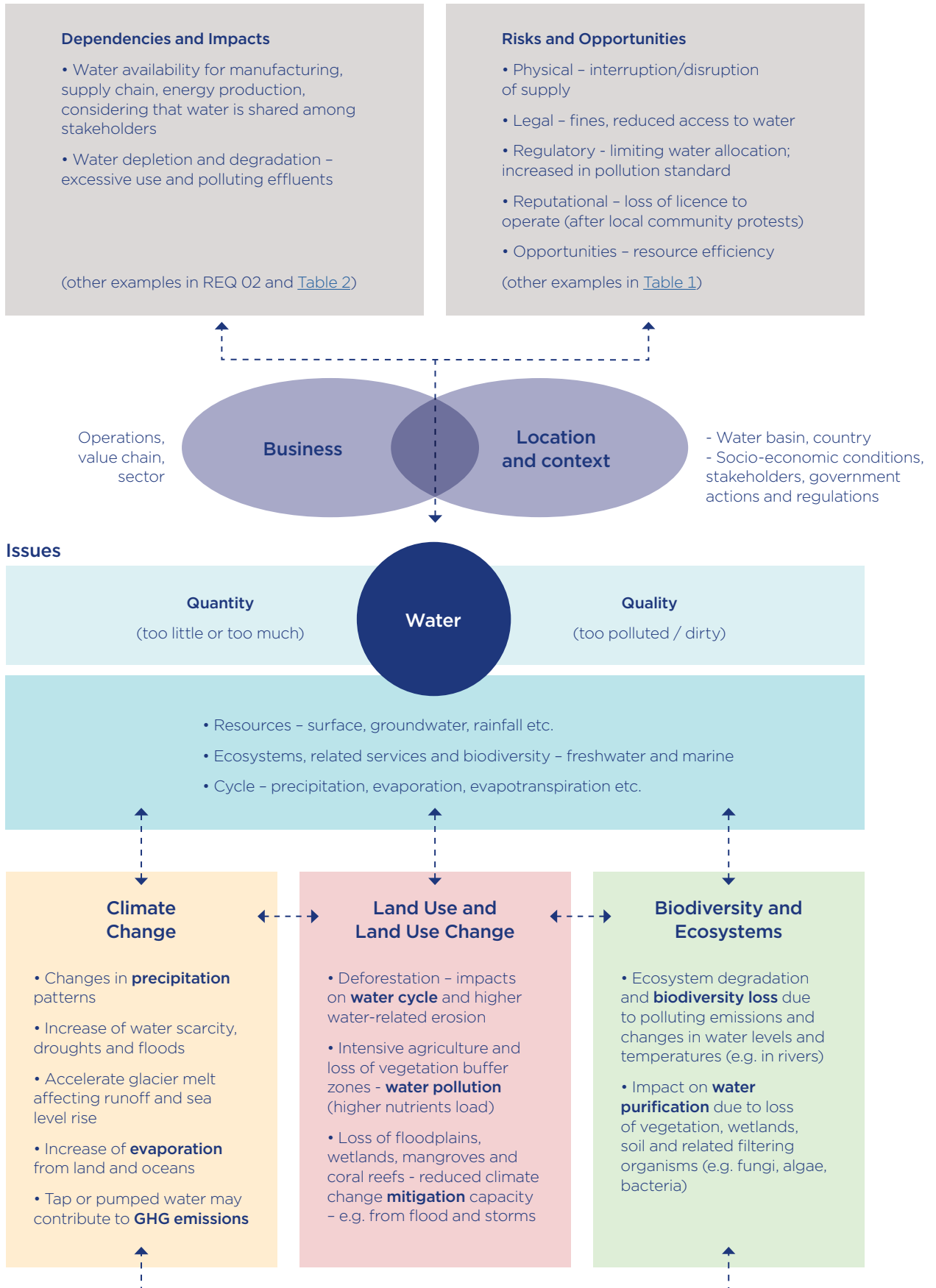


Figure 3. Key water-related characteristics for businesses and examples of links between water and other environmental topics

Chapter 3

Application guidance for water-related disclosures



1. Reporting expectations and important considerations

The following section illustrates the application of the first six reporting requirements of the CDSB Framework to water-related disclosures. First, though, a number of clarifications on the reporting expectations and related outcomes, and considerations regarding the guiding principles and remaining reporting requirements of the CDSB Framework are provided.

1.1 Applying materiality

The reporting practices of this Guidance should be applied and disclosed against, like all information for the mainstream report, only when the information is deemed material by the organisation (see [section 1.1.1 Materiality](#)). This means, in practice, that **not all the suggested reporting practices offered in this Guidance will necessarily be applicable for inclusion** in the mainstream report of all companies that have deemed water material. Details on the approach and factors applied in determining materiality and in the selection of the water-related information included in the mainstream report represent useful information for investors. If water is not deemed material a brief explanation of the reason behind this outcome is needed.

Additionally, REQ-11 of the CDSB Framework encourages companies to include a statement of conformance, setting out the extent that the principles and reporting requirements of the CDSB Framework have been applied. In doing so, companies are expected to state the outcome of applying the relevance and materiality principle.

1.2. Providing contextualised and business-specific water-related information and clarifying methods

Disclosures should provide the reader with succinct and concise water-related contextual information specific to the reporting organisation. The organisation should:

- Focus on reporting those activities and outputs that are likely to impact the availability and quality of water for the organisation itself and/or for others, where the impacts from those activities and outputs are likely to affect the reporting organisation's ability to operate its business model and execute its strategy, as stated in the CDSB Framework;

- Emphasise and report details on **hotspot areas^j** affected by critical levels of **water-related risks^k** (see [Table 1](#)) and where organisation's sites, suppliers or markets are located to address the site-specificity of water-issues. When material, such reporting details should explain how an organisation is prioritising or what it is doing differently to tackle water-related issues in these hotspot areas other than in less critical areas, and this can represent decision-useful information for report users. Such details show that an organisation has:

- Understood the geographic-specificity of water-related issues;
- Analysed the water-related status and risks of its operations and value chain and classified them according to different levels of risk (see [Tools for assessing water-related status and risks for support](#)); and
- Identified hotspot areas (e.g. affected by "high" or "very/extremely high" risks) and potentially defined specific goals, targets, and established management mechanisms.

The geographic detail of such disclosures can cover either hotspot areas (e.g. different levels of water risk), water basin, country, or specific site, and the choice depends on the materiality assessment of the organisation (e.g. site-specific details can be disclosed for big mining sites that are material for the overall organisation, for instance due to productivity or reputation).

- Clearly describe the assessment methods used, e.g. definition of hotspot areas, assumptions and reasons for inclusion in the mainstream report. Additionally, since several water-related terms are not uniquely defined and evolve over time, it is good practice to provide definitions of the water-terms used in the mainstream report and reference to external resources to avoid misinterpretation.

^j The term *hotspot areas* will be used in Water Guidance for those areas that have been identified as priorities by the organisation.

^k Water risks embed both water stress and scarcity. Water stress includes water availability, quality, and accessibility, which are also affected by the organisation's and government's water management; it does not include factors such as floods and effects of climate change. Scarcity reflects the physical abundance of freshwater; it is a function of the water use/demand relative to water available in a given area. There are other physical water-related risks, such as flooding and drought, as well as regulatory and reputational risks that may affect an organisation.

1.3. Reporting boundaries and period

REQ-07 of the CDSB Framework concerns the reporting boundaries employed by the organisation for the mainstream report. Material water-related information disclosed should be prepared according to the reporting boundaries used for the rest of the mainstream report. It may be, however, that water-related information that falls outside this reporting boundary will be appropriate for inclusion in the mainstream report, such as relating to suppliers and outsourced activities located in hotspot areas or where contracts expose the organisation to water-related risks or opportunities. REQ-07 offers that information and data from outside the reporting boundary should be distinguished and the organisation's approach to boundary setting be reported. More information on boundary setting and reporting can be found in [CDSB's Proposals for boundary setting in the mainstream report](#). In addition to the reporting boundary, REQ-09 suggests that the material water-related information included in the mainstream report should follow the reporting period of the rest of the report. Aligning the reporting period of water-related information included in the mainstream report better ensures that it can be connected with other information disclosed. This can enhance the comparability with areas such as financial performance and other environmental data, as well as the natural capital balance sheet — as advocated by CDSB Framework Principles 3 and 4, respectively.

1.4. Using existing disclosures and resources, and ensuring connectivity

The CDSB Framework and its reporting requirements intend to align with and complement existing mainstream financial disclosures. It will be the case, then, that organisations may already have the information to satisfy certain aspects of the CDSB reporting requirements and the suggestions of this Guidance. For example, companies may already be disclosing material water-related information that would be appropriate for mainstream disclosure in line with the CDSB Framework through different reporting channels, such as sustainability reports, CDP submissions and index, investor questionnaires, or natural capital balance sheets or income statements.¹ Together, with the list of [Useful resources](#) suggested in this Guidance (throughout the 6 reporting requirements) and the table included in [Appendix 2](#), these reporting channels can support report preparers (and users) in understanding water-related concepts such as water stewardship, water-related risks and water accounting methods and metrics. Repurposing these existing disclosures to meet the specific requirements of the mainstream report could benefit and streamline reporting practices. A useful resource to understand the interoperability of existing frameworks and standards is the paper [Reporting on enterprise value](#), which also provides a practical example of sustainability-related financial disclosure through a prototype standard focused on climate.

¹ The outputs from the reporting process based on the water guidance can be also used in Natural Capital Accounts which are referred to by a number of different groups including: The UK Natural Capital Committee, Capitals Coalition and the British Standards Institute.

Similarly, report preparers may also be able to apply the financial accounting standards used for mainstream reporting to report on certain aspects of water-related financial information. Despite not being focused on water, another useful resource is the CDSB's [Uncharted waters](#), which explores financial accounting standards that could aid companies in responding to various aspects of the TCFD recommendations. IASB ([IFRS® Standards and climate-related disclosures](#)) and the IFRS Foundation ([Effects of climate-related matters on financial statements](#)) have both published papers that discuss how the IFRS Standards address issues that relate to climate-change risks and other emerging risks. Similarly, FASB has also produced an educational paper ([Intersection of Environmental, Social and Governance Matters with Financial Accounting Standards](#)) that explains when applying financial accounting standards, organisations may consider the effects of certain material ESG matters (including water and waste management) that have a material direct or indirect effect on the financial statements and notes. Building on the IASB and IFRS Foundation papers, CDSB has also developed guidance ([Accounting for Climate](#)) to support preparers on how to integrate climate-related matters into financial reporting and could also be applied to water-related matters, where such matters are considered material.

Finally, Principle 3 of the CDSB Framework emphasises the importance of ensuring that material environmental disclosures, including those regarding water issues, are connected with other mainstream disclosures. The principle informs report preparers that disclosures should be formulated and positioned in a way to allow investors to see and understand the linkages. In developing their mainstream reporting practices, companies should try and ensure that the language and labelling used best allows for clear understanding of these interconnections and avoids unnecessary duplication or confusion of information.

2. Roadmap and checklist for water-related disclosures

The reporting outcomes depends not only on the materiality assessment but also on the level of maturity of integration of water in the business strategy, policy, and management of the reporting organisation and of water-related disclosures.³⁹ Some companies have already integrated water in their business strategy whilst others have yet to adopt substantive measures and are only in preliminary stages of undertaking their journey towards water stewardship. Providing a clear roadmap detailing actionable steps with measurable targets would be particularly valuable to report users. [Figure 4](#) provides examples of approaches to water-related financial disclosures according to the maturity of such disclosures. In combination with the checklist, it can support the preparation of effective disclosures, which need concrete assessment, governance and internal communication, coordination and cooperation among different business departments.

The checklist (also referenced in [Figure 4](#)) summarises the suggestions on *how* to include material water-related information in mainstream reports following the CDSB requirements. The elements of the checklist are **not to be addressed as mandatory requirements**, but as desired disclosures that should be included in the mainstream report if material for the organisation.

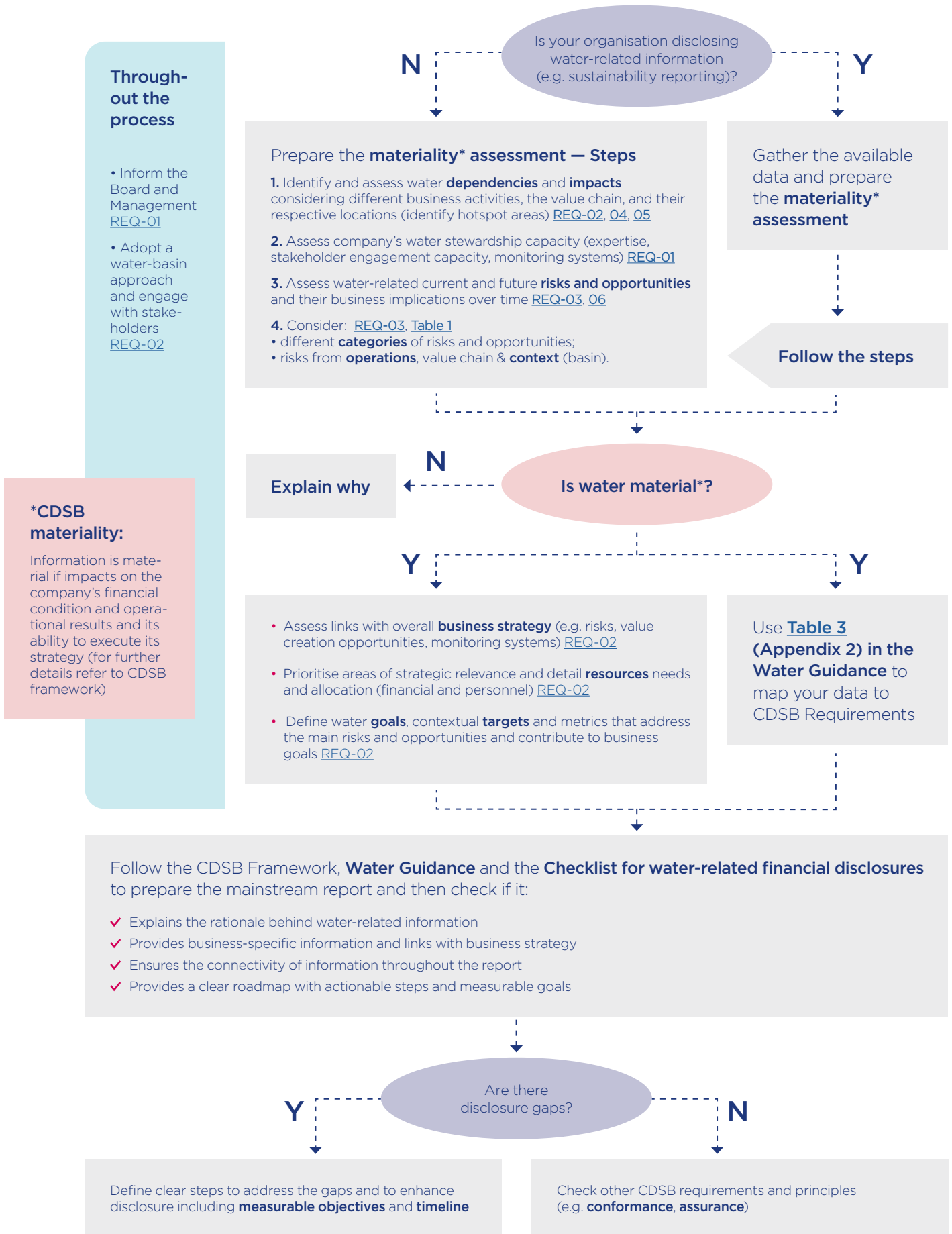


Figure 4. Roadmap to effective water-related financial disclosure. This flowchart illustrates a hypothetical roadmap for water-related financial disclosures. The path depends on the organisation-specific maturity in and type of conducted water reporting (i.e. GRI, CDP Questionnaire) and there can be additional intermediate paths besides the two shown in the figure. Materiality assessment can occur at different stages throughout the process (this figure is indicative). The Water Guidance provides additional support (e.g. suggestions and resources) for each step and references to the specific sections of the Guidance are included in the flow chart.

REQ-01 Governance

Does the disclosure:

- ✓ Identify the person(s) or committee responsible for water policies, strategy and information?
- ✓ Explain how water policies, strategy and information are delegated to management, and if there are specific roles or mechanisms in place in hotspot areas to tackle compliance with water-related regulatory landscape and engagement with stakeholders?
- ✓ Describe any systems for accountability and incentivisation?
- ✓ Explain whether the governance mechanisms for water policies, strategies and disclosure differ from other material concerns and, if so, why?

REQ-02 Management's environmental policies, strategy and targets

Does the disclosure:

- ✓ Explain the material water-related dependencies and impacts of the organisation with additional consideration of links to natural capital?
- ✓ Summarise the water policies and strategies and how they support or link to the organisation's risks and opportunities and overall strategy?
- ✓ When applicable, explain whether and how water strategies, policies, and management are influenced by stakeholder engagement?
- ✓ Set out the contextual, science-based and time bound targets, timelines, and indicators for delivery of water policy and strategy with methods and baselines, as well as explain progress and/or the development of policies?
- ✓ Detail the resourcing of the delivery and management of water policies and strategies?

REQ-03 Risks and opportunities

Does the disclosure:

- ✓ Identify material water-related risks and opportunities by adopting a basin-scale and value chain approach, and by considering different types of risks (see [Table 1](#))?
- ✓ Explain the implications of material water-related risks and opportunities on business and value chains, specifying geographic locations and time horizons in which the risks will materialise?
- ✓ Describe the systems and processes used for assessing, identifying, and monitoring water-related risks and opportunities, including

whether they are integrated with existing risk management systems and processes?

REQ-04 Sources of environmental impact

Does the disclosure:

- ✓ Provide metrics and indicators for sources of material water impacts (at least withdrawals, consumption, discharge) using both absolute and normalised metrics?
- ✓ Explain the metrics used, including the methodologies, geographic details, levels of uncertainty and provide narrative to assist in understanding of the results?
- ✓ Categorise and disaggregate metrics, e.g. considering areas affected by different levels of water risks or different water sources and destinations, to support understanding and comparability?

REQ-05 Performance and comparative analysis

Does the disclosure:

- ✓ Provide appropriate historical data to the results reported from REQ-04 for material water impacts to allow for useful comparison, including details on hotspot areas?
- ✓ Contextualise the performance with baselines, targets and other criteria used to assess progress?
- ✓ Explain the major trends with reference to drivers of change under (e.g. water-related strategies or business developments) and/or outside (e.g. regulatory changes) the control of the organisation?

REQ-06 Outlook

Does the disclosure:

- ✓ Explain the likely effect of future water-related impacts, risks, and opportunities as well as of water strategy on company performance and resilience, taking account of regulatory and market trends and environmental changes?
- ✓ Identify and explain the time horizons used for reporting on corporate outlook?
- ✓ Explain any techniques, such as scenario analysis, used to inform the outlook including the methods, scenarios and assumptions used, and any shortcomings and uncertainties?

3. Application guidance

REQ-01 Governance

Disclosures shall describe the governance of environmental policies, strategy and information

Disclosure checklist

Does the disclosure:

- ✓ Identify the person(s) or committee responsible for water policies, strategy and information?
- ✓ Explain how water policies, strategy and information are delegated to management, and if there are specific roles or mechanisms in place in hotspot areas to tackle compliance with water-related regulatory landscape and engagement with stakeholders?
- ✓ Describe any systems for accountability and incentivisation?
- ✓ Explain whether the governance mechanisms for water policies, strategies and disclosure differ from other material concerns and, if so, why?

1. Governance arrangements and rationale

Governance disclosures should demonstrate transparency and accountability for the organisation's oversight of water-related matters. It is essential that the responsibility for the disclosure of water-related information is identified, whether it be at board-level or has been delegated to specific committees, etc.

The most innovative, far-reaching, and successful water strategies and stewardship journeys will often require the leadership or integral support of the highest governing bodies of an organisation. Illustrating, whether diagrammatically or through clear narrative, where responsibility lies at board-level and who is driving forward such strategies at the management level is essential to evidence clear accountability and provide transparency. It could assist report users in understanding the decision-making processes for major strategic decisions. For instance, what processes would allow or require governance bodies to decide to allocate capital, change strategic direction or transform the business model in response to identified water-related risks and opportunities?

In setting out the governance and management arrangements for water-related policies, strategies, and goals, companies should ideally summarise the rationale for such arrangements. For example, at board-level, what qualifications, skills, or experience makes the person or members of a committee best suited to overseeing the organisation's water-related strategy? Indeed, some boards and management teams will draw on external expert advice on general or specific water-related issues for capacity building and steering. For example, capacity building sessions could be especially appropriate for companies approaching the assessment of water-related risks and opportunities or using scenario analysis to drive strategy development. Offering details of such external, expert advice in the mainstream report could demonstrate proactive and responsive oversight of water-related issues as well as improve the reliability of disclosure.

If in place, the organisation may describe the responsibilities of specific roles, capacity building sessions, and stakeholder engagement activities in hotspot areas.

2. Information flows and oversight

Effective reporting on governance will articulate the connections, information flows and oversight mechanisms that exist between the board, management and water-related issues. For example, report users may wish to know by what means and how often the appropriate board members are informed by management on water-related targets, progress or relevant changes to the external environment and through the supply chain, but also details on the nature and reliability of the control system used to prepare water-related information to be disclosed. Additionally, information on how and how often the employees (and contractors) with direct responsibilities for water resources (e.g. operators responsible for water treatment or monitoring activities) are consulted about the water strategy and stewardship of the organisation would provide further helpful context on information flows.

To demonstrate that the appropriate organisational and information systems are in place to oversee water-related risks and opportunities, the reporting on the governance of material water-related issues could answer the following questions:

- Which corporate governance codes determine or influence the way in which the organisation is governed?
- Where appropriate, are there means for responsive strategic interventions or systems in place to ensure resilience (e.g. prevention or mitigation of incidents, such as polluting spill)?
- How often does the whole board discuss the water strategy and consider related developments?
- How are water-related risks and opportunities considered in major strategic decisions/ capital allocations?
- How often is performance and progress in hotspot areas^m communicated to management?
- Who ensures compliance with water-related regulatory environment?

3. Incentivisation

To foster performance ownership, appropriate members of the board and management need to be incentivised to meet and fulfill water-related targets and policies. Reporting on such arrangements in the mainstream report is a means of communicating that commitment. Equally important, though, is the reporting of the metrics or criteria used in incentive schemes. They should speak to the most pertinent water-related risks, opportunities and impacts that have been identified by the organisation. Providing ongoing disclosure about water-related performance and progress towards long-term water targets tied to remuneration is useful to report users.

4. Specificity of water governance

Companies' water efforts sometimes form part of broader, cross-cutting environmental strategies with governance and oversight organised around these broader, interconnected environmental ambitions. However, different investors can focus their attention on different material environmental issues when assessing companies and reading reports, with water often of particular importance, especially for some sectors. When material, companies should therefore explicitly summarise their water-related governance as discussed in previous paragraphs but more importantly, explain how it is integrated in a more connected environmental strategy, as well as in wider sustainability and business strategy.

Examples of good practices

1. Olam [Annual Report 2019](#) describes the involvement of the Board in water-related strategy and risks assessment. A dedicated Committee is responsible for water-related matters (Governance Report - pgs. 40-1) and stakeholder engagement. The CEO is a member of this Committee (Strategy Report - pg. 64).
2. Coca-Cola HBC [Integrated Annual Report 2019](#) describes the process of stakeholder engagement with local communities on water conservation and with "Partners in efficiency" to share knowledge and develop solutions for improving water-related performance throughout the supply chain (pg. 19). The report also clarifies the role of the Board in this process.
3. In its [Universal Registration Document 2019](#), L'Oréal clearly reports the inclusion of quantitative water-related targets on reduction of water consumption and other related qualitative criteria (e.g. CDP rating) as part of the variable remuneration of the Board (pg. 99)

^m The level of details of the reported information depends on the organisation structure and facilities. For example, as suggested by [The Mining Association of Canada](#), if an organisation operates multiple facilities within a single basin, the organisation may choose to adopt a regional approach to water stewardship. In these cases, the division of roles and responsibilities between facility-level personnel and regional personnel should be clear.

Useful resources

1. Step 2 of the current iteration of the [Alliance for Water Stewardship's 'International Water Stewardship Standard'](#) (AWS Standard v2.0) aims to ensure sufficient leadership support, site authority, and allocated resources to enable the implementation of effective water stewardship. This requires an action plan with an associated timeline detailing due diligence and risk strategy, and the identification of responsibility amongst management. The standard underlines the shared nature of water challenges within a basin and the importance of improving both water-related organisation performance and status of the basin, and of partnership, stakeholder engagement and consensus.

2. In the report [Growing Water Risk Resilience: An Investor Guide On Agricultural Supply Chains](#), PRI underlines the investors' expectations on the board-level oversight and accountability for water-related risks, including the supply chain. Additionally, it emphasises the importance of both internal, supply chain, as well as collective actions through stakeholder engagement, including regulators. The document provides a useful checklist.

3. In their [Water Stewardship Protocol](#), **the Mining Association of Canada** proposes assessment criteria for water governance. The criteria underscores the importance of (1) involvement of relevant employees, contractors, and facility-level stakeholders in water stewardship, (2) of the definition of roles, responsibilities and accountabilities for operational water management and basin-scale planning, and (3) of the integration with governance (e.g. budgeting and external auditing). The protocol provides a self-assessment checklist covering governance (REQ-01), management (REQ-02) and performance (REQ-05).

4. The **WBCSD** report [CEO Guide to Water - Building resilient business](#) proposes a seven-step framework for business leaders towards responsible water stewardship. It underlines the importance of board level oversights, water-related risk management strategies, and of engaging stakeholders, including consumers. The report also outlines water-related risks and business opportunities (useful for disclosure under REQ-02 and REQ-03).

REQ-02 Management's environmental policies, strategy and targets

Disclosures shall report management's environmental policies, strategy and targets, including the indicators, plans and timelines used to assess performance

Disclosure checklist

Does the disclosure:

- ✓ Explain the material water-related dependencies and impacts of the organisation with additional consideration of links to natural capital?
- ✓ Summarise the water policies and strategies and how they support or link to the organisation's risks and opportunities and overall strategy?
- ✓ When applicable, explain whether and how water strategies, policies, and management are influenced by stakeholder engagement?
- ✓ Set out the contextual, science-based and time bound targets, timelines, and indicators for delivery of water policy and strategy with methods and baselines, as well as explain progress and/or the development of policies?
- ✓ Detail the resourcing of the delivery and management of water policies and strategies?

1. Providing the context for water policy, strategy, and targets: business-specific dependencies and impacts

The report user should be able to understand how water resources and ecosystems, which underpin and support the organisation's ability to succeed, are reflected in its ambitions in meeting water-related and wider business goals. The first step consists of assessing dependencies and impacts (both positive and negative) on water that are specific to the organisation's business (also in the context of wider environmental and social issues). The results of this analysis are to be used to provide clear context to the disclosure of water-related strategies, policies and targets. This assessment should consider:

- Different types of water (fresh and non-freshwater, e.g. marine, renewable, fossil), sources and recipient water bodies (e.g. surface, ground-, tap-, and rainwater);
- Different business units and parts of the value chain (from supply to consumption and end-of-life of products, when applicable) in relation to their locations, thus considering both on-site and off-site dependencies and impacts (e.g. influence of customers' water impacts), and both those that are under and outside the control of the organisation (e.g. dependencies on water networks or energy systems managed by third parties);
- Different uses of water, such as consumptive (e.g. irrigation water evaporated or incorporated in products), non-consumptive (e.g. hydropower), or for remediation (e.g. borehole);
- Water degradation due to effluents from the organisation into water bodies (e.g. non-treated wastewater released in the environment); and
- Aspects linked to the socio-economic context (e.g. other concurrent water users) especially in hotspot areas (e.g. where people have limited access to water or where governmental water management is poor).

The [UN SEEA-Water](#) with considerations from a national perspective and sectoral guidelines (e.g. IPIECA, ICMM, SASB standards) may benefit report preparers in understanding the water dependencies for a specific company.

The identified subset of dependencies constituting material risks or opportunities (REQ-03) to the company business can be summarised in a qualitative narrative description of the integrated business model.

Details on hotspot areas and on water resources under pressure (e.g. surface or groundwater) should be provided, if material.

This information provides a useful context for the understanding of the policies and strategies developed by the company.

This Guidance acknowledges that water-related risks and opportunities are inherently interconnected with other environmental issues, such as climate and land-use change. Therefore, it is helpful when companies detail their dependencies on water in the context of its natural capital dependencies. This natural capital contextualisation offers a company the opportunity to:

- Explore risks and opportunities emerging from interconnections and relationships between different environmental issues;
- Explain to investors its place in the complex web of natural systems (also through a graphical representation); and
- Consider how to integrate learnings from interconnections into risk management, strategy and performance.

The thinking and guidance in the Natural Capital Protocol, the Principles of Integrated Capitals Assessments,⁴⁰ and International <IR> Framework⁴¹ can support the wider understanding of the relationships between natural capital and also other capitals.

2. Policies and strategies

Report users should be able to understand how identified risks and opportunities are reflected in organisation's strategic development and how they affect the impacts of and dependencies on water and natural capital and water-related ambitions. It may be beneficial to set out the reasoning behind the adoption of such policies and strategies, explaining how they respond effectively to issues raised in risk and opportunity analysis, dependencies and ambitions, and detailing how they are integrated in the overall business strategy and management (e.g. in assessing organisation performance, overseeing expenditure, costing, acquisitions and divestures, and in assurance processes). In particular, it is important to understand how water strategies and policies are mitigating risks, harnessing opportunities across

geographies over the short-, medium- and long-term, and the related financial implications. This description should be appropriately connected with risk management processes.

If these strategies and targets have been developed in **connection to important agreements** or policies,ⁿ or sectoral or water stewardship initiatives (e.g. Alliance for Water Stewardship or the CEO Water Mandate), then the relevance to the organisation should be explained. As stated in the CDSB Framework, this is good practice because it provides a basis for comparison.

When adopting and reporting on water-related policies, strategies and targets, consideration of **geography and time** is central. Water-related risks and opportunities vary greatly according to location and time horizon. For example, some water-related regulations are more likely in one country than another at any point in time; the nature and severity of water issues, such as water scarcity and its implications for the socio-economic conditions due to competition for water, will vary significantly. As suggested in the [Reporting expectations](#), it is useful to explain if specific goals or targets and prioritising actions are in place in **hotspot areas**.

Exposure to water-related risks depends on both operations and basin context, therefore, effective **management responses** to water issues include both internal and external actions. Examples of internal actions include an increase in water efficiency, products and services design and development, diversification of water sources, contingency planning (e.g. infrastructure failure or spills), addressing emerging effluents concerns, and measurements, and monitoring procedures in light of risks and opportunities described in REQ-03.

ⁿ Examples are: the Sustainable Development Goals and Science-based Targets for Nature, or national and regional regulations and goals, e.g. EU Water Framework Directive, US Safe Drinking Water Act, or the Indian National Water Mission

External actions include stakeholder engagement activities aimed at integrated water management influencing governance within a basin, and protection and restoration of freshwater habitats or ecosystems.

A summary of both types of responses should be disclosed to concisely exemplify the organisation approach to water management, including details on practices implemented to manage risks in the short-term versus longer-term, and, when applicable, complemented with a reference to more detailed external documents (e.g. dedicated water policy document or website).

Where water strategies and targets interact with other environmental or social policies, report preparers should draw users' attention to potential or existing synergies, explaining the benefits and/or feedbacks (e.g. effects of climate change).

Finally, explanation would be beneficial in the event of: (1) exclusion of geographies, facilities or water issues from reporting scope, (2) no stakeholder engagement, and (3) no integration of water in the overall organisation policy and strategy.

3. Targets and timelines

Detailed and consistent disclosure is especially important for the reporting of corporate targets, timelines and indicators for measuring performance against water policies and strategies. The type of target and indicator, the baseline and timeline, and the scope should be clearly described to investors and connected with the overall strategy as well as with the addressed business risks and/or opportunities. For example, useful details on targets are:

- Are the targets contextual and science-based, as recommended by international water initiatives (e.g. CEO Water Mandate or Science-based Targets)? Have baseline and target year been defined?
- Are specific targets set for hotspot areas or for areas where no standards on use of water and discharge exist (e.g. set by regulatory mechanisms)?

- Are targets measured through the key performance indicators (KPIs) described in REQ 04 and used internally by management?
- Have targets been discussed with stakeholders?
- Are targets aligned with international goals, and/or with regional, national, or local regulations?
- How do business operations contribute to the organisation-wide water targets?

Likewise, it may be beneficial to set timelines according to how the organisation has defined the **short-, medium- and long-term** in its risk and outlook analysis.

Progress towards targets may be expressed in terms of reducing negative impacts but also through more proactive targets, such as the percentage of clean water replenished in hotspot basins in relation to the water consumed (i.e. net positive)⁴², or value or percentage of investments and of research and development that is focused on improving water efficiency or on preserving water ecosystems in hotspot basins. Targets such as these provide greater connectivity to financial and core business performance.

As an organisation progresses with its water strategies and policies, it is beneficial to explain how it is advancing and what factors have been intrinsic to achieving or surpassing the targets. More importantly, when indicators or targets have been or are likely to be missed, this should be rationalised, detailing factors that were significant and explaining what could have been and could not be controlled or better managed. Explaining how strategies will be adapted to improve performance as a result would be of particular interest to report users.

4. Resourcing

When reporting on water-related policies, strategies and targets, companies should set out the resourcing, both financial and personnel, for meeting the delivery of the water policies and strategy. Such detail in a mainstream report can offer investors reassurance of the organisation's commitment and effort to meeting its water ambitions. Reporting on resourcing is especially important if the organisation's strategy requires significant capital investment or operation reorganisation to meet its ambitions. Additionally, specific resources in place in hotspot areas should be detailed.

Useful resources

1. Sectoral guidelines and standards can support companies in the identification of water dependencies. Useful resources are the [SASB industry-specific standards](#), [A practical guide to consistent water reporting](#) by ICMM for the mining and metal sector, the [Water risk assessment in the oil and gas sector - An overview](#) by IPIECA for oil and gas.
2. [ENCORE](#) tool allows to explore water related dependencies for the direct operations of 169 sectors of the economy at the global level.
3. [The System of Environmental Economic Accounting \(SEEA\) - Technical Note: Water Accounting](#) illustrates the main links between water and economic systems (pg. 6). These links can be grouped into three types of flows between the two systems: (1) physical flows of water and wastewater, (2) monetary flows associated with water related products and services, (3) assets (stocks of water and their changes during the accounting period).
4. The [AWS Standard v2.0](#) presents a 5-step approach to water stewardship. For each step, criteria and indicators are provided to support companies in their water stewardship journey. Additionally, the standard aims to achieve five main outcomes: water governance, sustainable water balance, water quality status, important water-related areas, safe WASH (Water, Sanitation and Hygiene) for all. Together these provide a comprehensive overview of water-related issues and of their complexity.
5. The CERES [Aqua Gauge tool](#) supports companies in developing and evaluating their water strategy – including risk assessment, goal-setting, accountability systems, and procurement, siting and CapEx decisions. Additionally, the [Ceres Roadmap 2030 section on Water](#) provides steps to improve water management and includes practical suggestions on performance (REQ 05).
6. The WWF report [Putting water strategy into context](#) proposes a set of steps that establishes a pattern of decision-making, which will enable a corporation to build water context into key decisions, including the allocation of scarce internal resources, to create value for the corporation, nature and people.
7. The integrated thinking illustrated in the [International <IR> Framework](#) takes into account the connectivity and interdependencies between the range of factors that affect an organisation's ability to create value over the short-, medium- and long-term, including the capitals that the organisation uses or affects, and the critical interdependencies, including trade-offs, between them.
8. The WWF webpage [Contextual and science-based targets for water](#) and the report [Contextual water targets](#) explains different types of water targets – non-contextual, contextual and science-based targets – clarifying the purpose and the focus of each category.
9. The CEO Water Mandate papers "[Exploring the case for corporate context-based water targets](#)" and "[Setting Site Water Targets Informed By Catchment Context: A Guide For Companies](#)" support companies in defining contextual water targets that are aligned with local and/or global public policy objectives. Additionally, the report [Setting Enterprise Water Targets: A Guide for Companies](#) illustrates a three-step process to define enterprise water targets informed by the water basin context, which help companies in addressing shared water challenges and focusing their efforts in the right high-priority places. Finally, the Science Based Target Network has issued an initial guidance on science-based targets (SBTs) for nature, as a first step toward integrated SBTs for all aspects of nature: biodiversity, climate, freshwater, land, and ocean (expected in 2022). The [Science-based targets for nature - Initial Guidance for Business](#) explains what an SBT is, why SBTs are important, and how they will work.

Examples of good practices

1. Heineken N.V. [Annual Report 2019](#) describes its Every Drop 2030 Strategy (pg. 124) and explains the importance of water for its business, its global commitment implemented through local actions (in water-scarce and stressed areas), and the role of stakeholder engagement and cooperation to maintain basin health. The report graphically illustrates the main actions and targets.

2. BHP [Annual Report 2020](#) clearly and concisely summarises its water stewardship (pgs. 59-60). The report describes the main water dependencies and company steps in managing water resources (at the operational level, in engaging with stakeholders and in contributing to global initiatives on harmonisation of water accounting like the CEO Water Mandate). Additionally, it includes reference to [external resources on water](#).

3. Coca-Cola HBC [Integrated Annual Report 2019](#) describes its water dependencies (pg. 18), water stewardship and strategy for reduction of water consumption within its Mission 2025 strategy (pgs. 21-5). It includes actions and goals at both operational and basin level (e.g. securing water availability in hotspot areas and engaging with communities), mitigation actions for water-related risks (pg. 59), and specific targets for water-stressed areas (pg. 44). The report also discloses information on investments in water stewardship (pg. 39).

4. Diageo [Annual Report 2019](#) describes its water dependencies, from availability to temperature (for cooling, pg. 52) and its approach to water stewardship (Water Blueprint), which prioritises actions in areas that the company assessed as water-stressed (pg. 51) and includes different actions, from water efficiency to management at the basin scale (pg. 15). The report clearly states the integration of water-related goals and management into the company strategy (pgs. 8 and 15).

5. Danone [Universal Registration Document 2019](#) presents its water stewardship journey (pgs. 166-8). The report illustrates the assessment undertaken to identify hotspot areas and prioritising interventions, the objectives (covering the entire value chain), the main actions and outcomes.

REQ-03 Risks and opportunities

Disclosures shall explain the material current and anticipated environmental risks and opportunities affecting the organisation

Disclosure checklist

Does the disclosure:

- ✓ Identify material water-related risks and opportunities by adopting a basin-scale and value chain approach, and by considering different types of risks (see [Table 1](#))?
- ✓ Explain the implications of material water-related risks on business and value chains, specifying geographic locations and time horizons in which the risks will materialise?
- ✓ Describe the systems and processes used for assessing, identifying, and monitoring water-related risks and opportunities, including whether they are integrated with existing risk management systems and processes?

Water-related risks and opportunities can be complex and have distinctive characteristics. They subject to spatial and temporal variations, follow non-linear pathways, are shaped by uncertain actions by different actors, and are not always directly manageable by the organisation. It is important to adopt a basin approach and consider the cumulative impact of all parties that affect a water basin. Water risks and opportunities, however, are highly specific to the organisation, the sector, and each of its operational sites, and the value chain.

The main causes of water risks are:

- Availability and accessibility of sufficient and adequate water supplies;
- Wastewater discharges into the environment;
- Socio-economic and political conditions;
- Regulatory regimes in the areas of operations or suppliers; and also
- Other environmental issues such as land use and climate change.

[Table 1](#) provides an overview and examples of potential water-related risks and opportunities that should be considered by organisations and the associated financial impacts. Water-related financial risks are grouped according to the categories used in the TCFD recommendations, namely physical risks and risks linked to the transition to a water secure future, including policy and legal, market, technology, and reputational risks. The included examples can originate from either operations or from context (i.e. water basin conditions) and some of them can fall under more than one risk category or result from cascade effects (e.g. physical risks such as reduced water accessibility can be caused by policy and legal risks, such as poor transboundary policy or lack of investments in infrastructures). When selecting which categories to disclose, preparers need to assess what is material to their organisation.

Table 1. Examples of water-related risks and opportunities, with the potential financial impacts that may be identified by companies, are provided in the table below. Operational and basin⁴³ (i.e. due to context) risks are labelled with **O** and **B**, respectively. Climate-water risks are identified with **C** and those that are linked to land-use change with **L**.

	Risks	Potential business and financial impacts
Physical risks	<p>Acute</p> <ul style="list-style-type: none"> - Increased severity and frequency of extreme weather events such as cyclones, droughts and flooding (coastal, fluvial, groundwater) C L - Contamination of water bodies (both fresh- and non-freshwater) caused by the organisation itself or by other companies or cities located in the same water basin O B L <p>Chronic</p> <ul style="list-style-type: none"> - Changes in precipitation patterns and extreme variability in weather patterns (affecting interannual or seasonal variability of water resources) C - Water scarcity C L - Water stress C L - Changes in temperatures C - Rising sea level C - Coastal erosion C - Ocean acidification C 	<ul style="list-style-type: none"> - Impaired assets due to damages resulting from floods or cyclones (not limited to the organisation's property, e.g. water infrastructures the organisation relies on or energy supply relying on water for cooling) - Reduced revenue and/or increased costs due to interruption of operations or supply chain as a consequence of floods or drought (e.g. low levels in water ways used for raw materials transportation),^o or damages to the water network; - Reduced revenues due to interrupted, reduced, or damaged production due to the unavailability of adequate water (used as input to production, or for industrial cooling) also caused by other water users in the basin and increased costs due to higher use of water from the distribution network (e.g. rather than rainwater) - Increased insurance premiums and potential for reduced availability of insurance on assets - Increased CapEx due to adaption to future climate and environmental scenarios (e.g. rainwater tanks, protection against floods) - Reduced productivity due to lower water availability and consequent rethinking of production processes or timing (e.g. agricultural production) - Write-offs, early retirement of existing assets and relocation of operations and suppliers, affecting the costs of raw materials (e.g. transportation)

^o Happened already in German Rhine river in 2018: transportation activities were interrupted due to low levels in the river and this event affected the supply of raw materials for some major chemical companies.

	Risks	Potential business and financial impacts
Policy and Legal	<ul style="list-style-type: none"> - Changes to legislation B - Tighter (emerging) regulation on water rights, permits, and allocations (restrictions in obtaining sufficient water due to regulations designated to alleviate pressure on water resources) B C L - Increased price of water - Enhanced reporting obligations - Mandates and regulation of existing products and services - Exposure to sanctions and litigation (e.g. spills of polluting effluents that damage human and ecosystem health; or violation of water-related rights, permits or allocations) O B - Non-compliance with legislation O - Ineffective (water) governance B - Lack of or weak transboundary water governance and cooperation resulting in reduction in water availability, e.g. due to increased water use by upstream countries B C - Water conflicts (e.g. in transboundary water basins where no cooperation between countries is in place) B C L - Non-existent, old and failing existing infrastructure that is not being properly maintained due to insufficient investments (on both grey and green infrastructures, such as nature-based solutions)^p B 	<ul style="list-style-type: none"> - Increased costs of operations and inputs to operations - Increased costs of personnel (report preparers) and monitoring activities (e.g. new sensors for data collection) required for reporting activities - Reduced revenue from decreased production capacity due to limited access to water - Increased costs and/or reduced demand for products and services resulting from fines and judgments - Fines due to violation of regulations - Loss of revenues or impaired asset valuation due to loss of a permit to operate from litigation and/or from direct action by the regulator towards non-compliance - Disruption of operations or supply due to reduced accessibility to water caused by poor transboundary water governance or poor infrastructures
Market	<ul style="list-style-type: none"> - Shifting customer preferences to less water-intense products (e.g. food, textile) - Volatility of water prices - Increased costs of raw materials (e.g. water-intense inputs, for which price has raised due to water scarcity) C 	<ul style="list-style-type: none"> - Reduced demand for products and services - Increased production costs - Supply disruption
Technology	<ul style="list-style-type: none"> - Transition to water-efficient and (water-) cleaner technologies - Substitution of existing products and services with lower water use or cleaner emissions options - Lack of access to data or access to poor quality data - Unsuccessful investment in new technologies - Water-related adaptation technologies required to cope with new water-climate conditions and futures scenarios (e.g. flood protection) C 	<ul style="list-style-type: none"> - Expenditure for research and development of new and alternative technologies - Capital investments in technology development - Increased costs of operations and raw materials (e.g. higher energy use) required to achieve water-related goals (lack of integrated environmental assessment)

^p The IUCN's [Guidance for using the IUCN Global Standard for Nature-based Solutions](#) provides a framework for the verification, design and scaling up of Nature-based Solutions. The guidance does not exclusively focus on water, yet the imperative is that companies start to think about an integrated approach to water management and consider the interlink of the different ecosystems in their respective frameworks.

	Risks	Potential business and financial impacts
Reputational	<ul style="list-style-type: none"> - Shifts in consumer sentiment toward the organisation/brand as a result/lack of water stewardship activities - Stigmatisation of sector - Stakeholders' perceptions and concerns related to the organisation's use of water resources (e.g. concerns regarding new pollutants) - Reputational risks due to the violation of water-related rights through operations - Negative media coverage - Social license to operate⁴⁴ B 	<ul style="list-style-type: none"> - Reduced demand and purchase of products and services - Workers' strike (in case of damages to water resources used by local communities) - Loss of license to operate (e.g. after community protests) - Social license risks may result in stranded assets
	Opportunities	Potential business and financial impacts
Resource efficiency	<ul style="list-style-type: none"> - Transition to more water efficient products - Increased water reuse and recycling - Reduced water usage and consumption 	<ul style="list-style-type: none"> - Reduced operation costs - Reduced exposure to water price volatility - Reduced reliance on water and increased resilience to potential water shortages
Product and service, and market	<ul style="list-style-type: none"> - Development of less water-intense products and services - Development of water-climate adaptation and insurance risk solutions c - Ability to diversify business activities 	<ul style="list-style-type: none"> - Increased resilience due to business diversification - Access to new markets due to less water-intense products and services - Increased insurance coverage and access to new assets that require it - Use of public-sector incentives
Financial incentives	<ul style="list-style-type: none"> - Access to sustainability index loans - Access to climate funds c - Green bonds - Incentives for suppliers 	<ul style="list-style-type: none"> - Increased access to funds and loans
Resilience	<ul style="list-style-type: none"> - Diversification of water resources and business activities - Participation in programmes and adoption of water-efficiency, recycling and circularity mechanisms - Improved water-related monitoring activities and data availability - Adopting a landscape approach to water management and implement nature-based solutions B 	<ul style="list-style-type: none"> - Increased business stability - Business and supply chain continuity - Reduced capital infrastructure costs
Reputation and relationship with stakeholders	<ul style="list-style-type: none"> - Collaborative engagement with stakeholders to tackle water challenges B - Improved conditions of water resources and ecosystems the organisation relies on (e.g. water replenishment due to improved operations, or ecosystem restoration) B L 	<ul style="list-style-type: none"> - Improved reputation among stakeholders sharing the same water resources - Improved stability of operations and working conditions

Like other risks and opportunities that companies face in the modern, interconnected era, those related to water require careful consideration, across all the locations of operations and value chain, different time horizons and potential future pathways. For this reason, risk management approaches, horizon scanning, forecasting, sensitivity testing and scenario analysis, which is discussed further below in relation to REQ-06, are amongst the practical tools that can guide companies in their assessment of risk and opportunities.

1. Detailing risks and opportunities

When disclosing material water-related risks and opportunities in the mainstream report, thoroughly describing them by specifying their key characteristics and explaining their relevance to the organisation, offers useful information to investors. In terms of characteristics for high quality reporting, it is essential to properly account for when and where the risk or opportunity may materialise, specifying whether it concerns a specific business area, a particular region or site and the time horizons, for instance. **Causes and sources** of water-related risks and opportunities and their **implications** for the business (on operations, value chain, business model and financial results) should be described and linked to the dependencies identified in REQ 02, sources of impacts and related indicators in REQ 04, and performance in REQ-05. For instance, from a risk perspective, indicators on water withdrawals and their quality are relevant because an organisation's operations rely on this amount of water (regardless of if it is then returned totally or partially to the environment) and on water availability and quality in the water basin of operation (i.e. on the possibility to withdraw the required amount of water). Information on water-related risks and opportunities should include considerations of and details on:

- **Assessment methods**, including tools used (see [Tools for assessing water-related risks](#)) and timeframes and risk categories considered, as well as details on materiality assessment, and on the integration into overall business risk assessment;
- Geographic specificity and influencing **context-specific elements**, such as geography, climate (i.e. precipitation patterns and seasonality), status of water resources, regulation, and socio-economic conditions

(e.g. poverty rates, employment rates, WASH-related conditions), as well as stakeholders' water-related challenges. Classifying locations of operations and suppliers according to different levels of risks is useful (e.g. breakdown of areas of operations in high, medium, or low water-risk), as well as a definition of the risk classes used (e.g. referring to existing tools – see [Tools for assessing water-related risks](#));

- **Variability** over short-, medium- and long-term time horizons. It is important for companies to explain when risks and opportunities could be expected to materialise and how they may develop through the considered timeframes, highlighting the main differences with historical conditions. Since the timing of water-related impacts on organisations will vary, this Guidance does not define time frames because this could hinder organisations' consideration of risks and opportunities specific to their businesses. Preparers are encouraged to decide how to define their own time frames according to the sectors and geographies in which they operate, and the water-related risks they face. A good practice is to consider the hydrological time boundaries in a given basin area (seasonality, return periods of hydrological events like floods etc.) also in combination with projections of different future climatic scenarios to convey uncertainty and possible ranges of future impacts. Climate change, indeed, challenges the assessment of water-related risks and opportunities because future hydrological conditions are likely to significantly differ from those in the past; and
- **Scenarios** considered in the risk assessment, describing which drivers that may influence the business-water interactions are included, such as regulations, socio-economic drivers, and environmental drivers like climate change. This information is interconnected with scenario analysis disclosed under REQ-06.

Where water-related risks intersect with other business and environmental risks in amplifying manners (i.e. aggregate risks), it is prudent for companies to identify and explain such connections and feedbacks.

2. Quantification and financial impact

Decision-useful disclosures will further set out the business implications of material water-related risks and opportunities and, where possible, quantify them over **appropriate timeframes**. When valuing the risks or opportunities, the reader should be offered the assumptions and essential figures (e.g. present value of asset or revenue stream affected) as well as the uncertainties for the financial figures, especially if the size of the risk or opportunity varies largely over time. In addition, the mainstream report should be designed in a manner that allows the reader to navigate from these risks and opportunities to the policies and strategies developed to manage them, as it is expected in REQ-02.

3. Connecting information

In addition, while the CDSB Framework does not set out specific reporting requirements, Principle 3 encourages organisations to explain whether and to what extent water-related issues are connected with other information and results in the mainstream report, with REQ-03 explaining that links should be made to reporting of processes and systems for risks and opportunities. For example, report users should be able to understand how water-related issues have been incorporated into existing systems of risk identification and prioritisation and whether the systems have been adapted to accommodate the characteristics of water-related issues. When reporting material water-related risks and opportunities it is important to explain how the organisation considers short-, medium- and long-term issues in risk management systems in linkage with disclosures under REQ-02. Further, the systems used to identify water-related risks and opportunities will develop in coming years with greater understanding of the link between water and environmental, regulatory, socio-economic and technological pathways in the different basins. Setting out how the organisation is developing and adapting these systems (also by linking to REQ-01 and REQ-02) will demonstrate responsive and effective management.

Examples of good practices

1. BHP ([Annual Report 2020](#)) assessed water-related risks within the basins and marine regions in which it operates, considering environmental, community and third party interactions according to a company-specific framework (pg. 25). Main water-related principal risk factors include physical water-climate threats (impacts on assets, such as water-related infrastructures, and increased competition for and regulation of water), asset integrity and tailings storage facilities, and third party performance (contractors whose operations may cause disruptions to community access to water, e.g. contamination of potable water) (pgs. 30-40).

2. In Danone [2019 Registration Document](#) (pg. 24) water-related risks are embedded in the climate change category (e.g. groundwater degradation could impact operations, and subsidiaries' relationships with local stakeholders), and regulatory changes (e.g. environmental law on water use). Additionally, water stewardship emerged as a priority theme from risk analysis (pg. 143), and a dedicated water risk assessment is performed by combining three tools (WRI Aqueduct Water Risk Atlas, WWF Water Risk Filter, and GEMI Local Water Tool) and audit processes (pg. 166) and is used to inform the development of water policy.

3. The Coca Cola [2020 Business and Environmental, Social and Governance report](#) (pg. 21) includes a concise description of the methodology adopted to assess water-related risks and the results are summarised in a clear table showing different categories of risk (physical, regulatory and reputational) and related business impacts along the value chain (split into supply chain, operations and markets).

Tools for assessing water-related status and risks

The using of existing tools for assessing the water-related status and risks in the basins of operations, supply, and market, can inform and support company materiality assessment.

The main tools used by companies are [Aqueduct](#) by the World Resources Institute (WRI), [Water Risk Filter](#) by WWF, the [India Water tool](#) by WBCSD, the [Water Footprint Assessment Tool](#) by the Water Footprint Network and [The Local Water Tool \(for Oil and Gas\)](#) by GEMI. These tools adopt different methodologies and assumptions, provide different levels of water stress and risks, and cover different areas of the world.

An overview and comparison of some of these tools are provided by the WBCSD and WWF report "[Right tool for the job: Tools and Approaches for Companies and Investors to Assess Water Risks and Shared Water Challenges](#)" and IPIECA report "[Water risk assessment in the oil and gas sector: an overview](#)" (see Appendix, pg. 5). Additionally, accuracy of results can be improved by coupling these tools with real time tools (e.g. that involve real time media tracking - for reputational risks) and earth observation and remote sensing tools for water quantity and quality risks.

Additional tools allow the exploration of the link between water-related risks and financial implications. For example, the [ENCORE](#) tool supports the understanding of business dependencies on natural goods and services (including water), and the assessment of how these dependencies might represent a risk for the business. Other tools like the Ecolab [Water monetizer](#) and the [Water and Value Tool \(WAVE\)](#) allow to translate water-related risks into monetary terms^q.

Regarding coastal threats, a list of tools to assess varying levels of climate & coastal threats (e.g. coastal floods) is provided in the report [Waterproofing APAC To Avoid Atlantis](#) by CWR.

Finally, the CERES' [Investor Water Toolkit](#) provides a list of metrics, maps, tools and research platforms to support the assessment of water-related risks. The Toolkit indicates that three types of indicators should be disclosed to provide investors with a comprehensive assessment: (1) point-in-time metrics that provide snapshots or "red flags" of potential water risk, (2) information on possible future risk exposure, and (3) geographic contextual information related to water resource security. This includes also a [database](#) on nearly 30 different metrics, maps, tools and research platforms.

These tools represent useful ready-to-use resources, but companies should (1) understand the assumptions and the methodology behind the selected tool(s), (2) combine different tools when performing their risk assessment, and (3) integrate company-specific components and information in the assessment (e.g. local water regulation or risks due to specific pollutant).

^q Check also "ISO 14008:2019 - Monetary valuation of environmental impacts and related environmental aspects" also available at: <https://www.iso.org/standard/43243.html>

Useful resources

1. The [Datasets and Tools for Context Reporting](#) by the CEO Water Mandate provide a useful list of resources and terms used in water-related risks assessment and accounting.

2. The CDP [Corporate Water Security Questionnaires](#) provides a comprehensive overview of water-related risks and potential impacts.

3. The [Water Risk Filter methodology](#) provides a comprehensive list of water-related physical, regulatory, and reputational risks (pgs. 3-4), the WWF briefing [Freshwater Risks & Opportunities: An Overview and Call To Action For The Financial Sector](#) outlines how water is both a financially material risk and an opportunity for investors, while the WWF and IFC report [The Value of Water: a framework for understanding water valuation, risk and stewardship](#) sheds light on water valuation, water risks, and the possibilities for better water stewardship.

4. Frameworks illustrating water-related risks:

- [Water Risk Exposure map](#) by CWR illustrates the interlinkages between water, climate, clustered (i.e. urbanisation and clustered assets) and regulatory risks.

- PRI report [“Growing Water Risk Resilience: An Investor Guide On Agricultural Supply Chains”](#) illustrates in Figure 2 (source: WWF) different risk factors stemming from operations and basin conditions, and related financial implications and impacts on value creation.

5. Overview of sector-specific water-related risks are provided by:

- For mining and metal sector, the ICMM report [“A practical guide to consistent water reporting”](#) (Table 9 supports the narrative on water challenges and opportunities; Table B.2. and B.3 provide examples of risks and opportunities);

- For food and beverage sector, the [CERES report](#) [“Feed ourselves thirsty”](#);

- For the beverage sector, the [BIER report](#) [“A Practical Perspective on Managing Water-Related Business Risks and Opportunities in the Beverage Sector”](#); the report is also useful for understanding the general approach to water-related risk identification;

- For finance sector, the natural capital (including water) risk assessment process presented in the report [Integrating natural capital in risk assessments: A step-by-step guide for banks](#) supports the identification of risks for financial institutions resulting from business water dependencies.

6. CWR report [“Toward Water Risk Valuation”](#) presents an assessment of water-related risks for 10 energy companies, the report [Are Asia’s Pension Funds ready for Climate Change?](#) illustrates key interconnected and underlying climate-water risks, while the report, [“No Water No Growth”](#), presents an integrated assessment on water and economic development of 10 Asian water basins. Results show the importance of considering the water basin context when assessing water-related risks and related implications to the economic systems.

7. The ISO standards [14007](#) and [14008](#) and the [BSI BS 8632 standard](#) on natural capital accounting can support the quantification (i.e. monetisation) of financial impacts of natural capital risks and opportunities (including water).

8. The DWS paper [A transformational framework for Water Risk](#) describes why water-related risks are material and why it is important to disclose them to investors, and it provides an institutional framework on addressing water risk across asset classes. The South Pole’s report [Methodology for Water Risk Assessments of Equity Portfolios](#) examines how investors can analyse and understand the water risks in their equity portfolios with the aim to align portfolios to global water targets and goals.

REQ-04 Sources of environmental impact

Quantitative and qualitative results, together with the methodologies used to prepare them, shall be reported to reflect material sources of environmental impact

Disclosure checklist

Does the disclosure:

- ✓ Provide metrics and indicators for sources of material water impacts, such as withdrawals, consumption and discharge, using both absolute and normalised metrics?
- ✓ Explain the metrics used, including the methodologies, geographic details, levels of uncertainty and provide narrative to assist in understanding of the results?
- ✓ Categorise and disaggregate metrics, e.g. considering areas affected by different levels of water risks or different water sources and destinations, to support understanding and comparability?

1. Material sources of water impacts

The CDSB Framework (Principle 1) sets out that companies should disclose identified relevant and material environmental information, including material sources of (water-related) impacts in their mainstream reports. Sources of water-related impacts may be linked to water use, wastewater discharge (degradation of water quality due to polluting emissions), but also degradation of natural ecosystems that guarantee enough and adequate water to the business (e.g. through land-use changes).

As explained in REQ 02, the material sources of water impact together with dependencies, risks and opportunities, should drive the formation of water-related policies, strategies and targets. However, report users would benefit from an explanation of the materiality assessment of the sources of water impact to the organisation. It might be that companies are disclosing on material sources of water and other environmental impacts in their **sustainability reports, CDP responses or index questionnaires**. Such disclosures can be repurposed to be included in the mainstream report and satisfy REQ-04 of the CDSB

Framework ([Appendix 1](#)). [Table 2](#) offers examples of common potential sources of water impacts clustered into direct and indirect business-water interactions.

2. Use of quantitative metrics

The use of quantitative metrics to illustrate the material sources of impacts is encouraged. Ideal metrics should be consistent with industry guidelines, recognised by existing reporting provisions, and international initiatives, and calculated in accordance with recognised approaches, so as to enable comparability and benchmarking. Metrics should also be representative of the specific organisation, such as metrics used in internal water management and performance monitoring, or that illustrate water-related financial impacts to the organisation (e.g. costs of water rights or licences, investments in infrastructures, revenues from water-efficient products and services). To enrich and complement the disclosure, quantitative metrics should be accompanied by a narrative providing:

- Connection with other information in the mainstream report, including financial performance (e.g. risks and opportunities – financial opportunities from reduced water pollution);
- Context and explanation of progress on more qualitative performance such as non-compliance to water-related regulation (e.g. percentage of facilities with violations) or membership of water-related initiatives (e.g. percentage of facilities with water-related certifications);
- Considerations on the selection of relevant metrics. Especially for **water quality**, appropriate metrics depend on both sector and site. For this reason, while sectoral guidelines can provide support, assessment of the main pollutants affecting the recipient water bodies at the operations or supplier locations would complement the information; and
- Description of treated and untreated effluents, priority substances treated by the organisation and related concentration limits, especially in basins with no effluent regulations and/or with degraded water bodies.

Sources of water impact	Description	Metrics
DIRECT		
Water use (withdrawals and consumption)	Abstractions of (fresh)water for production, products, utilities (e.g. sanitary water or gardening water), or for decontamination purposes (e.g. polluted soil and aquifer decontamination), reduce the availability of water in the environment (either temporarily or permanently), i.e. for natural ecosystems functioning and for other water users within a basin.	<ul style="list-style-type: none"> - Total volumes of water withdrawals, consumption and discharges (only quantity) - Intensity metrics of consumption and/or withdrawals per unit of production, revenue, employee, and/or other suitable references - Volumes of water reused, recycled, produced or injected (e.g. in oil production), related efficiency metrics (e.g. % on total withdrawals) and related reduction in withdrawals or consumption
Water discharge	Modification of the physical (e.g. temperature after cooling) and/or chemical characteristics of water due to release of wastewater with concentrations of pollutants above the limits and thus leading to degradation of water resources and impacts on water ecosystems (also coastal) and biodiversity.	<ul style="list-style-type: none"> - Number of non-compliance incidents (due to violation of quantity permits, standards, and regulations such as limits to polluting emissions) that result in formal enforcement actions, and unauthorized or non-compliant discharges should be disclosed - Concentrations of key pollutants in the wastewater (e.g. hydrocarbons for the Oil and Gas sector) possibly selected according to sectoral guidelines or regulations (e.g. critical pollutants in a specific area of operation), and related indicators, e.g. Chemical Oxygen Demand (COD) or eutrophication potential (due to excess of nutrients e.g. due use of fertilizers in agriculture)
INDIRECT		
Land use and cover change	Changes in land cover such as deforestation or urbanization affect water-related processes such as evapotranspiration, interception by vegetation, or infiltration into the soil. Given a certain amount of precipitation, these processes determine the water balance thus regulating the water availability in a water basin.	<ul style="list-style-type: none"> - Water-related ecosystem services and biodiversity metrics – check Natural Capital Protocol (Biodiversity guidance); DEFRA biodiversity metrics⁴⁵; Streamlined European Biodiversity Indicators⁴⁶; UNEP-WCMC Corporate biodiversity indicators⁴⁷; Value Balancing Alliance⁴⁸ - Land-use change indicators (e.g. hectares of forest, grassland or wetland lost due urbanization)
Ecosystem degradation and loss of biodiversity	Ecosystem services such as water regulation (quantity and quality), and flood and drought protection are guaranteed by ecosystems such as forests, grasslands, wetlands, estuaries and coastal waters, and their biodiversity. ⁴⁹ Loss or degradation of these ecosystems and their biodiversity can significantly affect the provision of these services.	

Table 2. Common examples of sources of water impact, with a description of each and how they contribute or are connected to water issues.

3. Contextualising water-related metrics

Water-related metrics should describe the organisation's relationship with the water-related contexts in which it operates, including both environmental and socio-economic conditions. For example, metrics on water use can be contextualised with factors such as regional water availability and demand, by adopting a water-basin approach.⁵⁰ Details on hotspot areas, where facilities, suppliers or consumers are located, would support the understanding of the diversification and prioritisation of management actions. For example, useful indicators which link the sources of impacts to risks are the percentage of sites located in hotspot areas and the corresponding contribution to the organisation's overall withdrawals and consumption, but also production and/or revenue.

Water withdrawals and consumption are two common metrics disclosed by companies in sustainability reports. Withdrawals represent the water required by an organisation to operate. If the required amount of water is not available or accessible for any reason, either natural, infrastructural or regulatory, the organisation cannot operate. Disclosing metrics on withdrawals in hotspot areas, provides quantitative information on the organisation operational risks. Water consumption illustrates the effective impact of an organisation on the amount of water resources in the basin and other water (downstream) users.⁵ Consumption metrics provide information (1) on organisation's impacts on water resources and on other stakeholders, and (2) on related reputational risks, especially in hotspot areas.

Besides geographies, metrics on water use or pollution occurring in seasons characterised by lower water availability would illustrate companies' impacts and performance in mitigating risks due to the variability of water within a year and/or over years (e.g. precipitation pattern and groundwater table level trends over pluri-annual hydrological cycle). For example, consumption during the dry season can be relevant for agri-food companies that are working to reduce the risk of crop failure due to water deficit.

Finally, indicators that highlight the contribution of the organisation to water-related societal conditions, e.g. price paid for the water consumed versus the 'fair' price, but also percentage of facilities with fully functioning WASH for employees in areas with limited access to clean water, can clarify the benefits of water stewardship and related management, especially in hotspot areas.

4. Decision-useful information

When reporting results on material sources of water impacts, it should be considered what constitutes decision-useful information – consistency, comparability, clarity and verifiability – as set out in Principles 4, 5 and 6 of the CDSB Framework (see the CDSB report [Decision-useful climate-related information for investors - What, Why & How?](#)). In satisfying these key characteristics, the applicability of the metrics and indicators chosen to report on material sources of water impacts, such as sector or industry and/or national or regional standards for reporting, should be considered.

In addition, results should be reported in absolute and **intensity terms**, with organisation revenue and/or appropriate non-financial output measures (e.g. a standard unit of product or service) being used to normalise the results. This supports **comparability** and benchmarking of companies and allow investors to understand the water implications aligned to business strategy. To this aim, disclosing clear definitions of involved water flows (e.g. consumption) and description of accounting methods is fundamental. Furthermore, companies should ensure that they do not conflate their results for material sources of water impacts with possible mitigation activities, such as water circularity mechanisms (e.g. reuse and recycle) and related efficiency measures. The latter can be reported where relevant and material, but accompanied with clear definitions of used metrics and accounting methods in a manner that is distinct from the material sources of impact (e.g. consumption or discharge), otherwise it may mislead the report user (e.g. using only the percentage of reused water can be misleading if no accounting details are provided).

Monetising water flows and related metrics can support the understanding of the water-related financial aspects.

⁵ The consumed water does not return to the basin, where the water was withdrawn.

5. Disaggregation and categorisation

To benefit comparability and understandability, it can be helpful to disaggregate and categorise results to better appreciate impact and report this alongside total results. Results can be disaggregated according to types of water (e.g. freshwater, seawater), water sources and destinations (e.g. surface, groundwater, seawater, rainwater, fossil or non-renewable), geographies (e.g. categorised by different levels of water-related risk), business activities, or phases of the value chain. For instance, if significant water volumes are consumed in hotspot areas, it would be useful to report users to access disaggregated performance results for those areas (e.g. water consumption in areas affected by high or very high water risk or scarcity), especially if linked to specific targets and related management.

6. Rationale of selection and methodological details

In the reporting of material sources of water impacts results, it is useful to offer brief explanations to the appropriateness of reporting choices for metrics, intensity factors and means of disaggregation. Given that it is common for selective reporting on corporate impact, such explanations offer further confidence in the data disclosed. In addition, setting out clearly the methodologies used for preparation of disclosures will add to the validity and usefulness of the results. The description should provide definitions and accounting details for the different water-related terms and flows considered in absolute, intensity and efficiency metrics, such as withdrawal, discharge, and consumption. Also, disaggregation categories should be clearly defined, and any tools and databases used should be referenced. Finally, where there are uncertainties and gaps in the water data or where methods and assumptions have been amended or applied, highlighting and offering an explanation to report users for these differences can alleviate confusions or misconceptions.

Examples of good practices

1. Kering [Universal Registration Document 2019](#) describes eight categories of environmental indicators used to assess the environmental impacts of the group. Two categories focus on water (consumption and pollution) and related results are presented in both volumetric (pg. 132) and monetary units (pgs. 149-152).
2. Olam [Annual Report 2019](#) presents links between water and financial indicators (Strategy Report - pg. 139) used to assess the total economic value of water consumption across all cocoa processing facilities located in eight countries (i.e. by applying context-specific values water).
3. Heineken [Annual Report 2019](#) provides water consumption for water-stressed areas (pg. 125).
4. TSMC [Annual Report 2020](#) discloses water-related financial metrics (pgs. 134-135) illustrating costs of pollution control, investments for resources conservation, training, management system and certification expenditures, and impact measurement and monitoring fees, and benefits from water savings.

Useful resources

1. The report "[Measuring Stakeholder Capitalism: Towards Common Metrics and Consistent Reporting of Sustainable Value Creation](#)" provides a list of basic water-related metrics (use and pollution) and the definitions of water variables considered in the metrics, and explains the rationale behind the selection of metrics.
2. Many of the world's largest companies already disclose information and data to CDP [Corporate Water Security Questionnaires](#) on material sources of water impact. CDP submissions can provide a useful, well-structured basis for developing mainstream disclosures in response to REQ-04 as well as other reporting requirements of the CDSB Framework, such as on governance, strategies and targets, and outlook.
- 3 SASB [materiality matrix](#) and [industry-specific standards](#) identify a base set of material water issues for each industry, providing metrics for reporting on them in a consistent and comparable manner.
4. GRI 303 disclosure standards on water and effluents describes basic water metrics and means of disaggregation (e.g. different water sources).
5. Sector-specific guidance can be provided by [documents](#) and [tools](#) from sectoral initiatives, such as the [Sustainable Apparel Coalition](#) and [ZDHC](#) for the textile and apparel sector, or [BIER](#) for the beverage sector.
6. The [water accounting framework for the Australian minerals industry](#) provides a flexible approach that produces water metrics that can be used to benchmark performance.
7. The Life Cycle Initiatives of the UNEP has developed [regionalised factors](#) to conduct an assessment of impacts related to water consumption.
8. The WBCSD and BIER tool on [Water Circularity Metric](#) and related [report](#) shed light on *circular water management*, related indicators at the facility level and a scenario-based tool that help users measure, set targets and monitor progress on circular water management.
9. The report [Methodology Impact Statement Focus: Environment \(Version 0.1\)](#) by the Value Balancing Alliance provides methods for assessing impacts and for performing monetary evaluation for water consumption and pollution.

REQ-05 Performance and comparative analysis

Disclosures shall include an analysis of the information disclosed in REQ-04 compared with any performance targets set and with results reported in previous periods

Disclosure checklist

Does the disclosure:

- ✓ Provide appropriate historical data to the results reported from REQ-04 for material water impacts to allow for useful comparison, including details on hotspot areas?
- ✓ Contextualise the performance with baselines, targets and other criteria used to assess progress?
- ✓ Explain the major trends with reference to drivers of change under (e.g. water-related strategies or business developments) and/or outside (e.g. regulatory changes) the control of the organisation?

To offer report users proper comparability between past and present performance on material sources of water impacts, companies need to ensure that they are offering an appropriate number of historical datapoints. Principle 2 of the CDSB Framework sets out that disclosures should include “all information that is necessary for an understanding of the matter that it purports to represent and does not leave out details that could cause information to be false or misleading to users.” Narrow dataset windows or intermittent, longer-term datasets are unsuitable for comparison and decision-making, for instance, potentially obscuring the actual trends of impact. For some, such longer-term measures of impact and performance will not be possible, having not collected the data for long enough, which should be explained where it hinders report users. In addition, consistency needs to be applied to techniques used for data gathering and processing to allow for proper comparability and understanding of performance. In many circumstances, such changes are made to improve accuracy or meet new standards. Where changes are made to methods, restatements should be produced, as in REQ-10 of the CDSB Framework, to draw attention to these changes and an explanation offered.

Where targets have been set for material sources of water impacts, it is useful to restate the overall ambition and the baseline, clarifying for the reader as to whether the targets are part of a corporate initiative or scheme, or tied to wider national or international ambitions. Such targets offer an effective means of providing a narrative analysis of performance to reduce water impact. It would be beneficial to provide details on performance and progress in hotspot areas but also in areas experiencing significant changes including land-use (e.g. urbanisation or deforestation), regulations, and population growth.

In explaining trends, companies should draw the reader’s attention to the impacts of environmental initiatives and management actions, wider corporate developments (e.g. changes in strategy, acquisitions, or divestments), and other drivers of change that are **internal to the organisation** such as methodological modifications (e.g. changes in targets or data coverage). For example, a spike in water usage might be the result of a significant acquisition, or a drop in withdrawals could come as a result of increased water efficiency. Other natural and human-induced factors that are **outside the control of the organisation** (e.g. regulatory changes) can influence such trends. Such narratives should try to illustrate a more holistic water impact, while making connections across different aspects of the corporate report.

Useful resources

1. Step 4 of the [AWS Standard v2.0](#) supports companies in evaluating their performance against the actions taken to implement the water stewardship, and in using this data to inform the next iterations of the water stewardship plan.
2. Regarding the description of progress against goals and targets, [GRI standards on water and effluents \(303\)](#) refers to clause 1.5 in [GRI 103: Management Approach](#). This clause requires information on the baseline and context for goals and targets, the expected timeline for achieving each goal and target, and whether goals and targets are mandatory (based on legislation) or voluntary.
3. The ICMM [practical guide to consistent water reporting](#) includes suggestions on metrics, categories of water quality, and levels of water-related risks useful for companies in the mining and metal sector when reporting their water-related performance.

Examples of good practices

1. Diageo [Annual Report 2019](#) summarises the company water stewardship performance in a table, which includes targets, KPIs, and a brief description of progress against the targets (pg. 56). Time series of KPIs are provided and disaggregated by geographies (pg. 12 and 57).
2. BHP [Annual report 2020](#) summarises the yearly performance with a concise narrative that describes the main achievements obtained towards the company water stewardship pillars (pg. 326).
3. Carlsberg [Annual Report 2019](#) provides a concise and exhaustive summary of the company water-related performance, including link with related target and baseline, and with the main management actions contributing to the result (pg. 29).

REQ-06 Outlook

Management shall summarise their conclusions about the effect of environmental impacts, risks and opportunities on the organisation's future performance and position

Disclosure checklist

Does the disclosure:

- ✓ Explain the likely effect of future water-related impacts, risks, and opportunities as well as of water strategy on organisation performance and resilience, taking account of regulatory and market trends and environmental changes?
- ✓ Identify and explain the time horizons used for reporting on corporate outlook?
- ✓ Explain any techniques, such as scenario analysis, used to inform the outlook including the methods, scenarios and assumptions used, and any shortcomings and uncertainties?

REQ-06 of the CDSB Framework encourages companies to provide a future-oriented summary that enables report users to understand how an organisation's water-related risks, opportunities and impacts are affecting, or will affect, its ability to execute its strategy, innovate and create value across time horizons. According to Principle 7 of the CDSB Framework, the information provided in response to REQ-06 should synthesise in a forward-looking manner and build on what has been disclosed in line with the first five reporting requirements of the CDSB Framework. In practice, REQ-06 should provide a full picture for investors of how water-related governance, strategy, management, and current and potential risks and opportunities will likely influence the organisation's performance and position.

Taking into account the timescales over which water-related risks will manifest, the non-linear and potentially abrupt nature of possible impact, and the multiple, interconnecting systems that drive water-related risks and opportunities for companies, scenario analysis is a particularly useful method for companies to better understand potential futures, and respond to and disclose such information to investors. Scenario analysis is a tool to assess and build resilience within environmental, economic and social systems that are in flux.

1. Scenario analysis

Scenario analysis can be conducted through different routes including consultation with internal and external experts or scientific analysis, which would support the understanding of the complex water-related issues. It can be a quantitative or a more qualitative exercise. There is no special or correct formula by which it is to be completed. Instead, it is a process to analyse a suite of potential futures, understanding the organisation, its dependencies and strategic resilience, within the different forces that drive each of the futures. Assessing a range of future water-related states and consequences for the business will elicit important information for companies and report users. Assessing future water-related scenarios is a complex and advanced exercise because it would, ideally, consider a set of drivers influencing both **water demand** from the different human activities (e.g. due to business operations, population, regulatory mechanisms) and **water supply** in a basin, that depends on precipitation patterns and other climatic conditions, but also on the status of ecosystems and on land use and cover.

Common practices focus on water-related outcomes from climate-related scenario analysis. In this analysis, a range of different warming levels (e.g. 1.5, 2, 3 and greater than 4°C) and transition pathways (e.g. drastic to 1.5°C, relatively more gradual 2°C, technologically-enabled 1.5°C) should be taken into account, as recommended by the TCFD. In particular, scenarios greater than 3°C should be assessed since they are critical for water-related risks and impacts, such as drought and flooding events, and related adaptation and mitigation actions. Climate scenarios, such as those developed by the Intergovernmental Panel on Climate Change (IPCC) and the International Energy Agency (IEA), can be combined with socio-economic scenarios such as the Shared Socioeconomic Pathways (SSP) by IIASA.

The results of the scenario analysis should provide a summary of the organisation's future dependencies on water resources and related future risks and opportunities, including details on current and future hotspot areas, to be included in the outlook.

Considerations on resilience of the organisation to the analysed future scenarios in light of water strategy and management should be presented, highlighting the main plans and actions to cope with future risks and seize future opportunities

from current strategy and management (e.g. water efficiency, stakeholders' engagement) and potential limitations and gaps. Given the site specificity of water issues, details on resilience in hotspot areas would be beneficial. Links, synergies and trade-offs between water-related management actions and those implemented to tackle other environmental (but also Social and Governance) issues should be explained (e.g. less-energy intense production processes can impact water use; or a desalination plant can impact on GHG emissions).

The use of scenario analysis will be based on iterative learning and development. This will allow companies to build on findings or methods employed previously as well as incorporate more up-to-date understanding of water dependencies and impacts, of other influencing environmental systems and their interactions as well as greater comprehension of water and climate resilient pathways. If using scenario analysis, then report preparers should be open with these aspects of learning and development.

2. Methods, assumptions and uncertainties

In reporting on corporate outlook, report users should be able to understand the different methods that have been used to prepare the outlook, including horizon scanning and scenario analysis, any assumptions made and the timeframes over which the analysis has been completed. These different characteristics of the scenarios should reflect the nature of the organisation, its assets and operations, and the scale of risks and opportunities already identified. In addition, where external advice or assistance on conducting scenario analysis is used, it is beneficial for this to be highlighted within the methods and inputs. In reporting the effectiveness and resilience of the organisation's strategies to the potential business impacts of the different scenarios, report preparers should be clear about uncertainties but as precise as possible with how the impacts of risks differ by geography and time horizon. Clear articulation of the specific sensitivities to the different scenarios will allow report users to better understand the potential responses identified by the organisation as a result of the exercise, whether that is no response, changes to financial planning and investment, or reimagining the business model.

3. Iteration and learning

Water-related risks and opportunities are highly dynamic and dependent upon changes in complex environmental systems and political, economic and societal arenas as well as the exposure of the organisation or asset and its associated vulnerabilities. The qualities and dimensions of water-related risks and opportunities for companies are likely to change over time, whether gradually or abruptly.

Given this, using the findings of such exercises to assess corporate outlook is an important means of updating risk and opportunity identification systems and refine or reformulate water-related policies, strategies and targets. This will better prepare the organisation in limiting and seizing water-related risks and opportunities. Including such learnings and how they have been incorporated into systems and ambitions in the mainstream report is a valuable means of demonstrating effective and efficient management of material water-related matters to investors.

Examples of good practices

1. Unilever, [Annual Report and Accounts 2019](#) – Despite being focused on climate change, scenario analysis, risks and opportunities and outlook are described in a special section in Unilever's annual report (pgs. 40-3). The disclosure sets out the methods and assumptions employed, the findings, impacts and outlook for the organisation and key commodities, and explains how the findings have fed into risk management and other processes. Regarding water, it is clear that water-related physical manifestations of climate change are considered as key impacts in the 4°C scenario (i.e., water stress, flood and storms).
2. In its [2020 Annual Report](#), GSK summarises the approach and results of its climate-related scenario analysis (pg. 48). Two scenarios have been assessed and water-related risks have emerged among the most pressing. In particular, flood and water stress leading to disruption and increased expenditure at both manufacturing sites and in supply chain.

Useful resources

1. The [TCFD Technical Supplement: The Use of Scenario Analysis in Disclosure of Climate-related Financial Disclosures](#) explains the importance of scenario analysis and offers considerable advice on and resources for developing and applying scenario analysis for climate issues, including water-related details.

2. The WWF report [Rising to resilience How Water Stewardship Can Help Business Build Climate Resilience](#) provides a practical application for businesses on how to integrate climate resilience into their water stewardship strategies.

Assessment Tools

As for risks, existing assessment tools can support the assessment of future scenarios and business resilience to those scenarios. Combining different tools and integrating organisation-specific components and information is good practice and would provide a more comprehensive and robust assessment.

3. The [Aqueduct tool](#) by WRI provides future projections of future water stress, supply, and demand in 2030 and 2040, by combining climate and water scenarios.

4. The [Water Risk Filter](#) by WWF includes [TCFD-aligned future scenarios](#) that combine climate and socioeconomic scenarios and provided 2030 and 2050 quantitative projections of physical risks such as scarcity, flooding, water quality, and ecosystem services status, as well as future regulatory and reputational risks.

Initiatives

5. [BIER's future scenarios toolkit](#) provides four scenarios considering availability of resources and quality of governance, which form the basis for The Future of Sustainability in the Beverage Industry in 2025. The toolkit supports both the implementation of the scenario analysis and its effective communication.

6. The CEO Water Mandate launched the [Water resilience coalition](#), an initiative focused on corporate water resilience by 2050. It is an industry-driven coalition that aims to elevate water-related issues to the top of corporate agenda through collective actions in water-stressed basins and ambitious, quantifiable commitments. Additionally, the CEO Water Mandate is developing the [Water Resilience Accounting Framework](#) aimed at measuring stakeholders' respective resilience and their contribution to the basin resilience to achieve water security and sustainable development goals. The framework will connect dynamic hydrologic, economic, and social systems using established water accounting.

4. Basis for conclusions

The content of this Guidance has been developed and selected according to the scope and aim of the document (see [Chapter 1](#)) and reflecting the fact that it is subordinated to the CDSB Framework and is complementary to other CDSB guidance documents, such as the climate and the biodiversity guidance. This has implications on specific content elements.

Firstly, the Guidance reflects the status of the sustainability reporting environment and regulation at the time of writing. Any related developments such as alignment with other initiatives or policy developments (e.g. EU taxonomy) and convergence to other reporting standards and frameworks will be incorporated in the **CDSB Framework** and consequently applicable to the Water Guidance. As explained above, **materiality** plays a crucial role within this dynamic space.

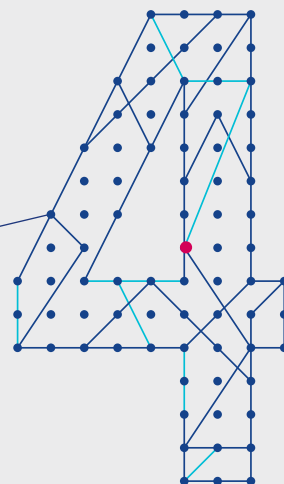
Secondly, the focus of this Guidance is **on disclosures** and not on corporate management and practices. For this reason, the Guidance mentions some good management practices to provide examples and direction to disclosures but does not go deeper into methodological details (e.g. steps to define water targets) and sign posts to external resources have specific focus on such topics in order to avoid duplicating existing information.

Thirdly, the CDSB reporting requirements are **voluntary**, unless prescribed in guidance issued by national or supranational government or regulator, and therefore neither are the reporting suggestions provided in this Guidance.

Finally, as anticipated in section [1.2 Application Guidance](#) some overlapping topics are addressed in more than one Application Guidance document, and reporting elements on ocean and marine ecosystems and biodiversity are mentioned in this Guidance but will be covered in more depth in the Biodiversity Guidance.

Chapter 4

Appendices



Appendix 1: CDSB Framework – Guiding principles and reporting requirements

Principles

P1 Environmental information shall be prepared applying the principles of relevance and materiality

P2 Disclosures shall be faithfully represented

P3 Disclosures shall be connected with other information in the mainstream report

P4 Disclosures shall be consistent and comparable

P5 Disclosures shall be clear and understandable

P6 Disclosures shall be verifiable

P7 Disclosures shall be forward looking

Reporting requirements

REQ-01 Disclosures shall describe the governance of environmental policies, strategy and information

REQ-02 Disclosures shall report management's environmental policies, strategy and targets, including the indicators, plans and timelines used to assess performance

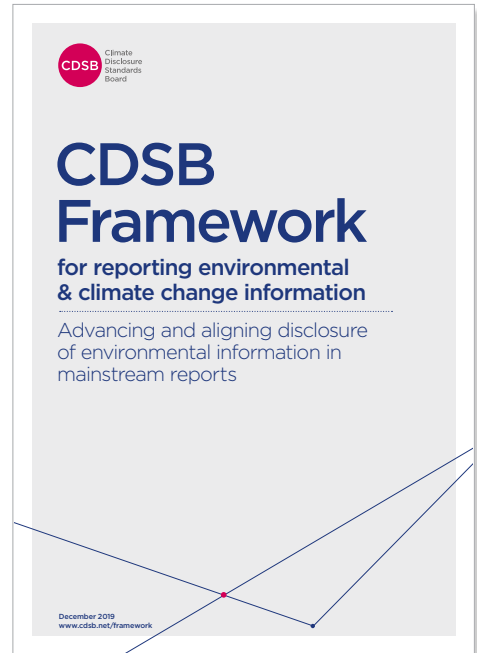
REQ-03 Disclosures shall explain the material current and anticipated environmental risks and opportunities affecting the organisation

REQ-04 Quantitative and qualitative results, together with the methodologies used to prepare them, shall be reported to reflect material sources of environmental impact

REQ-05 Disclosures shall include an analysis of the information disclosed in REQ-04 compared with any performance targets set and with results reported in a previous period

REQ-06 Management shall summarise their conclusions about the effect of environmental impacts, risks and opportunities on the organisation's future performance and position

REQ-07 Environmental information shall be prepared for the entities within the boundary of the organisation or group for which the mainstream report is prepared and, where appropriate, shall distinguish information reported for entities and activities outside that boundary



REQ-08 Disclosures shall cite the reporting provisions used for preparing environmental information and shall (except in the first year of reporting) confirm that they have been used consistently from one reporting period to the next

REQ-09 Disclosures shall be provided on an annual basis

REQ-10 Disclosures shall report and explain any prior year restatements

REQ-11 Disclosures shall include a statement of conformance with the CDSB Framework

REQ-12 If assurance has been provided over whether reported environmental information is in conformance with the CDSB Framework, this shall be included in or cross-referenced to the statement of conformance of REQ-11

t » Water is considered in several of the SASB sector-specific standards. Here only the Food and Beverage and the Oil & Gas are reported as examples. SASB accounts for water related impacts across multiple general issue categories (Water Management, Supply Chain Management, Material Sourcing & Efficiency). Interested parties can review the applicable industry standard(s) to identify relevant content that could support effective disclosure on water-related matters.

Appendix 2: Mapping the CDSB requirements to TCFD and water reporting standards

Table 3. International water reporting standards, frameworks, and guidelines and TCFD - mapping with CDSB requirements

	CDSB Framework					
	REQ-01	REQ-02	REQ-03	REQ-04	REQ-05	REQ-06
TCFD	- Governance (a, b) - Risk Management (a, b, c)	- Governance (b) - Strategy (b) - Risk Management (a, b, c) - Metrics and Targets (a, c)	- Governance (b) - Strategy (a, b, c) - Risk Management (a, b, c)	- Metrics and Targets (a, b)	- Metrics and Targets (a, b)	- Strategy (a, b, c) - Risk Management (c) - Metrics and Targets (a)
CDP Water Security Questionnaire	- W1.4; - W3.3a; W3.3e; - W6.2; W6.2a; W6.2b; W6.2c; W6.3; W6.4; W6.4a; W6.5; W6.5a;	- W1.1; W1.2; W1.2b; W1.4a; W1.4c; W1.4d; - module W.2; - W3.3b; W3.3c; W3.3d; - W4.2; W4.2a; W4.2b; W4.2c; W4.3a; - W5.1a; - W6.1; W6.1a; - W7.1; W7.4; - W8.1; W8.1a; W8.1b; W8.1c; - module W9	- W1.2d; - module W.2; - W3.3a; W3.3b; W3.3c; W3.3d; W3.3e; - W4.1; W4.1a; W4.1b; W4.1c; W4.2; W4.2a; W4.3; W4.3a; W4.3b; - W7.2;	- W1.2b; W1.2d; W1.2h; W1.2i; - W5.1	- W5.1; - W8.1a; W8.1b	- W.4.3a; - W7.3; W7.3a; W7.3b
GRI 303 - water and effluents	- REQ. 303-1 (c, d)	- REQ. 303-1 (a, b, c, d) - REQ. 303-2	REQ. 303-1 (a)	- REQ. 303-1 (a, b) - REQ. 303-3 - REQ. 303-4 - REQ. 303-5	REQ. 303-1 (a)	REQ. 303-1 (b)
SASB[†] (FB: Food and Beverage; EM: Oil & Gas)	- Standard Application Guidance - 5.0 (a, c)	- Standard Application Guidance - 5.0 (b, d) - FB-AG-140a.2 - Note to EM-EP-140a.4 - EM-EP-160a.1	Standard Application Guidance - 5.0 (b, d) - FB-AG-140a.2	- FB-AG-140a.1 - FB-AG-140a.3 - EM-EP-140a.2 - EM-EP-140a.3 - EM-EP-140a.4	FB-AG-140a.2	
ICMM – A practical guide to consistent water reporting	- 2.2.6c	2.2.6b; 2.1; 2.2.1; 2.2.2; 2.2.6b; 2.2.6c; Figure 1; Table 6; Table 7; 3.2.1	- 2.2.6c; Table 7; 3.2.1; Annex B	- 1.1.3; 2.2.3; 2.2.4; 2.2.5; Table 3; Table 4; Table 10	- 2.2.1; Table 9; Annex C	3.2.1
IPIECA - Sustainability reporting guidance for the oil and gas industry (Module 4)	- 4.5 ENV-6: C4 - 3.6 CCE-1	- 4.5 ENV-1: A6, A7, A10, A11; - 4.5 ENV-2: A2, A3; - 4.5 ENV-6: C1, C3, C4	- 4.5 ENV-1: C3	- 4.5 ENV-1: C1, C2, C4, A1, A2, A3, A4, A5, A8, A9; - 4.5 ENV-2: C1, C2, A1, A5, A6, A7; - 4.5 ENV-6: C2, A1, A2, A3, A4, A5, A6, A7, A8	- 4.5 ENV-1: C5; - 4.5 ENV-2: A4	
Int. Water Stewardship Standard	STEP 2	STEP 1, STEP 2, and STEP 3	STEP 1 and STEP 2	STEP 1 and STEP 5	STEP 3 and STEP 4 and STEP 5	STEP 1, STEP 2, STEP 4 and STEP 5
Natural Capital Protocol	Step 02	Step 02; Step 03; Step 04; Step 09	Step 03; Step 04; Step 07	Step 04; Step 05; Step 06; Step 07	Step 06; Step 08	Step 08
Australian Water Accounting Standard 1	- Contextual statement	- Contextual statement	- Contextual statement - Statement of Water Assets & Water Liabilities; - Note Disclosures	- Contextual statement - Note Disclosures	- Stat. of water assets & water liabilities; - Stat. of changes in water assets & water liabilities; - Stat. of water flows	- Note Disclosures
The CEO Water Mandate - Corporate Water Disclosure Guidelines	Response - Policies, governance, and targets	- Company water profile - Interactions with water; commitment & response - Response: Policies, governance, and targets; Internal actions; External engagement	- Company water profile - Challenges and opportunities; Hotspot basins; - Defining what to report - Business risks, opportunities, and impacts - Current state - Context - Implications	- Company water profile - Profile metrics - Current state - Performance; Compliance - Implications - External impacts	- Company water profile - Metrics on water performance - Current state - Performance	- Defining what to report

Appendix 3: Key resources

CDSB

1. CDSB (2019). CDSB Framework for reporting environmental and climate change information. Available from: <https://www.cdsb.net/framework>
2. CDSB and CDP (2020). The building blocks: Connecting CDP data with the CDSB Framework to successfully fulfil the TCFD Recommendations. Available from: <https://www.cdsb.net/buildingblocks>
3. CDSB (2020). Application guidance for climate-related disclosures. Available from: <https://www.cdsb.net/climateguidance>
4. CDSB (2012). Proposals for boundary setting in mainstream reports. Available from: <https://www.cdsb.net/what-we-do/reporting-guidance/boundary-setting-mainstream-reports>
5. CDSB (2018). Uncharted waters: How can companies use financial accounting standards to deliver on the Task Force on Climate-related Financial Disclosures' recommendations? Available from: <https://www.cdsb.net/task-force/692/uncharted-waters-how-can-companies-use-financial-accounting-standards-deliver-tcfde2%80%99s>
6. CDSB (2020). Accounting for climate. Available from: <https://www.cdsb.net/climateaccounting>
7. CDSB (2021). Decision-useful climate-related information for investors - What, Why & How?. Available from: <https://www.cdsb.net/decision-useful>

Resources database and repositories and glossaries:

1. CEO Water Mandate: Water Action Hub. Available from: <https://wateractionhub.org/>; Toolbox - <https://ceowatermandate.org/toolbox/library/>; Corporate Disclosure Guidelines - <https://ceowatermandate.org/disclosure/resources/datasets/>
2. Alliance for Water Stewardship - <https://a4ws.org/download/glossary-of-terms/>

3 Pacific Institute: Multi-Benefit Resource Library - <https://pacinst.org/multi-benefit-resource-library/>

4. Natural Capital Toolkit - https://shift.tools/contributors/551?&price=free&issue_id=4

Water Stewardship - definition:

1. Alliance for Water stewardship. Available from: <http://a4ws.org/about/impacts-of-aws/> (also used by Water Footprint Network; Available from: <https://waterfootprint.org/en/water-footprint/corporate-water-stewardship/>)
2. CEO Water mandate - <https://ceowatermandate.org/toolbox/>
3. WWF - https://wwf.panda.org/our_work/our_focus/freshwater_practice/water_management/
4. European Water Stewardship - <http://www.ewp.eu/copia-de-activities>
5. UNIDO - <https://www.unido.org/our-focus/safeguarding-environment/resource-efficient-and-low-carbon-industrial-production/industry-and-adaptation/water-stewardship>

Risk and status assessment for the identification of hotspot areas:

1. CEO Water Mandate. Interactive Database of the World's River Basins. Available from: <http://riverbasins.wateractionhub.org/>
2. WWF. HydroSHEDS. Available from: <http://www.hydrosheds.org/>
3. World Resources Institute - Aqueduct Global Maps 3.0 Data. Available from: <https://www.wri.org/resources/data-sets/aqueduct-global-maps-30-data>
4. World Resources Institute. Aqueduct Water Risk Atlas. Available from: www.wri.org/our-work/project/aqueduct/
5. WWF. Water Risk Filter. Available at: <https://waterriskfilter.panda.org/>
6. Water Footprint Network. Using Water Footprint Assessment to prioritise strategic action. Available from: <https://waterfootprint.org/en/standard/practitioners-corner/>

References

1. Climate Disclosure Standards Board (2019). CDSB Framework for reporting environmental and climate change information. Available from: <https://www.cdsb.net/framework>
2. IFRS (2021). Conceptual Framework for Financial Reporting. Available from: <https://www.ifrs.org/issued-standards/list-of-standards/conceptual-framework.html/content/dam/ifrs/publications/html-standards/english/2021/issued/cf/>
3. Task Force on Climate-related Financial Disclosures (2017). Final Report: Recommendations of the Task Force on Climate-related Financial Disclosures. Available from: <https://www.fsb-tcfd.org/wp-content/uploads/2017/06/FINAL-2017-TCFDRpt-11052018.pdf>
4. CDP, CDSB, GRI, IIRC and SASB (2020). Reporting on enterprise value illustrated with a prototype climate-related financial disclosure standard. Available from: <https://impactmanagementproject.com/structured-network/global-sustainability-and-integrated-reporting-organisations-launch-prototype-climate-related-financial-disclosure-standard/>
5. Climate Disclosure Standards Board (2020). CDSB Framework application guidance for climate-related disclosures. Available from: <https://www.cdsb.net/climateguidance>
6. Steffen, W., K. Richardson, J. Rockström, S.E. Cornell, *et al.* (2015). Planetary boundaries: Guiding human development on a changing planet. *Science* 347: 736, 1259855. Available from: <https://science.sciencemag.org/content/347/6223/1259855>
7. United Nations Global Compact CEO Water Mandate, Pacific Institute, CDP, Suez, WBCSD (2020). Corporate Water Resilience in an Uncertain Future. www.ceowatermandate.org/resilience-report
8. UNESCO (2019). The United Nations world water development report 2019: Leaving No One Behind. Available from: <https://en.unesco.org/themes/water-security/wwap/wwdr/2019#download>
9. PRI (2018). Growing water risk resilience: an investor guide on agricultural supply chains. Available from: <https://www.unpri.org/download?ac=4195>
10. BlackRock (2020). Troubled waters - Water stress risks to portfolios. Available from: <https://www.blackrock.com/us/individual/literature/whitepaper/bii-water-risks-july-2020.pdf>
11. CERES (2019). Investors Water Toolkit – Case Studies. Available from: <https://www.ceres.org/resources/toolkits/investor-water-toolkit/details#case-studies>
12. KPMG (2021). You Can't Go Green Without Blue. Available from: <https://assets.kpmg/content/dam/kpmg/xx/pdf/2021/05/you-cantgo-green-without-the-blue.pdf>
13. DWS (2020). A transformational framework for Water Risk. Available from: <https://www.dws.com/en-us/insights/dws-research-institute/a-transformational-framework-for-water-risk/>
14. James, K. (2020). We want companies and our investment managers to think like universal owners': HESTA's Daniela Jaramillo on water risk. Responsible Investor. Available from: <https://www.responsible-investor.com/articles/we-want-companies-and-our-investment-managers-to-think-like-universal-owners-hesta-s-daniela-jaramillo-on-water-risk#.YHdKp9mAMY.linkedin>
15. Webb, D. (2021). Water risk gathers steam with moves from DWS, WWF, and Thomas Schumann Capital. Responsible Investor. Available from: <https://www.responsible-investor.com/articles/water-risk-gathers-steam-with-moves-from-dws-wwf-and-thomas-schumann-capital>
16. Mair, V. (2021). BlackRock and Microsoft aim to plug data gaps on water stress with new research competition. Responsible Investor. Available at: <https://www.responsible-investor.com/articles/blackrock-and-microsoft-aim-to-plug-data-gaps-on-water-stress-with-new-research-competition>
17. CERES (2020). The Valuing Water Finance Task Force. Available from: <https://www.ceres.org/our-work/water/valuing-water-finance-taskforce#:~:text=The%20Valuing%20Water%20Finance%20Task,on%20water%2Drelated%20financial%20risks.&text=Ceres%2C%20together%20with%20the%20Task,case%20for%20corporate%20water%20leadership>
18. Beverage Industry Environmental Roundtable – BIER (2019). Water Stewardship. Available from: <https://www.bieroundtable.com/work/water-stewardship/>

- 19.** International Council of Mining & Metals - ICMM (2017). A Practical Guide to Consistent Water Reporting . Available from: <https://www.icmm.com/en-gb/guidance/environmental-stewardship/water-reporting>
- 20.** South Pole (2020). An Investor Guide on Basin Water Security Engagement: Aligning with SDG 6. Available from: <https://www.southpole.com/uploads/media/an-investorguide-basin-water-security-engagement.pdf>
- 21.** CDP (2020). Cleaning up their act: Are companies responding to the risks and opportunities posed by water pollution? Available from: <https://www.cdp.net/en/research/global-reports/cleaning-up-their-act>
- 22.** South Pole (2020). Methodology for Water Risk Assessments of Equity Portfolios. Available from: <https://www.southpole.com/uploads/media/methodology-for-water-riskassessments-of-equity-portfolios.pdf>
- 23.** CERES (2015). An Investor Handbook for Water Risk Integration. Available from: https://www.ceres.org/sites/default/files/reports/2017-03/Ceres_ESGWaterRisk_041515_Print.pdf
- 24.** World Economic Forum (2020). The Global Risk Report 2020. Available from: http://www3.weforum.org/docs/WEF_Global_Risk_Report_2020.pdf
- 25.** WWF (2018). Valuing rivers how the diverse benefits of healthy rivers underpin economies. Available from: http://awsassets.panda.org/downloads/wwf_valuing_rivers_final_.pdf
- 26.** World Bank Group (2016). High and Dry: Climate Change, Water, and the Economy. World Bank, Washington, DC. © World Bank. Available from: <https://openknowledge.worldbank.org/handle/10986/23665>
- 27.** UN High Level Panel On Water. Water Infrastructure and Investment. Available from: <https://sustainabledevelopment.un.org/content/documents/hlpwater/08-WaterInfrastInvest.pdf>
- 28.** Credite Suisse (2020). Water Scarcity. The key challenges in meeting the demand. Available from: <https://www.credit-suisse.com/about-us-news/en/articles/news-and-expertise/water-scarcitya-new-report-by-credit-suisse-202001.html>
- 29.** The Economist (2021). Investors start to pay attention to water risk. Available from: <https://www.economist.com/finance-andeconomics/2021/01/09/investors-start-to-payattention-to-water-risk>
- 30.** CERES (2020). Ceres Case Study: Water Footprinting Analysis of Major Global Indices. Available from: <https://www.ceres.org/sites/default/files/Ceres%20Case%20Study-%20Water%20Footprinting%20Analysis%20of%20Major%20Global%20Indices.pdf>
- 31.** Nordea (2019). Waterproof Investments - Analysis of water-related risks within South African companies. Available from: <https://www.nordea.com/en/doc/final-nordea-sustianable-finance-0321.pdf>
- 32.** CEO Water Mandate (2014). Definitions. Available from: <https://ceowatermandate.org/terminology/detailed-definitions/>
- 33.** WWF (2019). Freshwater risks & opportunities: an overview and call to action for the financial sector. Available from: https://d2ouvy59p0dg6k.cloudfront.net/downloads/wwf_waterrisk_financialvalue_part4_keypiece_web.pdf
- 34.** CDP (2020). Water Security Questionnaire. Available from: <https://www.cdp.net/en/guidance/guidance-for-companies>
- 35.** CEO Water Mandate (2010). Corporate Water Accounting – Identifying water-related business risks. Available from: <https://ceowatermandate.org/accounting/core-functions/>
- 36.** Capitals Coalition (2016). Natural Capital Protocol. Available from: https://capitalscoalition.org/capitals-approach/natural-capital-protocol/?fwp_filter_tabs=training_material
- 37.** IPCC (2019). Sea Level Rise and Implications for Low-Lying Islands, Coasts and Communities. In: IPCC Special Report on the Ocean and Cryosphere in a Changing Climate. Available from: <https://www.ipcc.ch/srocc/>
- 38.** IPCC (2018): Global Warming of 1.5°C. Available from: <https://www.ipcc.ch/sr15/>
- 39.** UN Global Compact (2021). Establishing your water stewardship journey. Available from: <https://www.unglobalcompact.org/take-action/action/water-stewardship-journey>

40. Capitals Coalition (2020). Principles of Integrated Capitals Assessments. Available from: <https://capitalscoalition.org/principles-of-integrated-capitals-assessments/>

41. International Integrated Reporting Council (2013). International Framework. Available from: <https://integratedreporting.org/wp-content/uploads/2015/03/13-12-08-THEINTERNATIONAL-IR-FRAMEWORK-2-1.pdf>

42. CEO Water Mandate (2021). Volumetric Water Benefit Accounting (VWBA): A Practical Guide to Implementing Water Replenishment Targets. Available from: <https://ceowatermandate.org/posts/waterreplenishment-guide/>

43. BIER (2020). Context-Based Decision Guide for Water Reuse and Recycling. Available from: <https://www.bieroundtable.com/wp-content/uploads/Context-Based-Decision-Guide-for-Water-Reuse-and-Recycling.pdf>

44. CERES (2019). Investors Water Toolkit - Understanding water risks. Available from: <https://www.ceres.org/resources/toolkits/investor-water-toolkit/details#translating-water-issues-to-material-risk>

45. Natural England (2019). The Biodiversity Metric 2.0. Available from: <http://nepubprod.appspot.com/publication/5850908674228224>

46. Biodiversity Information System of Europe (2020). Streamlined European Biodiversity Indicators. Available from: <https://biodiversity.europa.eu/track/streamlined-european-biodiversity-indicators>

47. UNEP-WCMC (2020). Corporate biodiversity indicators. Available from: <https://www.unep-wcmc.org/resources-and-data/aligning-measures-review-corporate-reporting-disclosure>

48. Value Balancing Alliance (2021). Available from: <https://www.valuebalancing.com/>

49. Secretariat of the Convention on Biological Diversity (2015) Water and Biodiversity: Summary of the findings of (GBO4) and implications for action as they relate to water. Available from: <https://www.cbd.int/gbo/gbo4/gbo4-water-en.pdf>

50. UNEP (2015). LCIA Characterization Factors. Available from: <https://www.lifecycleinitiative.org/training-resources/lcia-cfs/>



With the contribution of the LIFE Programme of the European Union.



This publication was funded in part by the Gordon and Betty Moore Foundation.

Project hosted by CDP Europe.

Contact

CDSB Secretariat
www.cdsb.net
info@cdsb.net
[@CDSBGlobal](https://twitter.com/CDSBGlobal)