Corporate water stewardship and science-based targets for freshwater

Alignment and interoperability between leading approaches

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A paper by the SBTN Freshwater Hub in collaboration with the Alliance for Water Stewardship.
Water stewardship is our collective responsibility. It is a paradigm of resource management and governance that calls on businesses, governments, and local communities to come together to find enduring solutions to our shared water challenges. Stewardship is a continuous journey, requiring trust and relationship-building, openness to learning and adaptation, with varying degrees of investment and complexity along the way. Stewardship is founded in a concern for the future, and a recognition of the rights of others to benefit from a commonly held resource.

Around the world, water stewardship has been in practice for thousands of years, enabling societies and ecosystems to flourish. The interlocking crises of water insecurity, catastrophic climate change, and biodiversity loss demand now, more than ever, that companies act as stewards of our existing resources to ensure their availability into the future.

Over the last decades, different frameworks, tools and disclosure platforms have helped foster corporate stewardship of water and other natural resources. Framework development, revision and iteration form an essential part of the evolution of water stewardship, building on lessons learned and responding to arising needs and gaps.

The latest among these are the methods and tools developed by the Science Based Targets Network (SBTN) to enable companies to set science-based targets (SBTs) for nature. The ambition of SBTs for nature will be set based on what nature needs—in terms of water quantity and quality—alongside other dimensions like biodiversity, land degradation, and ocean health outlined in the SBTN guidance. Once set, companies are expected to take effective action at the landscape and corporate levels to achieve their objectives, as well as to track and report on their measurable progress toward these over time. SBTs for nature complement the existing breadth of water stewardship resources available for companies to use for managing their water impact. Understanding how these align and complement one another can allow companies to take a holistic, systematic approach to water stewardship.

1 https://a4ws.org/about/
In this paper, we outline what companies can leverage from their previous stewardship work to support their efforts toward setting SBTs for freshwater as the next phase in their water stewardship journey. To make this information most valuable for companies, we focus on aspects of data interoperability between SBTs for nature and other corporate resources from SBTN partners. The water stewardship frameworks and disclosure platforms included in this paper represent key resources in use by companies but do not encompass the whole array of what is available.

As partners in developing SBTs for freshwater and other tools for water impact management, our objective is to increase corporate clarity and reduce confusion about how these frameworks can be used together to set SBTs for freshwater as a part of advancing their water action journey. In doing so, we hope to increase corporate confidence and unlock action at the pace and scale needed for meaningful change.

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2 This paper is part of SBTN’s broader effort to clarify the links between SBTs for nature and existing sustainability frameworks and tools. Please visit the SBTN website to find blogs and FAQs on the topic.
SBTs for nature are measurable, actionable, and time-bound objectives based on the best available science and aligned with environmental limits and societal sustainability goals. SBTs for nature include targets for freshwater as well as those for land and ocean. Impacts on biodiversity are addressed through targets set for these three realms. Targets set on climate through SBTi can lead companies toward changes at the business and site-level that may help address their nature targets. They can also help companies prepare the data structure needed for setting these additional SBTs.

For companies looking to reduce their impacts on the environment and biodiversity, including within the freshwater realm as well as the terrestrial and ocean realms, SBTs for nature can enable robust and credible action that supports the societal vision of an environmentally safe and socially just future. When defined and implemented, these corporate targets will take direct aim at the drivers and pressures fueling nature loss, offering a pathway for critical and measurable corporate action in the right places at the right time.

As of 2023, the scope of the first version of freshwater targets (v1) includes surface water flows, groundwater levels (only basins where local model/thresholds exist), nutrient pollution (nitrogen and phosphorus), upstream value chain, and direct operations. Figure 1 depicts what freshwater SBTs can look like on the ground. It highlights freshwater quantity targets, which address corporate water use and water availability within a landscape.

Figure 1. Example of a science-based target for freshwater.
Why SBTs for freshwater?

Beyond the resources that already exist for water impact management, SBTN brings the following value to companies:

**A holistic approach.** This ensures corporate action on freshwater complements corporate ambitions on climate, land and ocean, and is undertaken in a way that maximizes the potential for synergies and efficiencies while balancing trade-offs. This approach can be more effective for companies and for freshwater systems: when companies set the first SBTs for land, they can also generate benefits for freshwater, including through the preservation and enhancement of semi-aquatic environments, and reduction of soil erosion, leading to water quality and retention benefits.

**A comprehensive view of companies’ impacts.** The SBTN approach ensures that companies look beyond their direct operations, to their upstream value chains where much of their water impact may exist. SBTN requirements for a full value chain assessment—within their direct operations and upstream supply chains—before moving to target-setting ensures that companies base their action strategy on a more comprehensive view of their impacts before moving to implementation.

**Activation in critical locations.** At the same time, SBTN requires place-based action, which ensures that companies implement targets in the places where nature and people need it the most. This builds on best practices in the world of water management, while providing more structure to the process of location selection, by ensuring this is done based on environmental materiality, not just corporate interest.

**Clarity on how much is enough.** Targets set using SBTN methods are in line with local and global ecological/biophysical limits and account for people’s needs. This standardized approach is also distinct from other target types because it provides a standardized way to get to the right-sized target. Other target types suggest a direction, but the magnitude may be somewhat arbitrary.

**Clear, prescriptive guidance.** SBTN provides a clear set of steps that companies must go through, taking the guesswork out of potential methods for impact estimation, scales of assessment, and ways of prioritizing locations for action. This gives companies a clear sense of what needs to be done and also improves their ability to compare amongst sites, products, and business lines.

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Force multiplier. Collective understanding is a key ingredient to collective action. The resources and tools that support the freshwater target-setting process can enable a shared understanding of a basin’s status, thresholds, how much restoration is needed, and actions that can be taken across realms. For example, by setting validated targets, a company can lower barriers to entry for others in the basin through resources in development, such as SBTN’s upcoming Basin Threshold Tool and Target Dashboard.

Validation of ambition levels. For companies to have their SBTs validated4, they must satisfy all criteria stipulated in the holistic methods for SBTN Steps 1 and 2, and the pressure-specific methods for Step 3. Once validated, companies’ SBT claims can provide a powerful signal to the public and other stakeholders.

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4 If companies have material impacts on other environmental issues, such as land use change, climate change and marine health, they will need to use methods for these where available (through SBTN or SBTi), before making claims about having set SBTs for nature. Note that claims companies may wish to make about “SBTs for nature” are broader than having set validated “SBTs for freshwater.”
Stewardship may be an ongoing process, but companies don’t want to have to start over with every new step along the way. To set SBTs for freshwater, companies can leverage work they’ve already done on corporate water stewardship to date. At the same time, setting SBTs can help companies satisfy other reporting frameworks, disclosure platforms and site certification goals. To illustrate how companies can do this, we’ve mapped four of the more influential frameworks and disclosure platforms against the steps involved in setting SBTs for freshwater (Figures 2–4). Please note that this paper and accompanying graphics will likely need to be updated over time to reflect changes in the frameworks and disclosure platforms referenced.

In this paper, the different standards, methods, disclosure mechanisms, and guidance companies can use to advance their corporate water stewardship are discussed. These can be used to assess and manage impacts at the enterprise level (i.e., across the entire business) or at the site level (i.e., within a specific location). While these are referred to collectively as frameworks and disclosure platforms here, each was created for a different purpose and can support different corporate objectives. As such, each framework, tool or disclosure platform has a distinct place within what we see as the integrated water stewardship journey (see Annex 1).

We have chosen to focus on four key frameworks and disclosure platforms to evaluate for interoperability with the SBTN methodology: The Alliance for Water Stewardship Standard (AWS), CDP, the Net Positive Water Impact ambition (NPWI) and the Taskforce on Nature-related Financial Disclosures (TNFD). While there are many other credible frameworks, tools and disclosure platforms we chose these four because they are easily recognized, widely adopted and represent complementary stages of the water stewardship journey. The purpose of this comparison is to illustrate how the water stewardship community is broadly aligned with our thinking and principles. For companies, this crosswalking can reduce the need to redo work over time, allow for knowledge transfer, and enable companies to become compliant with more well-established guidelines.
Here we provide a brief overview of each framework and disclosure platform:

**Alliance for Water Stewardship (AWS) Standard** is a site- to- catchment scale Standard for companies with major water- using activities to understand their facilities' water use and impacts, and to work collaboratively and transparently with local stakeholders for sustainable water management within a wider catchment context.  

**CDP** is the global environmental disclosure system for companies, cities, states and regions that drives corporate transparency by using capital markets and corporate procurement to motivate companies to disclose and reduce their environmental impacts. Through CDP, companies can disclose their impacts, management, governance, use and stewardship of water resources.

**The Water Resilience Coalition’s Net Positive Water Impact (NPWI)** helps companies set a site-level ambition for their water impact and footprint, as well as their collective actions in the basin. Delivering NPWI contributes toward reducing water stress in its three dimensions: quantity, quality, and access. It ensures the company's contributions exceed impacts on water stress in the same region.

**Task Force on Nature-related Financial Disclosures (TNFD) LEAP Framework & Disclosure** recommendations are enterprise-level guidance companies can use to respond to nature-related issues through a risk management and disclosure framework.

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5 https://a4ws.org/
7 https://www.cdp.net/en/water
8 https://ceowatermandate.org/resilience/net-positive-water-impact
9 https://tnfd.global/
In this section, we address interoperability in the context of setting SBTs for freshwater. We define interoperability as the ability to use work done to meet one objective to advance another, with a specific focus on setting SBTs and taking data gathered for SBTs for these other initiatives. This should not be interpreted as a final depiction of the framework or disclosure platform’s interoperability, but rather a snapshot based on the current versions available and information known to us through testing by companies. This information is intended to help companies understand how they can leverage data collected in one framework or disclosure platform to complete another.

Companies should note that alignment and interoperability between these frameworks do not mean that they should use either one or the other in the context of achieving their overall water stewardship goals. The frameworks and disclosure platforms together are complementary and should be used in combination rather than in substitution. Each framework has a distinct purpose along different stages of the water stewardship journey, whether related to understanding and impact assessment, target-setting, implementation, or reporting.

To make clear what companies can leverage from their water stewardship journey to set SBTs for freshwater, this section is organized according to the SBTN 5-step process. In the graphics that follow, we show alignment with the parts of the SBTN target-setting process that have already been launched, Step 1: Assess, Step 2: Interpret & Prioritize, and Step 3: Measure, Set, Disclose. Future additions to the full SBTN methodology will include Step 4: Act and Step 5: Track. Once guidance on these steps is developed, this document may be updated to reflect further alignment between frameworks for the implementation, reporting, and target progress evaluation phases.

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10 We can define interoperability as “the ability of organizations to interact towards mutually beneficial goals, involving the sharing of information and knowledge between these organizations, through the business processes they support, by means of the exchange of data between their information, communication, and technology systems” (European Commission, NIFO).

11 See the high level alignment of the SBTN 5-step process with the broader water stewardship journey in Annex 1.
**SBTN Step 1: Assess**

**Purpose:** Determine the material pressures most likely to require target-setting by a company, based on sector-level information (Step 1a: Materiality Screening) and estimate a company’s contributions to key environmental pressures across its operations and value chains and screen the state of nature in order to inform decisions about what to set targets on, for which parts of the business, and where in the value chain (Step 1b: Value chain assessment).

**Data required from companies:** List of activities in the company’s direct operations and upstream, as well as location information on these, and basic data on spend/volume for upstream.

**Data generated through the method:** Estimates of pressures and state of nature values for all activities and locations included in the assessment.

**Sources of data for freshwater SBT-setting process:**
- Criteria 1.1 - Define site physical scope
- Criteria 1.2 - Engage stakeholders
- Criteria 1.3 - Gather site water data (direct impact)
- Criteria 1.4 - Gather supplier water data
- Criteria 1.5 - Gather catchment water data

**Relationship with SBTN Step 1:** Interoperable (data can be used from SBTN to complete AWS, and vice versa)

**Relationship with SBTN Step 2:** Interoperable (data can be used from SBTN to complete CDP, and vice versa)

**Sources of data for freshwater SBT-setting process:**
- Process for identifying, assessing and managing dependencies and impacts on water (direct operations and value chain)
- Facility-level exposure to water-related risks by river basin
- CDP Water Watch tool can also be used to complete the materiality screening in SBTN’s Step 1a method.

**AWS**

**CDP**

**NPWI**

**TNFD**

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**SBTN Step 2: Interpret & Prioritize**

**Purpose:** Determine where companies will set targets and act first, based on environmental significance, societal considerations, and corporate strategy.

**Data required from companies:** Data from SBTN Step 1 method, complemented with corporate data on local stakeholder needs and corporate strategy.

**Data generated through the method:** Prioritized list of activity-location pairs for target setting, separated by pressure category.

**Sources of data for freshwater SBT-setting process:**
- Criteria 1.1 - Define site physical scope
- Criteria 1.3 - Gather site water data (direct impact)
- Criteria 1.4 - Gather supplier water data
- Criteria 1.5 - Gather catchment water data
- Indicator 1.6.1 - Shared water challenges (quantity, quality)
- Criteria 1.7 - Site water risks/opportunities
- Indicator 1.7.1, 1.7.2 - Site water risks, opportunities

**Relationship with SBTN Step 2:** Interoperable

**Sources of data for freshwater SBT-setting process:**
- Company accounting - Water withdrawals from water-stressed areas
- Water-related detrimental impacts in the river basin and the total financial impact
- Risks and Opportunities - Identification of inherent water-related risks with substantive financial or strategic impact on business; Number and proportion of facilities exposed to water risk by river basin that could have substantive financial or strategic impact on business.

**AWS**

**CDP**

**NPWI**

**TNFD**

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**Relationship with SBTN Step 1:** Interoperable (data can be used from SBTN to complete TNFD, and vice versa)

**Sources of data for freshwater SBT-setting process:**
- L1 - Span of the business model and value chain
- L2 - Dependency and impact screening
- E1 - Identification of environmental assets, ecosystem services and impact drivers
- E2 - Identification of dependencies and impacts
- E3 - Identification of dependencies and impact measurement

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**Figures 2-4. ‘Cheat sheets’ on interoperability of different frameworks to support companies setting SBTs for freshwater.**

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**Purpose:** Set validatable science-based targets to manage key freshwater pressures

**Data required from companies:** Baseline pressure data (water use and water pollution) at each basin being targeted.

**Data generated through the method:** Ambition levels for targets at each basin.

### AWS

**Relationship with SBTN Step 3:** Interoperable

**Sources of data for freshwater SBT-setting process:**
- Criteria 1.1 - Define physical scope
- Indicator 1.1.1 - Map the physical scope
- Indicator 1.2.1 - Stakeholder consultation
- Indicators 1.3.3 - water quantity and 1.3.4 - water quality
- Indicator 1.4.1 - Supplier water use
- Indicator 1.5.3 - Catchment water quantity and 1.5.4 - Catchment water quality

### CDP

**Relationship with SBTN Step 3:** Interoperable

**Sources of data for freshwater SBT-setting process:**
- Facility level water accounting – including coordinates for the water accounting data.
- Water related targets - reduction of water pollution, reduction of water withdrawal, increased WASH services.

### NPWI

**Relationship with SBTN Step 3:** Interoperable

**Sources of data for freshwater SBT-setting process:**
- Understanding of the impacts, dependencies, risks and opportunities for each watershed
- Objectives, goals and targets to become NPWI for each watershed

### TNFD

**Relationship with SBTN Step 3:** Interoperable

**Sources of data for freshwater SBT-setting process:**
- E3: Dependency and impact measurement
- P2: Target setting and performance management
Validation and verification of SBTs for freshwater and other progress toward water objectives

We define these terms as follows:

**Validation**: an independent, ideally third-party process involving expert review to ensure the target meets required criteria and methods of science-based targets.

**Verification**: assessment of compliance, performance, and/or actions relative to a stated commitment, standard, or target.

What is offered by SBTN and AWS:

SBTN: Before companies begin to take action to meet targets and make claims publicly about what they are contributing to society and environmental goals through this work, companies’ science-based targets will be subject to review by independent validators. This desk-review of companies' targets and their ambition therein helps to ensure that companies are accurately applying the methods and setting targets in good faith. Verification is not yet part of SBTN’s guidance. However, verification may require independent third-party confirmation of either or both a) baseline values of a target indicator (e.g., a company's water or GHG inventory) and b) progress made toward achieving the target.

AWS: The AWS Standard is a site-catchment-based framework that shares several features with SBTN. AWS’ Standard Assurance System is the mechanism through which progress made against the criteria and indicators of the AWS Standard are assessed. Certification is the signifier that actions have been verified as achieved. Certification is achieved through an independent third-party assessment conducted via auditor visits to the site and catchment. In lieu of SBTN setting up verification processes and certification, the AWS Standard offers the current best practice in independent verification of achievements made by a company at a facility and catchment level.

The key difference between the work done by different organizations is that SBTN’s validation requirements embedded in the methods offers a check offers a check of companies’ target ambition levels and approach to setting targets, while AWS’s verification process offers confirmation of companies’ actions and progress toward objectives at the site level. Both processes are complementary.

12 https://sciencebasedtargetsnetwork.org/submitting-your-targets-for-validation/
Action to protect and improve our collective freshwater resources is imperative. What companies should do next depends on what they have already done and where they are in their stewardship journeys.

→ If you’re a company reading this paper and you recognize many of the resources listed as ones you’ve used in the past, we’d recommend you begin building upon this to set science-based targets for freshwater (if you haven’t already). Similarly, if your company already has other freshwater targets, we suggest considering the adoption of science-based targets as the current period for your targets comes to an end.

→ If you’re just beginning your journey toward water stewardship and environmental action, you may find it easier to get started by setting contextual targets\(^\text{13}\); see our roadmap in Annex 1 for more options.

Just as resource management requires collective action, organizations developing guidance, tools or standards that advance resource stewardship must understand how they play complementary and reinforcing roles to advance water stewardship. This will make it easier for companies to use data across multiple opportunities and to help build consensus and trust between partners looking to build long-term sustainability and resilience in water-stressed regions of the world.

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\(^{13}\) [https://wwfint.awsassets.panda.org/downloads/wwf_contextual_water_targets_hr.pdf](https://wwfint.awsassets.panda.org/downloads/wwf_contextual_water_targets_hr.pdf)
[https://ceowatermandate.org/site-targets-guide/](https://ceowatermandate.org/site-targets-guide/)
[https://www.wri.org/research/developing-enterprise-water-targets-informed-local-contexts-cargills-approach](https://www.wri.org/research/developing-enterprise-water-targets-informed-local-contexts-cargills-approach)
Companies are not always sure how to draw on these frameworks to support their water stewardship actions. Guidance on ‘what frameworks to use where’ across the water stewardship journey will require more cross-collaboration among leaders in the water stewardship community. To start the conversation, Figure 5 was developed to help map out the ideal corporate water stewardship journey, understand when to use various frameworks, and how they can work together. We drew inspiration from existing models of water stewardship such as WWF’s Water Stewardship Ladder and AWS’s Water Stewardship Journey.

The graphic below (Figure 5) was developed as part of a collaborative exercise between SBTN, AWS, CDP, WWF, The Nature Conservancy, World Resources Institute, Pacific Institute and the CEO Water Mandate, in response to calls from members of the water stewardship community for more guidance on how different frameworks, tools and disclosure platforms fit together into a cohesive process or journey. Based on our collective understanding, we mapped out the broad steps of what an ideal water stewardship journey could be. We then charted where globally recognized and frequently used tools, frameworks, disclosure platforms and guidance fit into that water stewardship journey.
The infographic illustrates an initial guide companies can reference when determining when and how to use various frameworks along their journey. It could also be a reference point to catalyze discussions on how the different pieces could fit together in the wider water stewardship journey.

Figure 5. A Corporate Water Stewardship Journey

The infographic illustrates an initial guide companies can reference when determining when and how to use various frameworks along their journey. It could also be a reference point to catalyze discussions on how the different pieces could fit together in the wider water stewardship journey.
Annex 2: Brief Description of Major Frameworks Mentioned in this Paper

Alliance for Water Stewardship (AWS) Standard
The AWS International Water Stewardship Standard (AWS Standard) is a framework for companies with major water-using sites to understand their water use and impacts, and to work collaboratively and transparently for sustainable water management within a catchment context. The AWS Standard has five focus areas, defined as Outcomes: sustainable water balance (= freshwater quantity); good water quality status (= freshwater quality); health of important water-related areas (= nature and freshwater); safe water, sanitation and hygiene for all (WASH); and good water governance. The Standard is structured around five steps: 1) Gather and Understand, 2) Commit and Plan, 3) Implement, 4) Evaluate, and 5) Communicate and Disclose. In each step there are a set of criteria and indicators that a site must achieve in order to be certified against the AWS Standard. Certification against the AWS Standard through third-party verification enables certified sites to make credible claims about their water stewardship activity.

CDP disclosure
CDP is a global non-profit that runs the world’s environmental disclosure system for companies, cities, states and regions. CDP uses capital markets and corporate procurement to motivate companies to disclose their environmental impacts, and to reduce greenhouse gas emissions, safeguard water resources, protect forests and tackle plastic pollution and waste. CDP disclosure uses transparency and accountability to drive corporations, financial markets, and governments to decouple growth from depletion of freshwater resources and allocate capital towards a water secure economy to achieve the United Nations Sustainable Development Goals. They do this by collecting information annually for investors, customers and policymakers on a company’s management, governance, use and stewardship of water resources. CDP disclosure provides data users and the companies themselves with an insight on current and future water-related risks and opportunities. Disclosure of targets allows informed decision making by governments and policymakers by tracking companies’ progress against environmental commitments. Along with CDP’s water scoring methodology, the water security questionnaire helps companies to drive improvements in water management and enables benchmarking against leading practice. CDP supports companies to disclose against the most credible frameworks, standards and platforms, and requires companies to disclose targets.
Net Positive Water Impact (NPWI)

Net Positive Water Impact (NPWI) from the United Nations Global Compact CEO Water Mandate and Water Resilience Coalition is an ambition for how a water user interacts with a watershed, and how it contributes toward reducing water stress in its three dimensions – availability, quality, and accessibility. It is an ambition that a water user’s contributions exceed their impacts on water stress in a region. There are three distinct “pillars” to NPWI across the three dimensions of water stress: 1) avoided or reduced operational impacts; 2) replenished, restored or regenerated operational footprint; and 3) delivered measurable watershed outcomes, through meaningful collaborations and collective action to address shared water challenges. NPWI is a long-term ambition, with a goal of achieving positive water impact across all 100 Priority Basins by 2050.

Science Based Targets for Nature

The NGO-led Science Based Targets Network (SBTN) develops science-based targets (SBTs) for nature. These are measurable, actionable, and time-bound objectives based on the best available science that allow companies to align with Earth’s limits and societal sustainability goals. SBTN released its first methods in 2023 for companies to assess and prioritize their environmental impacts (including freshwater, land, ocean, biodiversity and the climate) across their value chains and then set targets, beginning with freshwater and land. These first freshwater science-based targets guide companies toward setting measurable, verifiable targets on freshwater quantity and quality (with an initial focus on nitrogen and phosphorus for quality). The freshwater targets are developed by the SBTN Freshwater Hub: a collaborative effort led by CDP and WWF, along with Pacific Institute, World Resources Institute, and The Nature Conservancy. The next release in 2024 will include additional coverage on freshwater quality. Beyond just freshwater, SBTN represents an integrated approach for companies setting and implementing their nature programs, facilitating a set of complementary targets and actions across land, freshwater and ocean.

Task Force on Nature-related Financial Disclosures (TNFD) Framework

The TNFD is a market-led, science-based and government supported initiative to help respond to nature-related issues. The Taskforce is nearing the end of its two-year framework design and development phase to provide market participants with a risk management and disclosure framework to identify, assess, respond and, where appropriate, disclose their nature-related issues. The TNFD framework, including TCFD-aligned recommended disclosures, will be published in September 2023 and ready for market adoption.
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