Implementing Net Positive Water Impact

Technical Guidance

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Working Draft V1

UN GLOBAL COMPACT

CEO WATER MANDATE

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Contributions
Ross Strategic and Pegasys supported the development of the original conceptual framework. This was further developed into an earlier version of this document (working draft) by Bluerisk, building on practitioner experience and published literature, working in close consultation with the CEO Water Mandate, Pacific Institute and the NPWI Taskforce of member organizations from the Water Resilience Coalition, including 3M, Danone, Heineken, Holcim, The Nature Conservancy and Kurita.

The draft guidance was reviewed and piloted by seven CEO Water Mandate-endorsing companies, including 3M, Danone, Diageo, GSK, Holcim, Kurita and PepsiCo. Six additional organizations – Ceres, Quantis and WaterAid, ERM, SWCA and Orbia – also provided valuable insights. The feedback received during these review phases have informed the scope of this guidance document. The authors are extremely grateful to the pilot companies and partners for their contributions to building a robust document.

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For more information and resources relevant to NPWI, please visit the project page.

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Boxes, Figures and Tables

GLOSSARY

Due to the significant size of the glossary, specific terminology used in this guidance has been placed into Appendix A.

ABBREVIATIONS

AWS	Alliance for Water Stewardship
CDP	Carbon Disclosure Project
EPA	United States Environmental Protection Agency
ESG	Environmental, Social and Governance
ILO	International Labour Organization
ITF	Internal Tracking Framework
JMP	Joint Monitoring Programme
M&E	Monitoring and Evaluation
NBS	Nature-Based Solutions
NGO	Non-Governmental Organization
NPWI	Net Positive Water Impact
SBTN	Science Based Targets Network
SDG	Sustainable Development Goal
TMDL	Total Maximum Daily Load
TNFD	Taskforce on Nature-Related Financial Disclosures
UNICEF	United Nations International Children's Emergency Fund
VWBA	Volumetric Water Benefit Accounting
VWBs	Volumetric Water Benefits
WASH	Water Access, Sanitation and Hygiene
WFD	Water Framework Directive of the European Commission
WHO	World Health Organization
WQBA	Water Quality Benefit Accounting
WRC	Water Resilience Coalition
WRF	Water Risk Filter
WRI	World Resources Institute
WWF	World Wildlife Fund

SYMBOLS


Availability


Quality


Accessibility

Pillar 1

Pillar 2

Pillar 3


Information


Guidance


Tool


Framework


Methodology

HIGH-LEVEL OVERVIEW OF NET POSITIVE WATER IMPACT

Water is linked to many of the most pressing global challenges faced by humanity and the environment. Global water demand has increased by 600% over the last one hundred years and the current global water demand of about 4600km^3 is set to increase by another 20 to 30% by 2050 (Burek *et al.*, 2016; Wada *et al.*, 2016). This increased demand for water goes hand in hand with reduced availability of water resources and increasing water pollution due to population growth, socio-economic development and changing consumption patterns (Boretti and Rosa, 2019; UNESCO, 2023). Given the ongoing impacts on freshwater ecosystems and increasing water demand worldwide, businesses play a pivotal role in reducing the effects of the water crisis. They can contribute to the sustainability of their operations and to environmental conservation through internal initiatives and strategic partnerships.

The overarching objective of Net Positive Water Impact (NPWI) is to make long-term improvements in basin health and resilience by directly addressing the underlying root causes of availability, quality and accessibility challenges. NPWI is a leadership ambition set at the enterprise level but implemented at the site and basin level. It is available to any private-sector organization across any industry or geography. It aims to ensure that the water user's contributions exceed its impacts in water-stressed basins. It requires long-term effort and input towards quantifiable outcomes.

NPWI requires companies to go well beyond balancing their operational impact and footprint. To reduce basin water stress, they need to be committed to doing measurably and significantly more by engaging with basin stakeholders on jointly identified basin challenges through collective action and by addressing these challenges through strategic investments across water availability, quality and accessibility. This guidance does not cover value- and supply-chain elements. Further guidance for these components is under development.

NPWI addresses **three dimensions of water stress**, namely **availability**, **quality** and **accessibility** across **three distinct pillars** that **define the scale at which NPWI is being addressed.** Each pillar addresses the three dimensions of water stress across different scales and the focus ranges from individual activities to collective action.

NPWI is designed to support organizations on their corporate water stewardship journey and **aligns closely with other corporate water stewardship approaches** to ensure complementarity and interoperability wherever possible. Additionally, **NPWI helps address UN Sustainable Development Goal (SDG) 6**: "Ensure availability and sustainable management of water and sanitation for all," responding to the UN Global Compact call and the Water Resilience Coalition (WRC) business pledge.

Included in this NPWI technical guidance is a **series of indicators and metrics that can help in monitoring progress** towards achieving NPWI at the individual site level and across all company sites located in water-stressed basins.

A company *may* celebrate NPWI progress milestones and achieve NPWI for individual sites in water-stressed basins, provided all data is **third-party validated and approved by the CEO Water Mandate**. The WRC *may*, with prior consent from the companies, aggregate anonymized data to calculate the overall NPWI impact in each water-stressed basin. The results, in turn, will inform the NPWI impact being made across the 100 Priority Basins.

OVERVIEW OF THE NPWI GUIDANCE

The NPWI guidance documentation is intended to support the implementation of an NPWI ambition across a company's direct operations. Overall, the NPWI guidance contains multiple documents, supplementary material and an online progress tracking tool (Internal Tracking Framework):

1. The **Executive Summary** provides a **high-level summary** for decision-makers and executives to understand the NPWI ambition and implementation steps.
2. **Net Positive Water Impact: An Introduction** offers a **comprehensive introduction to the objectives, value and structure of NPWI**, providing the entry point to the NPWI guidance and suitable reading for corporate leadership and technical staff.
3. **Implementing Net Positive Water Impact: Technical Guidance** (this document) is an in-depth description of the required steps across the **three pillars of NPWI and three dimensions of water stress.**
4. **Implementing Net Positive Water Impact: Step-in-Practice** provides a **practical example for operationalizing NPWI** in the textile industry and is intended as an add-on to the technical guidance document.

Upcoming

5. The **Internal Tracking Framework (ITF)** includes all **indicators and other metrics** to enable standardized data collection and progress reporting towards milestone achievements and site NPWI claims.
6. A supplementary document on **How Net Positive Water Impact relates to the Water Resilience Coalition** is currently being developed with WRC signatories. It will be relevant to anyone interested in better understanding this relationship.

This is the **third** document in the series.

The Technical Guidance document is **principles-based** and not prescriptive. However, a **step-wise approach is provided** to help embed the general considerations needed to implement the concept across a site and relevant basin. **All companies are expected to clearly plan and document steps in their NPWI journey**.

STRUCTURE OF THE TECHNICAL GUIDANCE

Scope

This technical guidance pertains to operationalizing NPWI at the site and basin levels only and focuses on activities related to direct operations in the basins in which sites are situated. Additional NPWI guidance for the supply and value chains will become available for broader implementation of NPWI.

Audience

This technical guidance document is relevant for all staff tasked with the actual implementation of NPWI (e.g., operational management, water stewardship teams, sustainability practitioners, etc.). This document can be shared with internal resources, value chain vendors or organizations within the basin in which a company's site is located.

Terminology

This guidance has adopted specific terminology to make clear what requirements, recommendations and options there are along the NPWI journey (adopted from PEFCR Guidance, v6.3). The term "*shall*" is used to indicate what is required for a site to achieve NPWI in a basin. The term "*should*" is used to indicate a recommendation rather than a requirement; any deviation should be accompanied by a justification, preferably in the Internal Tracking Framework. The term "*may*" is used to indicate a permissible option; all chosen options shall include sound justification for the selected option.

Stepwise guidance

This technical guidance document presents five key steps (Figure 1), starting with building an awareness of and ambition for NPWI (undertaken at the company level) through to assessment, action and measurement of progress and outcomes (at the site and basin levels). These steps are not prescriptive and may be undertaken in ways that meet the specific contexts of companies implementing NPWI. They may also be undertaken concurrently depending on available resources and the objectives of the company. The chapters in this guidance are based on this step-wise approach.

FIGURE 1: FIVE STEPS FOR NPWI IMPLEMENTATION

STEPS AT A COMPANY LEVEL ← → STEPS AT A SITE AND BASIN LEVEL

Step 1 Awareness	Step 2 Ambition	Step 3 Assessment	Step 4 Action	Step 5 Measurement
1. Understand NPWI. 2. Integrate NPWI into company business goals and priorities.	1. Identify list of sites in water-stressed basins. 2. Prioritize where and when to achieve NPWI across company sites.	1. For each site and its basin, develop a baseline/benchmark assessment. 2. For each site and its basin, translate NPWI requirements into own objectives and targets.	1. For each site and its basin, identify opportunities and prioritize activities. 2. Establish and secure inputs needed for financing and partnerships. 3. Implement activities.	1. For each site and basin, build a monitoring and evaluation plan. 2. Analyze and evaluate outputs and outcomes with recommended indicators. 3. Report and communicate outputs and outcomes. 4. Learn, improve and adapt over time.

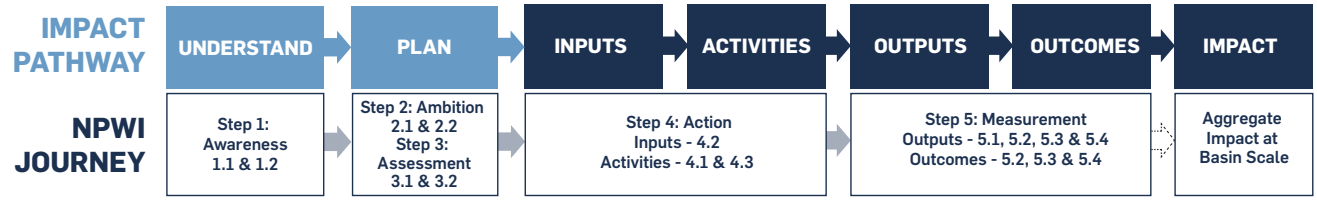
Adapted from AB InBev and TNC, 2022.

Aligning with the Impact Pathway

The steps in NPWI implementations follow the well-recognized water stewardship activity impact pathway, originally depicted in WaterAid (2018), WBCSD (2019) and Reig *et al.* (2019). An impact pathway is a logical series of cause-and-effect chain of events that describe how a specific activity results in changes. The first two steps of the NPWI journey require considerable preparation content which precede the impact pathway elements. The impact pathway was thus extended, adding the elements 'Understand' and 'Plan' to represent all NPWI steps appropriately (Figure 2).

"***Understand***," the first step of the impact pathway, refers to **Step 1: Awareness** and incorporates understanding what NPWI is and how it fits into the business goals of the company. "***Plan***" allows companies to identify and prioritize sites to include in their NPWI journey, covered in **Step 2: Ambition**, as well as embark on the baseline assessment and goal-setting processes of **Step 3: Assessment**. "***Inputs***," which aligns with NPWI **Sub-step 4.2 Action**, details the resources, time and partnerships necessary to move a project forward, while "***Activities***" aligns with the remaining sub-steps of **Step 4: Action**, where activities are prioritized and implemented. Quantifying "***Outputs***" (tangible and direct project results, e.g., one artificial wetland built) and "***Outcomes***" (the short- and medium-term changes resulting from project implementation, e.g., improved water quality parameters because of the constructed wetland) are both covered under **Step 5: Measurement**. The impact pathway concludes with the long-term "***Impacts***" measured. This element does not directly align with any of the five NPWI steps (depicted with dotted line arrows at the right of Figure 2), but it does align with the broader objective of the water stewardship community and institutions like the CEO Water Mandate and the WRC to **aggregate and report collective corporate impact at a basin scale**.

FIGURE 2: NPWI IMPACT PATHWAY



Source: Adapted from WaterAid (2018), WBCSD (2019), and Reig et al. (2019).

The remainder of this document is divided into sections that represent the five steps of NPWI: Step 1: Awareness, Step 2: Ambition, Step 3: Assessment, Step 4: Action and Step 5: Measurement. Each section provides a brief overview, key information for undertaking that step, an outline of potential roles and responsibilities and helpful resources to enhance understanding or support implementation.

STEP 1: AWARENESS

Step 1: Awareness is **designed to help build an understanding of what NPWI is**, why it matters and how this is the starting point needed to reduce water risk and drive measurable basin impact at scale. Much of the foundational NPWI descriptions are covered in the **Net Positive Water Impact: An Introduction** document and should be consulted as part of this step.

STEPS AT A COMPANY LEVEL		STEPS AT A SITE AND BASIN LEVEL		
Step 1 Awareness	**Step 2 Ambition**	**Step 3 Assessment**	**Step 4 Action**	**Step 5 Measurement**
1. Understand NPWI. 2. Integrate NPWI into company business goals and priorities.	1. Identify list of sites in water-stressed basins. 2. Prioritize where and when to achieve NPWI across company sites.	1. For each site and its basin, develop a baseline/benchmark assessment. 2. For each site and its basin, translate NPWI requirements into own objectives and targets.	1. For each site and its basin, identify opportunities and prioritize activities. 2. Establish and secure inputs needed for financing and partnerships. 3. Implement activities.	1. For each site and basin, build a monitoring and evaluation plan. 2. Analyze and evaluate outputs and outcomes with recommended indicators. 3. Report and communicate outputs and outcomes. 4. Learn, improve and adapt over time.

1.1 UNDERSTAND NET POSITIVE WATER IMPACT

As a first step, it is important to fully understand the multiple elements of NPWI. The Net Positive Water Impact: An Introduction document is a key resource that should be reviewed first to get a solid understanding of NPWI and how it can help build long-term water resilience in water-stressed basins.

As a reminder, NPWI is structured into three pillars that help define the scale of activities for each site. Each pillar addresses all three dimensions of water stress.

P1 **Pillar 1** helps to outline the activities required to **reduce or eliminate operational impacts for a site**.

P2 **Pillar 2** helps to define activities that **address the remaining operational footprint** through activities such as replenishment, restoration and regeneration.

P3 **Pillar 3** considers **activities at the basin scale**, at which a site can sensibly engage and make a difference through **collective action** projects with other basin stakeholders.

NPWI: a multi-dimensional, pillared approach

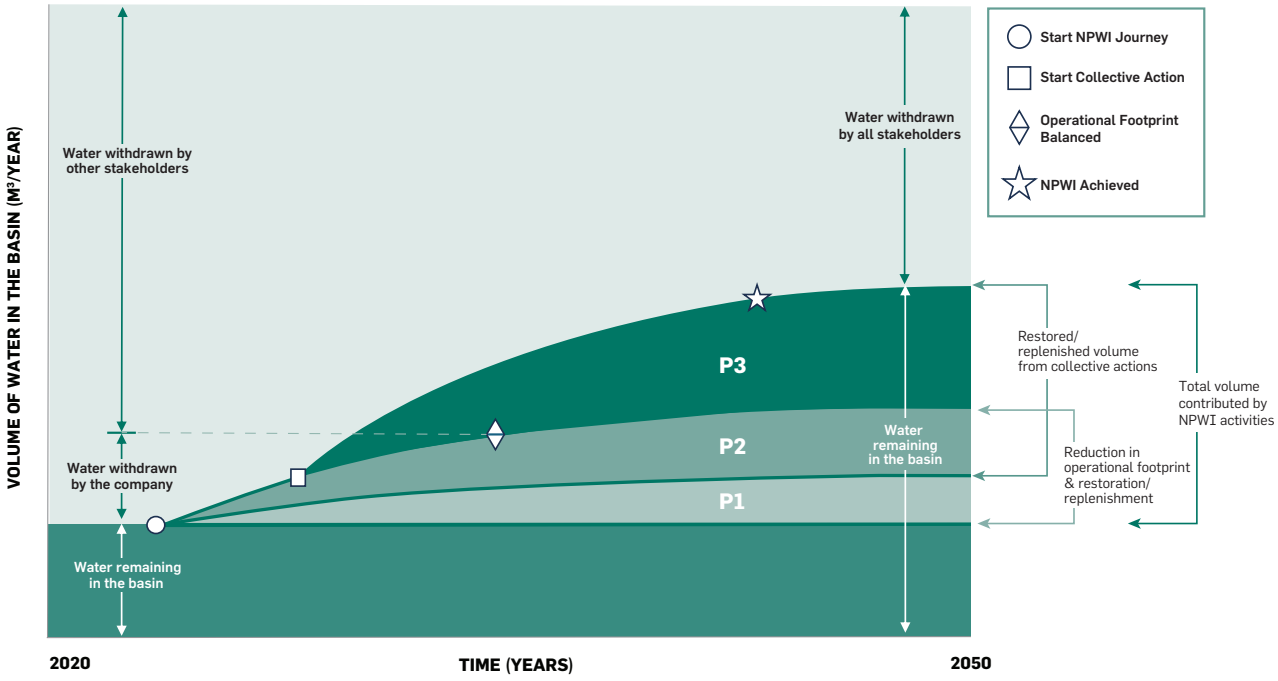
The three pillars and their multiple scales for implementation provide companies with a layered approach to reducing their operational water footprint, reducing shared water challenges in water-stressed basins, and achieving NPWI goals across water availability, water quality and accessibility. The pillars *may* be addressed in parallel or in succession, depending upon what is most feasible and how advanced the water stewardship journey is at the site.

The NPWI journey over time is hypothetically depicted for availability (Figure 3 in green), quality (Figure 4 in yellow) and accessibility (Figure 5 in purple) below. The figures have the same timeline (x-axis in years) depicting the NPWI journey to 2050. Pillars 1 to 3 are stacked to show cumulative improvements in the basin over time. Four symbols depict journey landmarks: the circle depicts the start of the NPWI journey; the square depicts the start of collective action; the diamond for availability and quality shows the pivotal point at which the operational footprint is balanced (not applicable for accessibility) and the star indicates the point at which NPWI is reached). Note, the figures do not depict the NPWI process (P1 to P3) in a basin proportionally. The NPWI impact is exaggerated for visualization purposes.

AVAILABILITY

The objective of this dimension (Figure 3) is for **companies to reduce the volume of water withdrawn in the basin over time**. Companies *should* work through all three pillars to reduce water withdrawal and increase overall water availability in the basin.

FIGURE 3: THREE NPWI PILLARS AND IMPROVEMENT IN WATER AVAILABILITY IN WATER-STRESSED BASINS



P1

Pillar 1 is company-driven, therefore companies implementing NPWI *should* look to reduce their operational footprint by **improving the efficiency of water consumption within operations and ultimately reducing water withdrawal at the site level** to operate at the most efficient state possible (see Water Withdrawals in Step 3: Assessment).

P2

Pillar 2 is also company-driven, and a company *should* focus on **replenishment and restoration of the site's operational footprint**. How much water a company gives back *should* be proportional to its baseline water withdrawal identified over a five-year average aggregate, determined as part of the baseline study (Developing a baseline in Step 3: Assessment). There comes a pivotal point at which this footprint is balanced, marking the end of Pillar 2.

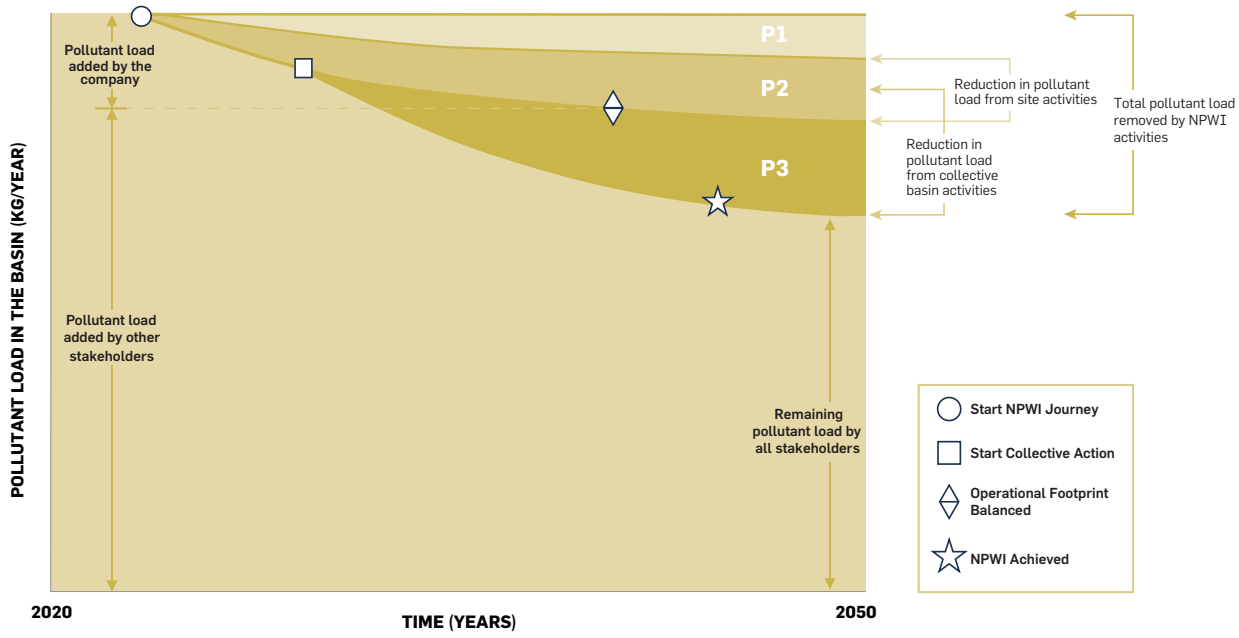
P3

In **Pillar 3** the company restores and **replenishes more volume of water in the basin than it withdraws** (demarcated with a star in Figure 3). Pillar 3 is stakeholder-driven, and thus collective decision-making is key. How much a company *should* replenish proportionally *should* be jointly determined with stakeholders as part of collective action initiatives under Pillar 3. A basin diagnostic or threshold, where available, *should* inform this collective decision.

QUALITY

The objective of this dimension (Figure 4) is to **reduce (and ultimately avoid adding) pollutant loads in the basin over time**. Each pollutant of concern *should* be identified and addressed, depending upon the sector, operational activities and site discharge composition.

FIGURE 4: THREE NPWI PILLARS AND IMPROVEMENT IN WATER QUALITY IN WATER-STRESSED BASINS



P1

Pillar 1 is company-driven, so the focus should be on reducing on-site pollutant load. This means **avoiding or minimizing the site's operational impact through effective pollutant removal or wastewater treatment and/or adopting a circular economy approach**. This includes recycling brine (a byproduct of processes like zero-liquid discharge) within the company or selling it for reuse in other industrial processes.

P2

Pillar 2 is also company-driven and focuses on **further removing and reducing any remaining pollutant load discharged from the site's operations**. This *may* be done on-site or immediately downstream of the site through internal, bilateral, or multi-stakeholder approaches. The other way to improve water quality under Pillar 2 is through dilution if enough superior quality water can be replenished or restored by activities such as NBS. However, it must be noted that the dilution volume of freshwater replenished must be coordinated with the release of the pollutants from the site's operations, hence it is a very delicate balance to make. Dilution is seldom the primary option to be considered here. A site achieves a pivotal point for the water quality dimension within a basin when it eliminates the equivalent load of the concerned pollutants (operational footprint) either within its site perimeters (Pillar 1) or removes pollutants downstream (Pillar 2). At this point, further reductions yield net positive benefits for the basin.

P3

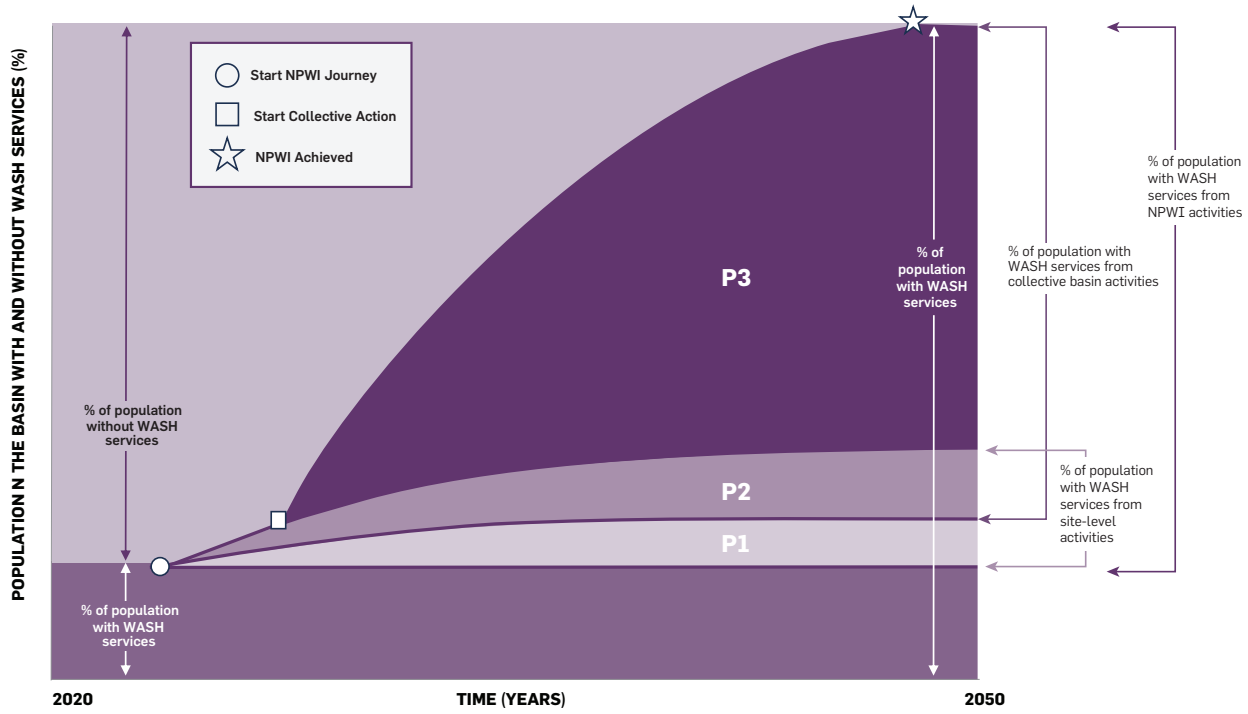
Pillar 3 activities are stakeholder-driven and entirely of a collective nature. The focus here is not on pollutants generated by the site but collectively deciding and acting on reducing the **types of pollutants posing the highest risks and concerns in the larger basin**. As part of Pillar 3, companies can engage in collective action that reduces types of pollutants that are not associated with the site's operational footprint but that are considered a key basin risk. Project action can take place anywhere in the basin where the issue is most pressing and does not need to be bound to the company site. The nature of collective engagement *should* be based on the scale of the challenge. This collective action *may* include projects such as public-private partnerships that collectively fund the upgrading or setup of large-scale water- or wastewater-treatment works or natural infrastructure investments like treatment wetlands to treat other sources of pollution in the basin such as sewage.

ACCESSIBILITY

The objective of this dimension (Figure 5) is to **provide WASH services that are physically accessible within the workplace or within recommended distances from households, educational institutions, or health facilities**. The accessibility dimension uses the percentage of the basin population without accessibility to WASH services as its reference point. This broader scale supports SDG targets 6.1 and 6.2, which strive for **universal access to WASH services by 2030**, a commitment that WRC members have adopted, pledging to provide 300 million people with WASH benefits by the same date.

Accessibility will play a minor role in basins where most of the population have access to WASH services but will pose a significant challenge in other basins where the population has inadequate WASH access. The scale and extent of providing WASH services depend upon the basin scale at which the company defines its NPWI ambitions.

FIGURE 5: THREE NPWI PILLARS AND IMPROVEMENT IN WASH ACCESSIBILITY IN WATER-STRESSED BASINS



P1

Pillar 1 is company-driven and at site-level, so companies *should* provide all employees with WASH services at the **workplace**.

P2

Pillar 2 is company-driven and at site-level, so companies *should* provide WASH services to **employee households and/or communities in the immediate vicinity** (defined as the radius within which site employees reside). Any collective action taken is expected to address all the levels of WASH access even if the current WASH provisions fall outside of employee residences (e.g. communal taps and ablution facilities). For WASH, NPWI aligns with the global targets of providing basic services at the household level. According to the Joint Monitoring Programme (JMP) water should be accessible for beneficiaries within a 30-minute round trip from home (including queuing), sanitation services should be on-premises and not shared with other households and hygiene provisions also should be on-premises (WHO and UNICEF, 2023).

P3

Pillar 3 is stakeholder-driven, therefore collective decision-making applies. Pillar 3 looks at engagement and investments in both public-and private-sector collaborative efforts to **improve WASH services to the basin's population**, going beyond the provision of services to staff. Studies have shown that WASH investments provide a strong social and financial return on investment. Beyond that, it is only by investing in WASH services (such as clean water supply, sanitation facilities, hygiene education and decentralized sanitation solutions like composting toilets) at the site and basin levels that the goal of universal access to WASH services can be reached. The extent of company support towards the provision of accessibility to WASH *should* be collectively discussed and determined with local stakeholders. Fundamental to this discussion should be the percentage of the population with accessibility needs and any official WASH-related goals already defined for the area.

Examples and details on how to operationalize each dimension of water stress across each pillar are provided in the Step-in-Practice document.

NPWI AND FLOODING

NPWI addresses basin flood challenges only indirectly. Flood events are typically event-driven and increasingly (but not exclusively) associated with climate change. Floods can occur in basins that have no availability challenges at all but also in basins with seasonal or episodic flow, overuse and protracted availability challenges. Flood events often have a direct impact on water quality as well as temporary accessibility to WASH services. Hence, NPWI supports building resilience against disruptive flood events.

1.2 INTEGRATE NPWI INTO COMPANY BUSINESS GOALS AND PRIORITIES

NPWI is an ambition that can help organizations build long-term resilience in water-stressed basins around the world. NWPI is unique in that it offers a structured approach to address water insecurity in all three dimensions of water stress through on-site, off-site and collaborative efforts. It is possible that some companies already have existing water-related objectives and targets that align closely with those of NPWI (see Step 3: Assessment). Others may need to develop additional ones to ensure alignment. Some are starting out on their corporate water stewardship journey and *may* use the central tenets of NPWI to inform their water-related priorities as well as their overall water strategies.

Decisions to integrate NPWI into company goals and priorities *should* be made at the enterprise level. Therefore, it is critical that top decision-makers in an organization *should* have a line of sight on what is required to implement NPWI and build resilience in a basin. Efforts of NPWI integration into existing policies and practices, or the development of new strategies and actions based on NPWI, *may* be led by different teams within an organization.

CONCLUDING STEP 1

At the end of Step 1: Awareness, readers should have clarity on what NPWI is and how to achieve it. It should also be clear how the achievement of NPWI across all operational sites in priority basins can contribute to achieving a company's business, social, climate and energy priorities.

This step is concluded with two information tables.

- A table with indicative/suggested roles and responsibilities that might be needed by different role players to complete this step.
- A table with links to reading and reference materials that help to inform, guide and support this NPWI step.

STEP 1 AWARENESS	
Who (role)	**What (responsibility/ies)***
CEO Water Mandate	Provision of information, guidance and thought leadership; clarification on NPWI processes or reporting; advice and support
Company leadership	Integration of NPWI into company goal, priorities and policies; allocation of resources and budget to NPWI activities; ongoing support and approvals
Company sustainability team	Information gathering; integration of NPWI into company goals, priorities, policies and practices; internal mobilization of NPWI
Site and other internal expert staff	Information gathering; integration of NPWI into company goals, priorities, policies and practices
Third party	*Information gathering; integration of NPWI into company policies*
Basin stakeholders	*Provision of local knowledge, data and/or information*

** Note: All italicized activities are optional for a particular stakeholder or group.*

HELPFUL RESOURCES FOR STEP 1: AWARENESS									
Resource Type	**Resource Title and Link**	**Relevance to Pillars**			**Relevance to Dimensions**			**Context**
		P1	**P2**	**P3**				
	CEO Water Mandate (About)							✓
	UN Sustainable Development Goals				✓	✓	✓	✓
	Water Resilience Coalition (About)							✓
	AWS International Water Stewardship Standard Step 1.1	✓	✓	✓	✓	✓	✓	
	ICMM A Practical Guide to Catchment Based Water Management for the Mining and Metal Industry Step 1		✓					✓
	Pacific Institute 2017. Exploring the Case for Corporate Context-Based Water Targets			✓	✓	✓	✓	✓
	SBTN Corporate Water Stewardship and Science-Based Targets for Freshwater				✓	✓		✓
	Water Resilience Assessment Framework	✓	✓	✓	✓	✓	✓	✓

STEP 2: AMBITION

The Ambition step addresses how companies should identify sites in water-stressed basins and how to prioritize where and when these sites should pursue NPWI. This step is the first of two planning steps in which a company orients itself in water-stressed basins and locates all sites that fall within them. The use of a variety of tools and information sources helps prioritize the order and timing in which NPWI *may* be implemented across sites. This level of planning *should* still take place at the company level, forming an essential precursor for site-level objective- and target-setting, which will inform the next steps of the NPWI process.

STEPS AT A COMPANY LEVEL		STEPS AT A SITE AND BASIN LEVEL		
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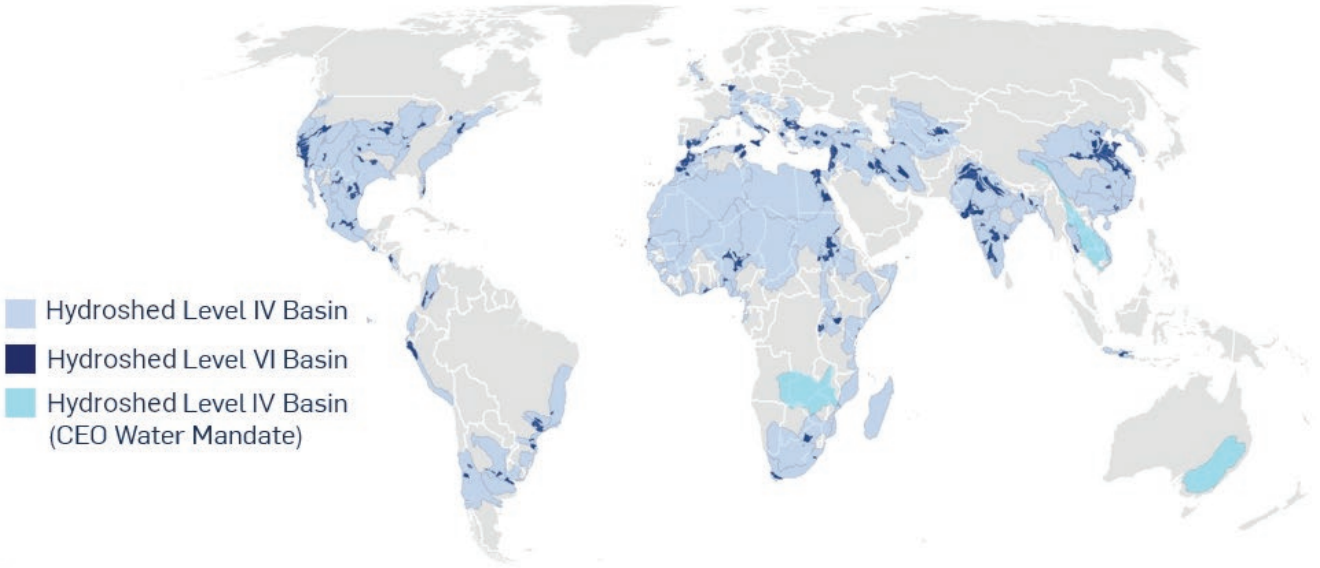
2.1 IDENTIFY A LIST OF SITES IN WATER-STRESSED BASINS

There are several platforms and tools that *may* be used to identify sites in water-stressed basins. These tools are useful starting points and help identify water stress across the different dimensions of NPWI as well as other areas of concern. Open-source resources, like the ones highlighted below, are helpful at the outset of this step to present global-level data, but their outcomes *should* always be compared with local data and/or local stakeholder insights.

100 Priority Basins

The CEO Water Mandate and WRC, in collaboration with several non-governmental (NGO) partners, have published the 100 Priority Basins list. This is a list of basins with high water stress around availability, quality and accessibility, overlaid with data that shows the highest level of opportunity for collective action from an economic and shared water-risk perspective for corporates (asset density, number of industries, value of crop production). The 100 Priority Basins list *should* be thought of as dynamic and responsive to changing conditions and actions by companies and other actors. This list is closely aligned with Aqueduct and the Water Risk Filter (Figure 6), and there is significant overlap of the high-priority water-stressed basins. The 100 Priority Basins are depicted at HydroBASIN Level 4, which is very coarse and covers areas of major basins (e.g., Mississippi or Ganges). It is a recommended point of initial orientation for companies to understand which sites fall into water-stressed basins. It is the scale at which basin impacts will be depicted by the WRC. Companies, however, are encouraged to define their NPWI actions at finer HydroBASIN resolutions (see Box 2 Step 3: Assessment).

FIGURE 6: OVERVIEW OF 100 PRIORITY BASINS

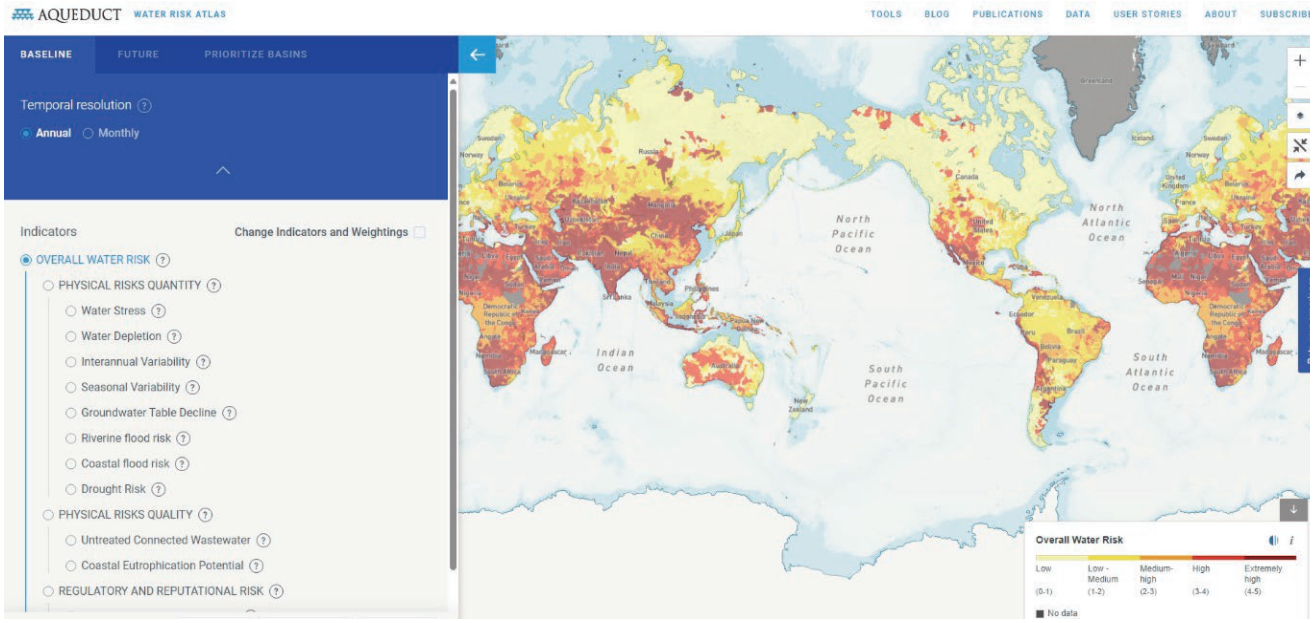


Source: CEO Water Mandate, 2023

Aqueduct

Aqueduct (Figure 7) is a global online data platform and tool that helps users understand and respond to water risks. It is run by the World Resources Institute (WRI), and it allows a company to compare water risk across multiple sites based on complex hydrological data and future projections. It calculates the level of water risk, displaying it as a ranking from low to high risk (0–5). Aqueduct maps are depicted at HydroBASIN Level 6, a more granular scale than the 100 Priority Basins described above, covering sub-basins within major basins.

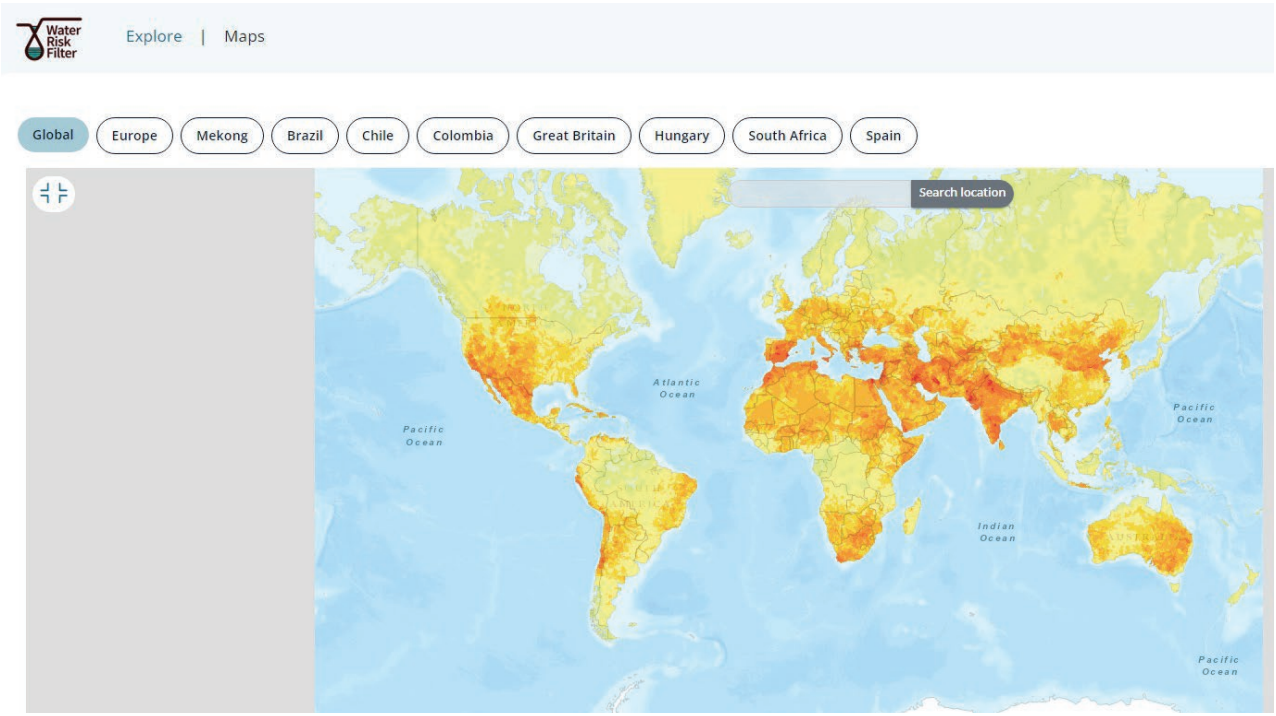
FIGURE 7: AQUEDUCT WATER RISK ATLAS



WWF Water Risk Filter

The Water Risk Filter (WRF) (Figure 8), run by the World Wildlife Fund (WWF), is a corporate- and portfolio-level screening tool to enable companies and investors to identify water risks facing their operations, value chain and investments, both now and in the future. It can combine basin-risk data with operational-risk information and rank sites according to water risk. It calculates the level of water risk, displaying it as a ranking from low to high risk (0–5). The WRF maps are typically depicted at HydroBASIN Level 7, one step more granular than what is depicted in Aqueduct at present.

FIGURE 8: WWF WATER RISK FILTER MAP



Points to note:

- Aqueduct and the Water Risk Filter both offer climate change prediction scenarios. These should be included in the analysis process.
- The two tools are similar but sometimes yield different results for the same site because different datasets and different scales (HydroBASIN 6 vs 7) are used. It is important to know and anticipate this. Best practice for this step is to screen sites through both tools, compare outcomes and then compare against local information (see next section).
- A company may choose a service provider to complete a detailed risk analysis if this is preferred over open-source risk assessment tools.

Listing of sites against water risk results

The results of the risk tool analyses and local ground-truthing *should* be tabulated. This *may* be done in an Excel sheet or an internal dashboard and attached as a tab in the ITF as background material. The Step-in-Practice provides an example of a site listing against the results of water-risk tools and a local-level cross-check. The priority is for NPWI to be implemented across sites showing the highest stress across the three dimensions of availability, accessibility and accessibility (equivalent to a risk ranking of 4 to 5 in the Aqueduct and WRF tools), followed by those basins in which there is evidence of low to moderate stress (equivalent to a risk ranking or 2 to 3 in the Aqueduct and WRF tools).

GROUND-TRUTHING AGAINST LOCAL DATA AND KNOWLEDGE

While the above tools are recommended starting points, it is important to acknowledge that local data has an essential role to play in finalizing water-stress assessments across sites. Global datasets are often too coarse to capture the reality on the ground and some form of ground-truthing is necessary practice. This can be done by double-checking available local information from studies and local governance reports and by checking site records of historical water challenges. Should such information not be available, a cross-check with local stakeholders is required (see Appendix B for the pros and cons of local versus global data).

2.2 PRIORITIZE WHERE AND WHEN TO ACHIEVE NPWI ACROSS COMPANY SITES

Depending upon the number of sites a company has and the available budget for NPWI-related activities, it will be necessary to rank and stagger the NPWI implementation over time, revisiting the list of water-stressed basins at regular intervals to keep the site list updated and relevant. Ultimately, NPWI *should* be implemented across all sites in water-stressed basins by 2050.

The ranking and staggering process should first be informed by the level of basin water risk and second by other factors, such as

- The status of the site within the company (e.g., flagship site).
- The status of the site's water stewardship journey (e.g., the site is well along its water stewardship journey and renders itself an ideal test site).
- Whether the site has the necessary resources to implement NPWI effectively.

Companies can also prioritize site selections based upon relevant sections of their value chain, including sites in basins with priority suppliers and/or value chains and/or basins with priority consumer markets. However, companies are not currently required to mitigate the impact of supplier, value chain or customer water use, pollution, or accessibility through implementing NPWI. **Additional thinking will be provided around NPWI in the value chain in upcoming guidance**.

The Ambition step provides an opportunity to review the level of water stress for sites (i.e., conditions in the basin) in which a company operates and helps to orient corporate water stewardship efforts. For any newcomer to water stewardship, this water-stress review would be the first part of creating baseline information (see Step 3: Assessment). Reviews *should* end with the ranking of sites for NPWI implementation in water-stressed basins, focusing attention on the most stressed basins first.

As a company proceeds along the NPWI journey, there *may* be a need to undertake additional water-stress reviews. For example, a review in five years *may* provide a new ranking of water stress among basins, and therefore a change in focus for where NPWI activities *should* be prioritized (See Step 5: Measurement).

CONCLUDING STEP 2

At the end of Step 2: Ambition, companies *should* have compiled a list of sites and corresponding basins where the company will prioritize to achieve NPWI. Additionally, a company *should* be prioritizing implementation by defining a clear scope and timeline for the company's ambition for NPWI across sites.

This step is concluded with two information tables:

- A table with indicative roles and responsibilities that may be needed and played by different role players to complete this step.
- A table with links to reading and reference materials that help to inform, guide and support this NPWI step.

The following roles and responsibilities are required to complete Step 2: Ambition.

STEP 2 AMBITION	
Who (role)	**What (responsibility/ies)***
CEO Water Mandate	Provision of information, guidance and thought leadership; advice and support
Company leadership	Remain informed; *selection of priority sites (optional)*
Company sustainability team	Baseline information collation, selection of priority sites; facilitation and leading of process; development of scope and timeline for NPWI implementation
Site and other internal expert staff	Baseline information provision (including stakeholder mapping); provision of site-level information; selection of priority sites
Third party	*Facilitation or support of process*
Basin stakeholders	Initial engagement; *provision of local knowledge, data and/or information*

** Note: All italicized activities are optional for a particular stakeholder or group.*

HELPFUL RESOURCES FOR STEP 2: AMBITION								
Resource Type	Resource Title and Link	Relevance to Pillars			Relevance to Dimensions			Context
		P1	P2	P3				
	CEO Water Mandate Stakeholder Engagement Guide for NBS							✓
	CEO Water Mandate et. al. Setting Enterprise Targets: Guide for Companies Action 2.1	✓			✓	✓	✓	
	Diageo Water Collective Action Implementation Guide Steps 1.1 - 1.2			✓	✓	✓	✓	
	SBTN: Step 1 and Step 2	✓		✓				✓
	TNFD Guidance on the LEAP Approach Step 1							✓
	Camargo et al. 2023. State of Nature Layers for Water Availability and Water Pollution to Support SBTN Step 1: Assess and Step 2: Interpret & Prioritize*			✓	✓	✓		
	Ceres "Corporate Expectations for Valuing Water"				✓	✓	✓	
	JMP Multilingual Country Files						✓	
	The Global Assessment of Private Sector Impacts on Water	✓			✓	✓		
	Water Action Hub 100 Priority Basins			✓				
	WWF Water Risk Filter	✓	✓	✓	✓	✓	✓	
	WRI Aqueduct Water Risk Atlas			✓	✓	✓	✓	
	SBTN basin threshold tool**			✓	✓	✓		

**Upcoming: Resource will be incorporated into Aqueduct and the WRF*

*** Upcoming*

STEP 3: ASSESSMENT

Step 3: Assessment is the first of three steps that outline implementing NPWI processes at the site and basin levels. It is important to start by understanding the site's impacts, dependencies, risks and opportunities concerning water availability, quality and accessibility. By assessing the site's operational footprint, as well as the context of each water-stressed basin, a company gains visibility into impacts from its operations as well as the specific local water challenges, stakeholder values and priorities and any uncertainties and information gaps. This knowledge forms a baseline, from which it is possible to define meaningful NPWI objectives (i.e., what a company is hoping to achieve) at sites in each priority basin, while also setting quantifiable targets. All objectives and targets are site-specific and are guided by the NPWI minimum requirements and recommended indicators.

STEPS AT A COMPANY LEVEL		STEPS AT A SITE AND BASIN LEVEL		
Step 1 Awareness	**Step 2 Ambition**	**Step 3 Assessment**	**Step 4 Action**	**Step 5 Measurement**
1. Understand NPWI. 2. Integrate NPWI into company business goals and priorities.	1. Identify list of sites in water-stressed basins. 2. Prioritize where and when to achieve NPWI across company sites.	1. For each site and its basin, develop a baseline/benchmark assessment. 2. For each site and its basin, translate NPWI requirements into own objectives and targets.	1. For each site and its basin, identify opportunities and prioritize activities. 2. Establish and secure inputs needed for financing and partnerships. 3. Implement activities.	1. For each site and basin, build a monitoring and evaluation plan. 2. Analyze and evaluate outputs and outcomes with recommended indicators. 3. Report and communicate outputs and outcomes. 4. Learn, improve and adapt over time.

3.1 FOR EACH SITE AND ITS BASIN, DEVELOP A BASELINE/ BENCHMARK ASSESSMENT

The NPWI journey *should* start with the creation of an initial baseline of basin conditions, looking across the three dimensions of water stress within the three pillars. Even if the previous risk assessments showed a low risk to a particular dimension, this *should* be included as part of the baseline. Basin conditions can shift over time and this way a company has a clear record of changes in baseline conditions. An understanding of the local context and business drivers is needed to gain visibility into the specific local water challenges, stakeholder values and priorities as well as uncertainties and information gaps.

Content of a baseline

For an initial baseline, information on the following *should* be collated for all selected sites, ideally covering a five-year aggregated average (if available):

AVAILABILITY

P1

- Site water balance (e.g., inflows/withdrawals, losses, storage and outflows/release)
- Current water-use efficiency (water intensity)
- Site water sources*
- The extent to which future developments (next five years) will impact withdrawal rates

P2

On-site implementation: Same as Pillar 1 in row above	Basin implementation: Same as Pillar 3 in row below

P3

- Current and emerging shared water challenges, their root causes and desired state
- Water-risk analysis[1]
- Basin characteristics: environmental, social, cultural, governance and economic as well as biological, chemical and physical processes, surface and groundwater (Appendix B) conditions in the basin
- Relevant stakeholders and their water-related values, priorities and concerns
- Current water stewardship activities and collaborations in the basin
- Climate change impacts (e.g., model of periods of drought, flooding or other extreme events will impact water quantity and quality)

WATER QUALITY

P1

- Specific pollutants (nutrients, legacy pollutants, contaminants of emerging concern, as well as biological and physical water quality parameters)
- Concentration or pollutant load of intake water per sourcing location
- Concentration or pollutant load of the water discharged from the site
- Volume of discharge
- Location of wastewater discharge points
- Water quality of receiving water bodies
- The extent to which future developments (next five years) will impact pollutant loads

P2

On-site implementation:	Outside the site boundary:
Same as Pillar 1 above	Both Pillar 1 above and Pillar 3 below

P3

- Current and emerging shared water challenges, their root causes and desired state.
- Water-risk analysis[1]
- Basin characteristics: environmental, social, cultural, governance and economic, as well as biological, chemical and physical processes and conditions in the basin
- Relevant stakeholders and their water-related values, priorities and concerns
- Current water stewardship activities and collaborations in the basin
- Climate change impacts (e.g., periods of drought, flooding or other extreme events modelled to impact water quantity and quality)

ACCESSIBILITY

P1

- Conditions and level of access by all employees to:
  - Safely managed drinking water[2]
  - Safely managed sanitation[3]
  - Basic hygiene[4]
- The extent to which future developments (next five years) will impact employee WASH accessibility

P2

- Accessibility/WASH has distinct information requirements for Pillar 2, based upon the WASH Self-Assessment Tool
- Conditions and level of access by all employee households and surrounding communities (radius or sub-basin) to:
  - Safely managed drinking water[2]
  - Safely managed sanitation[3]
  - Basic hygiene[4]

P3

- Current and emerging shared water challenges, their root causes and desired state
- Water-risk analysis[1]
- Basin characteristics: environmental, social, cultural, governance and economic as well as biological, chemical and physical processes and conditions in the basin
- Percentage and level of access to WASH by the basin population (see WASH tools and resources in Box 1 below. It *may* be national or municipal data if basin data is not available)
- Relevant stakeholders and their water-related values, priorities and concerns
- Current water stewardship activities and collaborations in the basin
- Climate change impacts (e.g., models depicting periods of drought, flooding or other extreme events will impact water quantity and quality)

** If a site receives water from an inter-basin water transfer, a case-by-case evaluation and planning approach would be required.*

1 A basic water-risk analysis should have been concluded in Step 2: Ambition and should, in part, inform this baseline.
2 Drinking water from an improved source that is accessible on premises, available when needed and free from fecal and priority chemical contamination (WHO and UNICEF, 2023)
3 Use of improved sanitation facilities that are not shared with other households and where excreta are safely disposed of in situ or removed and treated off-site (WHO and UNICEF, 2023)
4 Availability of a handwashing facility with soap and water at home (WHO and UNICEF, 2023)

The site's current baseline *should* represent the company's activities in the basin for the previous five years and contain the content outlined in this section. If a company has a footprint of less than five years, all operational years need to be included and *should* be noted in the ITF. The NPWI requirement is that the baseline be up to date (i.e., reflect the current basin conditions) and be based upon relevant information to help a company develop appropriate interventions and actions. A site that has already started water stewardship activities that fall under Pillars 1 to 3 and has collected the appropriate historical data required, as well as monitored progress over time, may backdate its NPWI data and capture these in the ITF. There, a review of the baseline should be done to see if the previous baseline is still applicable or if it needs to be adapted to an evolving reality (see Step 5: Measurement). A company *may* report on any previous progress made in achieving its availability, quality and accessibility objectives, provided it can measure these in relation to a previous baseline.

It is important to have a good grasp and record of local conditions in the basin that are pertinent to availability, quality and accessibility. For water quality, for example, the underlying geology or vegetation types can inform the nutrient load and or the presence of chemical elements, tannins, heavy metals, etc. in water sources. Slope, soil type and land use will determine the type and load of runoff. Water sources can be quite nutrient poor or acidic, and the physical nature of aquatic ecosystems can result in different filtration rates of pollutants. Understanding these natural conditions is an essential departure point ahead of formulating any objectives and targets. To create such a baseline, existing water quality data *should* be collated, considering local data sources wherever possible. Global data *may* be used where local datasets do not exist, are inaccurate or have a high degree of uncertainty related to their validity or robustness. Where needed, some baseline sampling *may* be required and *should* inform a long-term water quality monitoring protocol for all NPWI steps.

To gain a better understanding of WASH services, both in the workplace and in employee households, a company *may* undertake several assessments. The use of surveys or other qualitative instruments can gather substantial amounts of data quickly and effectively. Managers and colleagues responsible for the well-being of employees *may* also hold meetings with a subset of employees to gather a broad understanding of WASH services internally and externally. A regular review of the levels of accessibility to WASH services *may* be needed in many geographies as basin conditions are often rapidly changing due to climate change, migration patterns and political pressures. Additionally, a WASH review *may* be needed when a site expands or brings on additional employees. Monitoring shifts in employee numbers and the local populations' levels of accessibility *should* be done regularly to keep WASH services equitable and universal.

Methods and guidelines for such baseline assessments exist and are listed in the Helpful Resources table at the end of this section. There are case studies, showcasing implemented activities as part of the WASH Pledge, and Box 1 below lists resources available to identify WASH issues in basins. These tools and resources can be used individually or in combination to get a comprehensive understanding of WASH issues in specific basins.

BOX 1: RESOURCES TO IDENTIFY WASH RESOURCES IN A BASIN

1. UNICEF's WASH Bottleneck Analysis Tool (BAT): This tool is designed to identify and address bottlenecks in WASH service delivery. It helps in assessing the enabling environment, supply and demand factors affecting WASH services.

2. SDG 6 Data and Monitoring Tools: The United Nations provides various tools and datasets to monitor progress towards Sustainable Development Goal 6 (Clean Water and Sanitation). These resources can help identify gaps and challenges in WASH services within specific basins.

3. MICS (Multiple Indicator Cluster Surveys): Conducted by UNICEF, these surveys provide detailed data on WASH conditions at national and sub-national levels, which can be used to assess WASH issues in specific basins.

4. JMP (Joint Monitoring Programme) by WHO and UNICEF: This program offers comprehensive data and reports on the progress of WASH services globally, which can be used to identify issues in particular regions or basins.

5. WASH Poverty Diagnostic (WPD): In collaboration with the World Bank, WaterAid provides insights into the relationship between water poverty and broader development goals. The WPD tool helps identify WASH issues in specific regions and basins by analyzing data on access, quality and socioeconomic impacts.

6. WaterAid's District-Wide Approach: This approach involves working at the district level to ensure sustainable WASH services. By focusing on comprehensive district plans, WaterAid addresses WASH issues in a holistic manner, which includes identifying and tackling basin-level challenges.

7. Sustainability Framework: WaterAid has developed a framework to ensure the sustainability of WASH interventions. This framework includes tools and resources for assessing and improving the long-term impact of WASH projects, with considerations for basin-level water resource management.

3.2 FOR EACH SITE AND ITS BASIN, TRANSLATE NPWI REQUIREMENTS INTO OBJECTIVES AND TARGETS

The developed baseline *should* now be used as the foundation for all future work on the NPWI journey. Once baseline conditions are identified, a company is ready to define its desired objectives for each site and the scale around which to define the activities for each pillar, based upon both the baseline conditions and the minimum requirements for NPWI.

The objectives *should* refer to the ultimate goals a site wants to achieve. For example, a site sets its volumetric objective for Pillar 1 as being recognized as best-in-class for water consumption in its respective sector. Objectives *may* also be set at the company level and transposed across all sites. When this is done, the highest value (rate, ratio, percentage, etc.) *should* be used across all sites (e.g., the most efficient consumption rate within affordability limits) rather than the lowest value. All objectives *should* be based on obtainable data – this can be existing data, data generated from internal monitoring protocols (e.g., water dashboards) or data gathered from ongoing basin collective action initiatives. Objectives *should* be developed for each pillar and dimension aligned with or exceeding the minimum NPWI requirements.

Next, a company *should* define targets, along with corresponding quantitative indicators, which will outline how to achieve the objectives that have been set at the site (or enterprise) level. Targets *may* be non-contextual, contextual or science-based. For example, a site can set a target of reducing its consumptive water use by 25% to operate at best-in-class efficiency over the next five years. Targets will help a site (and a company) fulfill its overall NPWI objectives. Targets *should* be expressed using the appropriate NPWI indicators and reported in the ITF. The recommended NPWI indicators in Step 5: Measurement have been intentionally chosen to be:

- Easily accessible for companies, based upon existing data or reporting requirements (low effort and cost)
- Based upon familiar units, thus promoting more standardized reporting

Delineating the scales for the three pillars of NPWI

The delineation of the spatial boundaries for the three NPWI pillars forms an essential planning step for each site. The baseline assessment would have provided sufficient information and understanding of the site location within the basin to make the delineation process possible. The decision-making process for the choice of scale for each pillar *should* be recorded in the ITF, and a summary of the decision process *should* be kept as part of the reference material.

Importantly:

P1

Pillar 1 is **always confined to the site boundary.**

P2

Pillar 2 activities, especially for availability and quality, ***may* still be located on company property**, especially if the site is associated with a larger piece of land owned by a company. Pillar 2 ***may* also be within the near vicinity of the site, outlined and defined by the area in which** all **projects are most impactful to reduce the remaining operational footprint.** This *should* be defined by considerations such as where replenishment projects have the biggest impact, by the location of wastewater outflow (point source pollution) or by the scale of surrounding communities where most employee households are located (accessibility). For **Pillar 2, the most suitable and workable scale *should* be decided based on local conditions** and ***should* be communicated to any relevant stakeholders** who might engage in collective action.

P3

Pillar 3 *should* be undertaken at the largest scale, **at the sub-basin or basin scale** at which collective action initiatives are most impactful. Due to the focus on the larger basin, Pillar 3 activities do not need to be confined to the immediate vicinity of the site. The scale *should* be defined, based on these important considerations:

- The scale-definition process *should* include stakeholder engagement to jointly define the most workable and sensible scale, based on collective needs. Things to consider include stakeholder relationships (circle of influence) and the level at which a positive impact is planned.
- The scale for Pillar 3 *should* encompass where the local Pillar 1 and smaller sub-basin Pillar 2 activities take place. It may include or overlap with relevant aquifers and may stretch across basin boundaries if a site is located on the cusp of two or more basins. In such cases, clear records on scale choice *should* be kept.
- A company *should* record the chosen boundary (recommended delineation at HydroBASIN (see below) to which the three water stress dimensions can be measurably contributed.
- The scale *should* be based on the opportunities and constraints that exist across different scales, weighing up the level of impact for investment in collective action.
- Consideration *may* be given to aligning the scale with a company's ongoing water stewardship catalytic and strategic activities and engagements.

BOX 2: HYDROBASIN SCALE

HydroBASINS is one of the hydrographic map layers extracted from the gridded HydroSHEDS GIS data layers. It is specifically designed to display sub-basin boundaries, based on the Pfafstetter coding system. The technical guidance recommends that companies should use the commonly used HydroBASINS data layer to delineate the scale at which they implement their Pillar 2 and Pillar 3 activities, where possible. The scale chosen by the company *may* depend on the size of the overall basin, the scale of the water challenge, the presence or absence of a key aquifer, engagement opportunities with stakeholders and the location of collective action projects. NPWI recommends that a workable scale for collective action is found. If the scale is too large, actions could be too diluted and stakeholder engagement is hindered by distance, whilst too fine a scale holds the risk of low beneficial impact. Collective action at a HydroBASIN scale 6 is the largest recommended workable scale, but it can be finer (e.g., HydroBASIN scale 9/10). In some cases, it might be preferable to define the pillars according to a local basin delineation or municipal boundaries if that is most workable for the local context. Companies are requested to record each priority basin they engage in and to note, describe and elaborate the logic behind their choice of basin delineation for collective action. This *should* be noted in the ITF.

Operationalizing objectives and target-setting

General clarification is provided below to help formulate objectives and targets for each NPWI pillar and dimension. This includes direct reference to both the NPWI indicators as well as the minimum NPWI requirements. The baseline information, gathered in the previous section, informs all.

AVAILABILITY

P1 PILLAR 1:
REDUCING WATER CONSUMPTION AND WITHDRAWALS

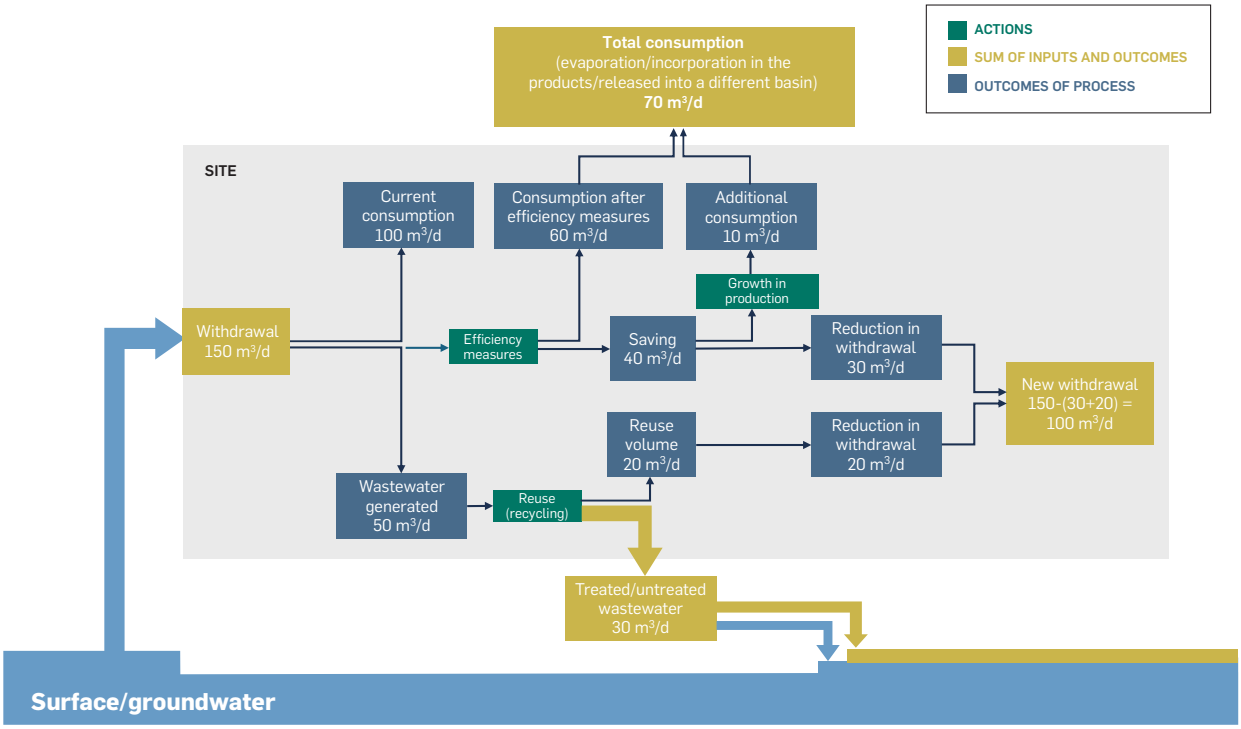
This document uses the terms 'water withdrawal,' 'water consumption' and 'water use' with precise meanings.

- **Water withdrawal** refers to the total volume of water removed from a source, such as a river, lake or aquifer, at any given time. It encompasses all water taken out, regardless of whether it is returned or not.
- **Water consumption** is a subset of water withdrawal. It specifically refers to the portion of withdrawn water that is not returned to its source after use. This can happen through evaporation, incorporation into products (like crops) or returned to the system at a different time with less beneficial use, e.g., a period of flooding.
- **Water use** is a broader term encompassing both withdrawal and consumption. The specific meaning of "water use" will depend upon the context.

For NPWI, both the water consumption and withdrawals within a site *should* be monitored and addressed for two reasons. Any reduction in consumption directly helps reduction in withdrawal, whilst also providing an opportunity for site growth using a part of the water saving. Any reduction in withdrawal is only possible if both consumption and wastewater flows can be reduced. Reduction in water consumption or water withdrawal is often recorded as an outcome of efficiency measures such as setting best-in-class figures/rates for the company or its sector (see below).

The mere reliance on reduction of consumption is not enough in cases where a site solely focuses on reducing internal water use through evaporation control, neglecting more impactful solutions like managing overall water withdrawal. In such cases, any water saving could be either used to expand the site operations or kept in storage to use during dry periods. Hence, for NPWI the focus *should* be on the reduction in water withdrawals – resulting in more water being available in the system – thus creating the potential for improved environmental flows and more availability for other users, including the environment (Figure 9).

FIGURE 9: REDUCING SITE OPERATIONAL FOOTPRINT YET BALANCING COMPANY GROWTH. A HYPOTHETICAL DEPICTION OF HOW THE PILLAR 1 AVAILABILITY JOURNEY UNFOLDS AT THE SITE LEVEL



Setting best-in-class rates for water efficiency, reuse and recycling

Depending upon the industry sector, best-in-class rates *may* be well-established, still be under development or not developed at all. Best-in-class refers to the highest achievable standards or benchmarks set in the industry or within a particular context for conserving, reusing and recycling water resources. This term signifies the most effective and efficient practices or rates of water usage that lead to significant conservation and sustainability. Defining "best-in-class" rates involves comparing and setting standards based on the most innovative, effective and environmentally friendly practices in water management across industries or sectors. This benchmark often evolves with advancements in technology, changes in regulations and improvements in sustainability practices, aiming to continually raise the bar for water conservation and management. Setting a best-in-class target does require ongoing review and adjustment to remain at the forefront of developments.

Efficiency is a measure of the volume of water use (consumption or withdrawal) per unit of production (also called water intensity). Efficiency is measured differently across sectors, so it is not easy to produce a standardized value for efficiency for NPWI. This guidance suggests that a company needs to use water as efficiently as possible within operations in the sector in which it operates. Measuring efficiency in different sectors could also require different metrics. Standardization of data reporting within operations or sectors will be key to implementing NPWI.

Where these rates have not been specified by sector or industry bodies, or where global standards are not being adopted, companies *may* track their efficiency, reuse and recycling rates in several ways:

1. A company *may* define best-in-class by doing an industry benchmark based on both water consumption and withdrawal. For example, the beverage industry's water stewardship work (see the Beverage Industry Environmental Roundtable) is based on water withdrawals. This entry point may require significant collaboration with other companies in a sector. Similarly, the Water Footprint Network provides consumption based on a best-in-class rates database (often called benchmark) for agricultural products at local through to global best practices, finding the most comparable setups for produce production in terms of location, water availability and environmental conditions.

2. If the above options are not workable, then best-in-class water efficiency, reuse and recycling rates *may* be determined by benchmarking the portfolio of sites against higher-performing sites. These would need to have similar processes across the company or industry or work with industrial water-solution providers to assess opportunities for improved efficiency, reuse and recycling rates. To identify best-in-class efficiencies, companies *should* look for sites with the same industrial process and identify those that have minimized leakages and consumption, high recycling rates, etc. For some operations, best-in-class *may* mean smaller improvements that achieve acceptable rates. For now, that becomes the benchmark to work against. As technology and efficiency approaches improve, or as other sites get close to that benchmark (or even exceed it), a company *should* then work on improving its current benchmarks. The easiest way to express this is through calculating the water ratio (see VWBA).

3. A company *may* have multiple levels of efficiency outputs, such as production efficiency and process efficiency. A company *may* achieve the outcome of overall efficiency by improving the efficiency of multiple processes in a modular fashion. For example, in one year the focus can be on building efficiencies in the bottling plant, the next year the focus can include washing stations or facilities and another year the packing processes can be incorporated (see Step 4: Action and Step 5: Measurement).

Some companies *may* be concerned about how they can increase production or operations while still meeting a reduction in water withdrawals for Pillar 1. It is important to note that setting best-in-class rates need not impact operations. Companies *should* consistently look for ways to develop innovative technology or adopt best-in-class efficiency, reuse and recycling rates even while operations expand or as new investments are made across the portfolio of sites.

Regular water audits paired with investments in technology empower companies to pinpoint areas where water use is inefficient. This allows them to implement improvements through technological upgrades or changes to existing processes. The resulting water savings *may* then be used in three ways: directly reducing water withdrawals, expanding operations while maintaining current water usage or finding a balance between the two (Figure 9). Where possible, companies *should* engage with sites that have undertaken similar expansion while maintaining their efficiency, reuse and recycling rates. Industry associations, sector forums and other companies can also be engaged to share best practices and learn from each other's experiences in water conservation and efficiency.

Additionally, a company *may* identify sites outside of water-stressed basins to prioritize any expansion objectives that would increase water withdrawals. Even there, careful monitoring of basin water stress is advised as is developing new sites with best practices from the outset.

AVAILABILITY

P2 P3 PILLAR 2 AND PILLAR 3: BOOSTING WATER QUANTITY THROUGH REPLENISHMENT, RESTORATION OR REGENERATION AND COLLECTIVE ACTION

Under Pillar 2 the company focus *should* be on balancing the site's operational footprint with regards to water withdrawal. **This *may* be accomplished in parallel to Pillar 1 activities** and through internal, bilateral, or collective means suitable to the local circumstances. The drive for the replenishment *should* come from the company. If the replenishment project is on site, internal stakeholders *may* inform the project only. If the replenishment project is located outside of the site boundaries, then project partners and basin stakeholders *should* inform the project to enhance water availability in the basin. Once water withdrawals are balanced, the objectives for Pillar 2 water availability are reached.

A net positive impact for water availability becomes possible under Pillar 3 in collective action projects. Companies *should* ensure that their contributions to replenishment volumes or ratios are appropriate to the context and surrounding stakeholder needs (including environmental flows), thus ensuring their site operational and reputational benefits. Basin diagnostics and basin threshold tools or local water models *may* be used to define company contributions.

It is important to note that **NPWI is principles-based** and not overly prescriptive with strict, specific quantitative efficiency targets such as best-in-class rates or the volume of water augmentation required. This is important as each sector will have different drivers and costs, and decisions at each site will be influenced by several factors, including location, level of water stress, cost of interventions/available budget, level of technologies, number of available replenishment options and others. An expert opinion should be sought in case of any uncertainties.

WATER QUALITY

The overarching objective for the NPWI water quality dimension is to actively contribute to having as high a water quality available in the basin. This is especially important for all activities and landscapes below the site, as it enables beneficial use for current and future downstream users and the environment. Downstream beneficial use refers to the intentional, safe and regulated utilization of reclaimed or treated wastewater for various purposes after it has undergone appropriate treatment processes. This treated water, once deemed safe and meeting specific quality standards set by regulatory bodies, is repurposed for diverse beneficial applications of a socio-economic or environmental purpose downstream from its original point of generation. Company efforts undertaken around wastewater treatment and basin water quality improvements in all three pillars are aimed at enabling beneficial downstream use.

P1 PILLAR 1: REDUCING POLLUTANTS

At the site level, **pollutants and their load *should* be specified, inclusively looking at nutrients, legacy pollutants and contaminants of emerging concern as well as biological and physical water quality parameters** (where applicable). All pollutants and water quality parameters *should* be defined per site, based upon those relevant to the industry, sector and direct site operations. The likely presence of multiple pollutants does make the water quality dimension of NPWI more complex than the availability dimension. Baseline records of site wastewater quality analyses *should* provide the most direct reference. A company *may* choose to address the complete list of pollutants at once or *may* decide upon a staggered approach, whereby it begins by targeting critical pollutants first, but ultimately all pollutants *should* be addressed. This guidance does not provide sector-specific lists of pollutants for Pillar 1. The following considerations *may* help the selection and prioritization processes:

- The Wastewater Impact Assessment Tool is a useful platform to identify key sector pollutants for consideration.
- Any pollutants emitted above acceptable thresholds, regulations or best-practice standards *should* be addressed as a matter of priority. The baseline assessment, completed as part of this Step 3: Assessment, *should* highlight critical pollutants prevalent in the basin – which *should* receive priority focus.
- A company *should* review other work in this area to align with target-setting (e.g., SBTN's non-point source pollution NP loading reduction threshold) and normative guidance e.g., WQBA (once available).

If a ranking process is decided upon, this *should* be transparently documented and *should* be communicated internally and with relevant external stakeholders (See Box 3 below).

Wastewater treatment on site *should* be of the highest standard, based on careful comparison of all relevant local, regional and national legislation, sector and internal company standards and international best-practice guidelines. The **minimum requirement for Pillar 1 is to ensure that the total pollutant load in wastewater released from the site to the system is reduced by appropriate wastewater treatment processes or near-eliminated with zero liquid discharge practices**.

In the case of opting for zero liquid discharge on-site, the management of solids and brine, depending upon their nature, *should* be according to international best-practice waste disposal guidelines. A circular economy approach *should* be considered to either recycle the brine for other uses internally or to sell/provide it to external agencies for use in their processes.

BOX 3: POLLUTANT LOAD AND THRESHOLDS

Pollutant load

Water quality improvements for NPWI are expressed through a reduction in pollutant load, as it is quantifiable and applicable for both point and non-point pollution and across a variety of pollutants and water-quality parameters. Pollutant load refers to the total amount of a pollutant discharged into the environment over a specific period, usually measured in mass (e.g., kilograms, tons). The pollutant load is influenced by both the concentration of the pollutant and the volume or flow rate of the medium carrying the pollutant (Franke et al., 2013). The measurement of pollutant concentrations can be made at the finest interval possible, often on a weekly or monthly basis, the discharge of effluent volume should be measured in line with the water withdrawal records for consistency. To determine the pollutant load over time (monthly, seasonally or annually), composite water quality and volumetric measurements should be completed.

In many basins, national/federal or state governments or agencies create water quality standards or thresholds for water quality. As an example, companies can use the Total Maximum Daily Load (TMDL) values, prescribed by the Environmental Protection Agency (EPA) following Section 303(d) of the Clean Water Act in the United States. Watershed Monitoring Systems are used in many other geographies and enable the quantification of current and future pollution-loading impacts. **For NPWI**, a company *may* use a national threshold or standard but should compare these with globally accepted standards in similar contexts and **opt for the most stringent values when setting targets for reducing pollutant loads**.

Water quality thresholds on pollutant concentration

A water quality threshold refers to a specific level or concentration of a particular substance or parameter in water beyond which it might become harmful to human health or the environment. These thresholds are defined by regulatory guidelines to ensure the safety and sustainability of water resources. Water quality thresholds can vary depending on the specific substance or parameter being measured. For example, thresholds can be established for contaminants such as heavy metals, pesticides, bacteria or nutrients like nitrogen and phosphorus. They can also be set for physical parameters such as temperature, pH, turbidity and dissolved oxygen levels. Water quality thresholds can be location specific, depending on the baseline ecological requirements of a freshwater ecosystem. Exceeding these thresholds can indicate excess pollution discharges or contamination, which might have adverse effects on aquatic ecosystems, drinking water supplies, recreational activities and other uses of water bodies.

Many companies are reliant on external water quality thresholds set at the national, regional or local levels in basins in which they operate. Often these external thresholds are robust and represent a high standard of water quality parameters (such as those of the EPA or the Water Framework Directive (WFD) of the European Commission). In locations where these thresholds are poorly defined, do not capture water quality standards for all the users adequately or are non-existent, companies should adopt strictest standards across the operational portfolio. **For NPWI, it is suggested that companies set a threshold at the site or enterprise level (P1) that aligns with the highest standards of water quality.**

Examples of common water quality parameters and their thresholds cover:

- **Chemicals**: A variety of chemical compounds (including legacy pollutants and contaminants of emerging concern), at threshold concentrations are toxic or harmful to humans and/or aquatic life. Consumption of plants, fish or shellfish that have accumulated toxic compounds from the water they live in can also be harmful.

- **Microbial pathogens**: These are a frequent problem across many basins and can stem from municipal or untreated sewage, runoff from areas with concentrated livestock or even stormwater. These pathogens pose severe health risks, especially in communities with insufficient WASH accessibility.

- **Nutrients**: These are directly associated with fertilizers and human and animal waste and can lead to eutrophication of water bodies. Phosphorus and nitrogen carried into waterways can trigger excessive aquatic plant and algal growth in water bodies, which can impair other uses of water. Certain algal blooms can be toxic to humans and aquatic life.

Biodegradable organics: Decaying plant and animal matter consume dissolved oxygen as they undergo microbial decay in water. This causes reduction of dissolved oxygen to levels that harm sensitive aquatic species and can disrupt ecosystem functioning.

Total dissolved solids and sedimentation: Sediments enter a river or wetland primarily via erosion from basin soils. Sediment materials can smother aquatic life and lead to the siltation of waterways and reservoirs. This can disrupt hydrological connections, limit movement of migratory aquatic species, affect transport systems and reduce the lifespan of dams and other water-storage infrastructure.

Changes in water temperature can occur through discharge of heated effluent into water, the removal of streamside shading, organic decay and other chemical processes or reductions in connectivity to colder surface or groundwater. Temperature changes can affect aquatic species survival and reproduction (temperature can function as a trigger), and higher temperatures can also speed up the growth of bacteria in the water, leading to other social, environmental and health effects.

Source: Adapted from draft WQBA, *upcoming*

WATER QUALITY

P2 **PILLAR 2: REMOVE ADDITIONAL POLLUTION TO REDUCE SITE OPERATIONAL FOOTPRINT**

Pillar 2 is company-driven and builds on efforts from Pillar 1 and requires a site to further reduce and ultimately balance pollutant loads from the operational footprint and contribute to reducing pollution levels of key pollutants below its respective thresholds in the basin. The operational footprint for water quality can be targeted by removing any remaining pollutant load from the receiving and/or downstream water bodies (e.g., NBS or collective solutions downstream of the site). **Pillar 2 *should* focus on operational pollutant load and its contribution to pollutant thresholds in the basin but be addressed beyond the site premises through bilateral and/or collective action projects.**

The prioritization and selection of pollutant types for Pillar 2 primarily considers the pollutants released from site operations. However, other basin-wide priorities and collaboration opportunities also influence the process. Given the potential for multi-stakeholder involvement, Pillar 2 *should* prioritize pollutants exceeding downstream water quality thresholds in the immediate vicinity. By identifying common pollutants on both lists (site/internal and basin/external), the company can collaborate with stakeholders to reduce the site-specific pollutant loads and overall pollution levels.

Some benefits may be derived from restoration or replenishment activities (but not exclusively). These can lead to an increased volume of superior quality water added to the system at critical periods, thus indirectly helping water quality downstream through dilution. The outcome of this action depends upon the nature and magnitude of pollutant impact, the half-life and chemical properties of the pollutants and other environmental factors. Regular water testing, set at sensible intervals (scientifically and affordable) *should* be an integral part of progress monitoring. The option of dilution supports better water quality downstream and the reduction of pollution levels below thresholds in a basin (Box 3).

Pillar 3 activities can occur in parallel to Pillar 1 and Pillar 2, but the focus is different in that other opportunities will need to be explored for improving water quality through collective action at the basin scale. **Pillar 3 is stakeholder-driven** and requires a significant shift in approach. The **pollutants addressed in Pillar 3 *should* be jointly identified by stakeholders to be basin priorities, irrespective of whether the pollutants have ever been on the list of site pollutants or not**. For example, even if phosphates were never on the pollutants list of a particular site, they could be on the list for Pillar 3 due to existing widespread eutrophication in the basin). **A company *should*, as part of Pillar 3, support the collective effort to reduce key basin pollutants at critical locations in the wider basin.** The objective would be to reduce pollution levels of the selected pollutants to below the accepted thresholds for each pollutant individually (see Box 3 for criteria on defining thresholds).

Pillar 3 requires robust basin-wide collaboration. Stakeholder engagement is crucial for designing and executing impactful projects such as large-scale wetland restoration, public-private wastewater treatment partnerships and policy reforms for long-term water resilience in basins. The choice of actions (See Step 4: Action) *should* be informed by the most pressing pollutants that pose a risk to stakeholders and the environment. Securing the continuation of downstream activities may be one priority of stakeholders. Adhering to strict water quality standards, which ensure downstream beneficial use, should be a priority. The list of critical pollutants in the basin is prepared as a wider stakeholder engagement process at the basin level.

Companies must contribute to basin-wide pollution reduction by reducing their 'fair share' of critical pollutants based on proportional impact. This can be achieved through independent actions, such as supporting specific remediation projects, or by collaborating with other stakeholders in collective efforts. Determining a company's 'fair share' requires stakeholder input, considering pollution load in the basin, basin challenges with respect to water quality, and existing rules and regulations (national, regional or local water quality standards). A combination of mandatory thresholds ("stick approach") and incentives ("carrot approach") can optimize participation.

Reducing pollutant loads might not always guarantee water quality improvements, particularly for complex issues like eutrophication. Eutrophication occurs only when phosphorus levels surpass a specific concentration in the water. Consequently, any phosphorus reduction above this threshold may have no impact on water quality unless the phosphorus level decreases below the eutrophication threshold. While basin-wide water quality models can help targeted interventions, their development can be time-consuming due to data limitations or weak institutions in several basins. In their absence, companies *should* act on reducing their pollution load through efforts in Pillars 1 and 2 while supporting the basin-wide efforts in reducing the critical pollutants identified in Pillar 3. A comprehensive approach requires simultaneous actions across all NPWI pillars.

ACCESSIBILITY

To address the dimension of accessibility in NPWI, it is important to disaggregate WASH indicators according to the three components of WASH, i.e. consider 1) access to drinking water, 2) sanitation and 3) hygiene services across Pillars 1, 2 and 3, respectively. Lenses for gender and/or for people with disabilities *may* be added to cover elements of SDG 5 ("Achieve gender equality and empower all women and girls") if so desired. **Activities across all three pillars *may* be done consecutively or in parallel**.

P1 **PILLAR 1:**
ENSURING WASH ACCESS TO ALL EMPLOYEES

To meet the WASH-related Pillar 1 requirements for NPWI, a company *should* ensure that all employees have the appropriate level of WASH services on all premises across a site. To support this pillar, companies can explore several resources and platforms. For example, the WASH4Work Pledge asks companies to commit to implementing access to safely managed and climate-resilient WASH in the workplace at an appropriate standard for all workers in all premises under direct control within three years of signing. Additionally, companies should refer to the WASH@Work: A Self-Training Handbook released by the International Labour Organization (ILO), which contains guidelines on how to configure workplaces to make them appropriate for workers to adequately and conveniently access WASH provisions and supervise provisions of WASH installations and facilities. The modules also provide checklists that can help improve working conditions and productivity. Alternatively, companies may refer to the WASH Self-Assessment Tool and the WASH Benefits accounting methodologies to identify appropriate actions, indicators and methodologies.

P2 **PILLAR 2:**
WASH ACCESS TO EMPLOYEE HOUSEHOLDS AND COMMUNITIES

Under Pillar 2, companies *should* address WASH in employee households and/or in the communities that surround their workplaces where employees live. Access to WASH services in employee households and communities will differ widely depending on local social, economic and political conditions in the basin. An assessment of these conditions *should* inform the nature, scope and scale of WASH investments under Pillar 2 (see Step 3.1).

In some contexts, it might not be possible to provide suitable WASH services to all employee households. Here, a company *should* look at investing in community WASH stations or similar safely managed and climate-resilient infrastructure. This can be a cost-effective option to provide WASH services to a large community with inadequate, publicly provided water and wastewater infrastructure. A combination of different WASH services *may* also be possible, and companies *should* provide the most appropriate solutions to meet the needs of employees.

P3 **PILLAR 3:**
PROVIDING WASH SERVICES AT THE BASIN SCALE

Pillar 3 requires that companies actively participate in stakeholder-driven collective action to improve accessibility to safely managed and climate-resilient WASH services. In some contexts, this task can mean actively participating in the provision of WASH services to a few communities, whereas in others, this can mean improving accessibility for hundreds of thousands of people. Pillar 3 *should* be exclusively addressed through collective action and the extent of effort *should* be jointly defined as a stakeholder group. Companies *may* anticipate engaging long term in public-private partnerships, strategic WASH investments with NGOs and other partners or even some NBS options (e.g., treatment wetlands).

To assess WASH access in a basin, a company *should* use data from national or regional censuses or more local statistics (if available) and the World Health Organization (WHO)/United Nations International Children's Emergency Fund (UNICEF) Joint Monitoring Programme (JMP). A company *should* use the most recent, validated data to ensure that its investments are at the appropriate scale and that efforts address current levels of need.

CONCLUDING STEP 3

At the end of Step 3: Assessment, the company *should* have a clear understanding of the basin's characteristics, including current and emerging shared water challenges and stakeholder priorities, as well as the site water balance and water-related business risks and how they relate to the shared water challenges and stakeholder priorities. All information *should* be available in a baseline information repository. There *should* be a clear understanding of the NPWI minimum requirements and the recommended indicators that guide the formulation of site-specific objectives and targets. Finally, strategic objectives and targets set for how the site plans to achieve NPWI across all three pillars and dimensions *should* be set.

This step is concluded with two information tables.

- A table with indicative roles and responsibilities that *may* be needed or exercised by different role players to complete this step.
- A table with reading and reference materials that help to inform, guide and support this NPWI step.

STEP 3 ASSESSMENT	
Who (role)	**What (responsibility/ies)**
CEO Water Mandate	Provision of information, guidance and thought leadership; advice and support.
Company leadership	Remain informed; agree on best-in-class approaches and targets.
Company sustainability team	Identification or undertaking of baselines, benchmark assessments and/or surveys; setting site-level objectives and targets; delineating spatial boundaries for NPWI activities; tracking efficiency, reuse and recycling rates; identifying replenishment opportunities; selection and prioritization of pollutants to be addressed; identification or development of best-in-class approaches and targets.
Site and other internal expert staff	Provision of site-level information; identification or undertaking of baselines, benchmark assessments and/or surveys; setting site-level objectives and targets; delineating spatial boundaries for NPWI activities; operationalizing and tracking efficiency, reuse and recycling rates; identifying replenishment opportunities; selection and prioritization of pollutants to be addressed; identification or development of best-in-class approaches and targets; undertaking audits for quantity, quality and WASH dimensions; ensuring appropriate access to WASH facilities on site; identifying WASH data for surrounding communities and region; identifying stakeholder priorities in the basin.
Third Party	*Optional: Identifying or undertaking of baselines or benchmark assessments; helping set site-level objectives and targets; identifying or development of best-in-class approaches and targets; undertaking audits for quantity, quality and WASH dimensions.*
Basin stakeholders	*Jointly setting basin-level objectives and targets; delineating spatial boundaries for NPWI activities; providing stakeholder priorities for the basin; providing local knowledge, data and/or information.*

** Note: All italicized activities are optional for a particular stakeholder or group.*

HELPFUL RESOURCES FOR STEP 3: ASSESSMENT									
Resource Type	Resource Title and Link	Relevance to Pillars			Relevance to Dimensions			Context
		P1	P2	P3				
	BIER Insights and Opportunities: Performance in Basin Context	✓	✓	✓	✓	✓	✓	✓
	Water Action Hub							✓
	Water Footprint Network							✓
	Water Resilience Coalition: List of 100 Priority Basins							✓
	AWS International Water Stewardship Standard: Step 1-2 – 1.8	✓	✓	✓	✓	✓	✓	
	AWS International Water Stewardship Standard: Steps 2.2 – 2.4	✓	✓	✓	✓	✓	✓	
	BIER Managing Water-Related Business Risks & Opportunities in the Beverage Sector:Section 1, Steps 1 - 2							✓
	CEO Water Mandate Setting Site Water Targets informed by Catchment Context Element 1	✓			✓	✓	✓	✓
	CEO Water Mandate Stakeholder Engagement Guide for NBS		✓	✓				✓
	Diageo Water Collective Action Implementation Guide Step 2.1 - 2.3			✓	✓	✓	✓	
	ICMM A Practical Guide to Catchment-Based Water Management for the Mining and Metal Industry Step 2			✓				✓
	Integrating Gender equality into WASH						✓	✓
	SBTN Step 3	✓		✓	✓	✓		
	WASH Pledge: Guiding Principles: Steps 1 - 3				✓	✓	✓	
	Water Resilience Coalition Basin Diagnostic Template and Guidance**			✓	✓	✓	✓	
	TNFD Guidance on the LEAP Approach Evaluate (Step 2), Assess (Step 3) and Prepare (Step 4)							✓
	WASH Self-Assessment Tool	✓	✓				✓	
	WIAT Wastewater Impact Assessment Tool	✓	✓		✓	✓		
	Volumetric Water Benefit Accounting (VWBA)	✓	✓	✓	✓	✓	✓	
	WASH Benefit Accounting	✓	✓	✓			✓	
	Water Quality Benefit Accounting**	✓	✓	✓		✓		
	Biodiversity Benefit Accounting**	✓	✓	✓	✓	✓	✓	✓

** Upcoming

STEP 4: ACTION

Step 4: Action covers the aspects of identifying and implementing tangible projects and activities related to NPWI ambitions that will be realized at the site and basin levels. The first part of this step guides companies through the project- and activity-identification processes. The second section guides the preparatory inputs of resources and partnership-building, while the final part of this section addresses project implementation.

STEPS AT A COMPANY LEVEL		STEPS AT A SITE AND BASIN LEVEL		
Step 1 Awareness	**Step 2 Ambition**	**Step 3 Assessment**	**Step 4 Action**	**Step 5 Measurement**
1. Understand NPWI. 2. Integrate NPWI into company business goals and priorities.	1. Identify list of sites in water-stressed basins. 2. Prioritize where and when to achieve NPWI across company sites.	1. For each site and its basin, develop a baseline/benchmark assessment. 2. For each site and its basin, translate NPWI requirements into own objectives and targets.	1. For each site and its basin, identify opportunities and prioritize activities. 2. Establish and secure inputs needed for financing and partnerships. 3. Implement activities.	1. For each site and basin, build a monitoring and evaluation plan. 2. Analyze and evaluate outputs and outcomes with recommended indicators. 3. Report and communicate outputs and outcomes. 4. Learn, improve and adapt over time.

4.1 FOR EACH SITE AND ITS BASIN, IDENTIFY OPPORTUNITIES AND PRIORITIZE ACTIVITIES

The preceding steps have primarily focused on building an understanding of NPWI and assessing where NPWI implementation *should* be prioritized across a company's sites in water-stressed basins. Here, a company *should* identify the types of actions that can help meet its NPWI objectives and targets that were set in the previous step.

Project and action identification *should* happen across all three pillars and dimensions. These actions and projects *may* align closely with existing corporate water stewardship efforts and use existing guidance and approaches to maximize outcomes across water-related projects. The distinction here is that NPWI often asks companies to go beyond what they are currently doing and scale up their efforts to have a basin-wide impact across availability, quality and accessibility dimensions. When it comes to the selection process of projects, Installment 1 of the VWBA Guide 2.0 *may* function as a decision-making tree for project eligibility, especially for the availability dimension, but most eligibility criteria are transferable to quality and accessibility projects.

Engagement strategy

A potential starting point for this step is to engage appropriate stakeholders, both internal and external to the organization, as the projects and activities being identified and prioritized *should* be appropriate to the scale of the challenges on site and in the basin, meet the needs of beneficiaries of project outcomes, be the most strategic and catalytic, etc. Any potential for trade-offs and negative impacts *should* be considered and compared with other potential activities to reduce any unintended consequences. Due to the difference in scale across the pillars, the engagement strategy for the project identification process differs.

For Pillar 1, most stakeholder engagement *should* be internal. Discussions *should* be scheduled with those signing off on investments in efficiency, pollution reduction and WASH investments, those implementing the solutions and those directly impacted by such changes. The necessary technical experts *should* be consulted to list and rank all possible site-level improvements. External stakeholders *may* be informed of potential projects and their outcomes, but their involvement *may* be minimal.

All activities beyond Pillar 1 *should* include a consultation process with external stakeholders. The projects and actions under Pillar 2 *may* include independent, bilateral or multilateral projects and, depending upon the nature of these partnerships, *should* include appropriate engagement with all relevant stakeholders. These stakeholders *should* include internal resources, technical experts (consultants), NGOs, public-sector actors and local communities and *may* involve a collective stakeholder group or partnership. The stakeholders under Pillar 2 for accessibility *should* include employee representation, the local authority in charge of water and sanitation service provision and relevant NGOs active in the location. In places where WASH accessibility is a contentious issue, a neutral facilitation entity *may* be included in engagements. A consensus *should* be sought on the nature of the agreement, whether by contract, memorandum of understanding or another formal document.

For Pillar 3, the project and activity identification and ranking process *should* be completely collaborative and *should* be based on a long-term outlook. Companies *should* facilitate a collaborative approach (but they *may* opt not to lead it) that helps navigate the decision-making processes and helps respect the opinions and perspectives of all basin stakeholders. In some cases, it will be required to adhere to or co-design some form of engagement protocol. The entire planning, implementation and output-, outcome- and impact-measurement processes *should* be more comprehensive (albeit slower) than the other two pillars.

The outcomes of successful stakeholder engagement at the start of Step 4 *should* be a clear foundation of appropriate projects and actions for NPWI implementation. These mutually agreed-upon options *should* set the direction of travel for a company. The collective input from stakeholders means that the company does not have singular authority and *may* need to revise or re-evaluate company goals. Reaching collective stakeholder agreement *should* be sustainable over the long term because it forms initial buy-in and therefore continued support of all stakeholders is more likely.

Projects and activities for NPWI pillars

Tables 1 to 3 provide a set of project and activity examples relevant to each pillar. These examples are not exhaustive and are meant as a guideline to understand what type of project *may* be relevant at which pillar-related scale. In some cases, a project or activity *may* benefit in several dimensions. As long as these benefits are not double-counted (i.e. where replenishment outcomes are counted twice under the volumetric benefit as well as for dilution under the quality dimension), they *may* be noted to provide multiple beneficial basin outcomes (i.e. volumetric replenishment can also impact water quality through dilution of pollutants; WASH projects for improved sanitation *may* also impact water quality positively). When evaluating potential projects for their suitability to deliver measurable outputs and outcomes, the upcoming Installment 1 of the VWBA 2.0 guide *should* be used as reference.

TABLE 1: AVAILABILITY PROJECT EXAMPLES FOR ALL THREE PILLARS

AVAILABILITY		
P1	**PILLAR 1**	**RELEVANT RESOURCES**
	• Efficiency gains	• Example; Example
	• Recycle and reuse technology	• Example; Example
	• Alternative supply options	• Example; Example
	• Leak repair	• Methodology; Example
	• Pressure management	• Example
P2	**PILLAR 2**	
	• Agricultural and domestic best management practices that reduce water withdrawals and/or consumption	• Example; Example
	• Nature-Based Solutions	• NBS Tool; Guide
	• Restoration programs	• Example; Example
	• Land conservation	• Example; Example
	• Terrestrial and aquatic landscape restoration and conservation	• Example
	• Groundwater recharge	• Global map
P3	**PILLAR 3**	
	• Large-scale landscape restoration, management and protection	• Example
	• Large-scale industrial, agricultural and/or domestic water demand reduction measures	• Example; Example
	• Public-private-partnerships to improve infrastructure resilience	• Example; Information
	• Alien plant clearing, which will increase surface-water runoff and groundwater level recovery	• Example; Example
	• Groundwater recharge projects, especially in areas with declining groundwater tables	• Global map
	• Tool development to improve basin-wide water resource management efficiency	• Example
	• Removal of small in-stream dams, weirs and other structures	• Example
	• Municipal and community water-demand management programs	• Link
	• Municipal- or basin-scale response systems for leaks	• Example

TABLE 2: WATER QUALITY PROJECT EXAMPLES FOR ALL THREE PILLARS

QUALITY		
P1	PILLAR 1	RELEVANT RESOURCES
	• Alternative supply options	• Example
	• Stormwater management	• Guideline
	• Treatment technology for:	
	• Zero liquid discharge	• Example
	• Reuse and recycling	• Example
	• Wastewater treatment technologies	• Example
P2	PILLAR 2	
	• Agricultural best management practices that reduce non-point source pollution	• Example
	• Stormwater management	• Example
	• Wastewater treatment systems, including treatment wetlands and constructed systems	• Example; Example
P3	PILLAR 3	
	• Large-scale landscape restoration, management and protection	• Example
	• Created wetlands or the restoration of degraded wetlands, thus improving filtration capacity	• Example
	• Support towards new, upgrading or upkeep of wastewater treatment facilities in the basin	• Example
	• Waste-reduction initiatives relevant to the industry, such as plastic collection weirs, nets and floating devices across rivers, recycled electronics systems	• Example
	• Support of municipal- or basin-scale rapid-response initiatives to pollution events	• Example

TABLE 3: ACCESSIBILITY PROJECT EXAMPLES FOR ALL THREE PILLARS

ACCESSIBILITY		
P1	PILLAR 1	RELEVANT RESOURCES
	• WASH Pledge	• Link
	• Installation and maintenance of safely managed and climate-resilient WASH services at the workplace	• Example
P2	PILLAR 2	
	• Installation of safely managed and climate-resilient WASH infrastructure in or near all employee households	• Example
P3	PILLAR 3	
	• WASH4Work	• Link
	• Repair or building of wastewater infrastructure to reduce exposure to unsanitary conditions – example of a business model	• Link
	• Communal WASH options	• Example; Example
	• Women in WASH for Entrepreneurs	• Link
	• Public-private partnerships to invest in or improve large-scale access to WASH services	• Example; Example
	• Education and skills-development programs	• Example; Example

Pillar 3 projects that benefit multiple dimensions of water stress

The number of collective action projects focused on reducing water risk is increasing. Corporate partners are often key players in the development or expansion of these basin-scale initiatives. Some of these collective action projects can provide stacked benefits to SDG 6 targets, meaning that a water quality initiative could also benefit water accessibility and ecological health. A WASH initiative *may* benefit water quality. Quantifying these benefits does not currently fall under the NPWI ambition, but companies *may* quantify these and report them against company goals and SDG targets as a co-benefit to NPWI. A detailed guideline on collective action is available in Appendix B.

HOW REPLENISHMENT UNDER PILLAR 2 CAN HELP MEET PILLAR 3 OBJECTIVES AND VICE VERSA

Under Pillar 2, a company wants to address its site's operational footprint. To do this, a company understands its direct attribution through quantitative evidence (e.g. their investments could yield 100% of the replenishment values as the organization is trying to exceed its consumptive values). If by investing in the same replenishment project, a company goes beyond restoring a volume of water equal to its level of consumption and has an opportunity to contribute to improving long-term water resilience in the basin, improving water quality and biodiversity, among other stacked benefits, it *may* meet the requirements for Pillar 3. These contributions to Pillar 3 through Pillar 2 actions will need to be assessed on a case-by-case basis.

Conversely, there *may* be opportunities for a company to address its site operational footprint (Pillar 2) through collective action (Pillar 3). For example, if a company invests in collective action projects, such as where five million liters of water are replenished annually while the company's footprint is one million liters, there is an opportunity to assign this outcome to its Pillar 2 objectives. This might be even more important for companies that do not yet have a large operational footprint in a basin but plan to increase their site's activities or footprint. Here, through investing in collective action projects early, they *may* meet their replenishment targets through Pillar 3 and exceed their Pillar 2 commitments.

Note: This is not a one-size-fits-all approach. There can be instances where this works and other contexts where this does not. At all times, companies *should* aim to replenish far more than they withdraw in a basin, based upon discussions with relevant stakeholders. The same applies to water quality and accessibility dimensions. It is only through truly catalytic changes in basins that water stress can be minimized.

4.2 ESTABLISH AND SECURE INPUTS NEEDED FOR FINANCING AND PARTNERSHIPS

Meeting NPWI objectives and targets and ensuring the successful implementation of activities relies upon adequate funding, resourcing and partnerships. By identifying opportunities and prioritizing activities (Step 4.1), a company *should* establish an appropriate management plan to establish resource needs, allocate financial and human resources to appropriate activities and develop mechanisms for partnerships.

Cost-benefit analyses

It is important for any organization looking to implement NPWI-related projects and activities to understand the full spectrum of the costs and benefits associated with this work. It might be needed to calculate costs and benefits across short-, medium- and long-term timescales or across capital and operational investments and budgets to determine a return on investment across different dimensions (e.g., costs reduction, reputational value, risk or hazard reduction,

etc.). It might also be important to identify the departments that have the appropriate budgets or resources to be applied to different projects or activities. By understanding the full spectrum of the potential costs and benefits, a company *should* build a business case for NPWI.

Funding and financing considerations

A company *should* pursue opportunities that can lead to unlocking new areas of funding. Here, engagement in collective action might result in cost sharing, while exploring commercial green financing opportunities could result in tax incentives, favorable payback schemes and other benefits. Government funding, grants from foundations and/or work with economic development and agricultural value chain investors could also open different options for NPWI investments at both the site and basin scales.

Human capital

In many cases, NPWI will require dedicated resources to implement various projects and activities to meet the pillared and dimensional requirements. A company *should* identify the appropriate internal human resources to support this work and ensure the long-term sustainability of NPWI-related investments. Where needed, an NPWI champion *may* be appointed to ensure that projects and activities are implemented effectively, are on a budget and meet the needs of the company.

The power of partnerships

In all NPWI investments at the basin scale (and even some at the site level), a company *should* look to establish partnerships with organizations that have relevant experience as well as a proven record and capacity to deliver. This can help ensure the activities are implemented properly and provide access to technical expertise, ongoing project support where needed or even local networks. Partnerships *should* be guided by a written agreement, which contains information on credit allocation (Box 4), the methods and frequencies of progress reporting, the level of public communication around project outputs and outcomes.

BOX 4: NPWI AND SHARING CREDIT IN COLLECTIVE ACTION INITIATIVES: A REPLENISHMENT EXAMPLE

In many collective action projects, there will be a need to share credit for collaborative investments. Depending upon the nature of such investments and agreed-upon inputs, outputs and outcomes, a company *may* attribute its contributions to its NPWI ambition.

The upcoming version of the VWBA Guide 2.0 proposes an approach to apply attribution. It states that, independently of how many project sponsors are involved, companies claiming volumetric water benefits (VWBs) resulting from water stewardship activities should apply credible and transparent approaches to attributing VWBs being claimed.

Credible approaches to the attribution of VWBs are defined as follows:

- All parties involved can stand behind them. The company making the claim, the other project sponsors and the project implementers should all be able to stand behind the attribution of VWBs between parties involved, based on their shared understanding of the cost, funding sources and resulting VWBs.
- Attributed VWBs are proportional to the contribution of the company making the claim. The company making the claim should attribute VWBs in a way that is reflective of the company's overall contribution to the activity and resulting VWBs (e.g., monetary or in-kind contributions or taking on a leading role as basin champion).

The following considerations should be kept in mind when exploring approaches to attribute VWBs:

- When there is clear visibility into the total project cost, and project outputs are primarily volumetric. In most cases, when there is a clear understanding of the total cost and the expected outputs of a project are primarily volumetric, VWBs resulting from a company's contribution to the project can be attributed using the cost-share approach.
- Following the cost-share approach, the total VWBs resulting from the project are attributed to each project sponsor based upon the proportional contribution of each sponsor to the total cost of the project.

In situations where project sponsors struggle to identify a credible and transparent approach to attribution suitable to the activity and its sponsors, companies should consider engaging a subject-matter expert and consulting external stakeholders on how best to attribute the resulting VWB in ways that minimize the risk of over claiming and can support robust, credible and transparent claims (Reig *et al.*, 2019).

A similar approach should be taken for collective investments in quality and WASH dimensions. It is critical that attribution be credible and transparent to ensure there are no concerns over greenwashing, double counting or over-claiming outcomes as well as keeping things fair and accountable.

4.3 IMPLEMENT ACTIVITIES

As the final sub-step for Action, a company *should* take all it has learned and developed in the previous steps and implement activities across the site and basin scales. It is suggested that interventions *should* be selected based on the outcomes of other steps and the nature and scale of water stress in the basins in which a company operates. The size of investments *should* be representative of the scale of the challenges in the basin.

Once an appropriate set of interventions has been created, a company *should* look to develop an implementation plan to ensure the effective execution of activities. This implementation plan *should* include many of the details identified in Step 4.2, including prioritization of activity, timeline for implementation, budget and resource allocation, monitoring and evaluation elements (see Step 5.4) and other relevant details.

A set of governance and monitoring arrangements *should* be established to ensure the desired outcomes are clear, resources are effectively mobilized and responsibility for delivery is established. Depending on where the roles and responsibilities for implementation of NPWI activities lie in an organization, accountability structures *should* be put in place to ensure effective implementation.

Finally, as the implementation of NPWI activities begins, a company *should* ensure that elements of Step 5: Measurement are considered to ensure that the monitoring and evaluation process is set up suitably for all activities. The quantification or estimation processes for NPWI success *should* be considered alongside the implementation process to ensure that adequate protocols and processes are set up to streamline the data-collection, reporting and iterating processes.

IMPLEMENTATION USING INTERNAL VERSUS EXTERNAL RESOURCES

Companies *may* opt to implement NPWI activities using their existing internal resources, assuming there is sufficient capacity and technical expertise present. Here, a company *should* design, implement and monitor all activities. In other cases, a company *may* bring in the expertise and capacity of external consultants or NGOs. Here, the implementation process *may* be undertaken solely by these support services or co-created with internal resources. Where a company opts to use external services, it *should* ensure that it has ultimate oversight on all NPWI-related decisions.

This guidance does not prescribe the use of internal or external resources or a combination of these. The nature and scale of NPWI activities will dictate the nature of the implementation strategy and which resources are allocated to these interventions.

CONCLUDING STEP 4

At the end of Step 4: Action, the company *should* have identified and selected actions that can help the site meet the minimum requirements to achieve NPWI. Proper financing and partnerships with appropriate agreements *should* be in place, and the implementation of activities to improve basin health and reduce water-related risk *should* have commenced.

This step is concluded with two information tables.

- A table with suggested roles and responsibilities that may be taken up by different role players to complete this step.
- A table with reading and reference materials that help to inform, guide and support this NPWI step.

STEP 4 ACTION	
Who (role)	**What (responsibility/ies)***
CEO Water Mandate	Provision of information, guidance and thought leadership; advice and support
Company leadership	Remain informed; ongoing support and approvals; *develop management plan*
Company sustainability team	Identification and engagement of internal and external stakeholders; development of implementation plan identify and ranking of site- and basin-level activities
Site and other internal expert staff	Identification and engagement of internal and external stakeholders; development of management plan; development of implementation plan list and ranking of all possible site-level improvements; identification and ranking of site and basin-level activities; undertaking of NPWI activities at site and basin levels
Third Party	*Identification and engagement of internal and external stakeholders; development of management plan; development of implementation plan list and ranking of all possible site-level improvements; identification and ranking of basin-level activities; undertaking of NPWI activities at site and basin levels*
Basin stakeholders	*Identification and ranking of basin-level activities; undertaking of NPWI activities at the basin level; facilitation and/or leading of collective engagement*

** Note: All italicized activities are optional for a particular stakeholder or group.*

HELPFUL RESOURCES FOR STEP 4: ACTION								
Resource Type	Resource Title and Link	Relevance to Pillars			Relevance to Dimensions			Context
		P1	P2	P3				
	AWS International Water Stewardship Standard Step 3	✓	✓	✓	✓	✓	✓	
	BIER Managing Water-Related Business Risks & Opportunities in the Beverage Sector Step 5							✓
	CEO Water Mandate Guide to Water-Related Collective Action			✓				
	CEO Water Mandate and Pacific Institute Nature-Based Solutions Stakeholder Engagement Guidelines			✓	✓	✓	✓	✓
	CEO Water Mandate WRAF Corporate Guidance	✓	✓	✓	✓	✓	✓	✓
	CEO Water Mandate Stakeholder Engagement Guide for NBS		✓	✓				✓
	Diageo Water Collective Action Implementation Guide: Step 3			✓	✓	✓	✓	
	ICMM A Practical Guide to Catchment-Based Water Management for the Mining and Metal Industry Step 3	✓	✓	✓				
	TNC Water Fund Toolbox: Partnerships			✓				✓
	SBTN Step 4**	✓			✓	✓		
	Volumetric Water Benefic Accounting (VWBA) 2.0**	✓	✓	✓	✓			
	Ceres Development of a Company-Level Cost-Benefit Analysis Framework							✓
	TNFD Guidance on the LEAP Approach Assess Step 3 and Prepare Step 4							✓
	Volumetric Water Benefit Accounting (VWBA)	✓	✓	✓	✓	✓	✓	
	WASH Benefit Accounting	✓	✓	✓			✓	
	Water Quality Benefit Accounting (WQBA)**	✓	✓	✓		✓		

** Upcoming

STEP 5: MEASUREMENT

Step 5 proposes how to **monitor, quantify, report and communicate all project outputs** that are tangible changes at the project level **as well as outcomes** - short- to medium-term changes that result from projects and activities. This step is divided into four subsections. The first outlines key points for setting up a monitoring and evaluation plan. The second step delves into the analysis of outputs and outcomes, using NPWI indicators. The third section provides guidance around communication and reporting for NPWI, while the fourth section looks at learning and improvements over the length of the NPWI journey.

STEPS AT A COMPANY LEVEL		STEPS AT A SITE AND BASIN LEVEL		
Step 1 Awareness	**Step 2 Ambition**	**Step 3 Assessment**	**Step 4 Action**	**Step 5 Measurement**
1. Understand NPWI. 2. Integrate NPWI into company business goals and priorities.	1. Identify list of sites in water-stressed basins. 2. Prioritize where and when to achieve NPWI across company sites.	1. For each site and its basin, develop a baseline/benchmark assessment. 2. For each site and its basin, translate NPWI requirements into own objectives and targets.	1. For each site and its basin, identify opportunities and prioritize activities. 2. Establish and secure inputs needed for financing and partnerships. 3. Implement activities.	1. For each site and basin, build a monitoring and evaluation plan. 2. Analyze and evaluate outputs and outcomes with recommended indicators. 3. Report and communicate outputs and outcomes. 4. Learn, improve and adapt over time.

5.1 FOR EACH SITE AND BASIN, BUILD A MONITORING AND EVALUATION PLAN

Monitoring and evaluation are essential to understanding if projects are succeeding in driving NPWI through measurable improvements in basin health and informing future investment decisions. **Such a plan *should* be developed in parallel to project planning** (Step 4.3 Action) **to ensure that the reporting pathway of project progress will actually be measurable**. Companies *should* leverage existing methods to monitor and evaluate their progress towards achieving NPWI. Reporting *should* focus on project outputs across all three pillars and their translation into outcomes, using the relevant NPWI indicators. The following points are important to consider when setting up the monitoring and evaluation plan:

- The conditions recorded in the baseline are the point of reference.
- The objectives and targets set out per site in Step 3 *should* be clearly recorded in the ITF.
- All activities that are planned and implemented *should* be clearly outlined and recorded (this level of detail is not required for the ITF, but should be compiled and kept for third-party validation).
- All activities *should* be measurable as outputs and outcomes, using the proposed NPWI indicators (see Tables 4 to 6).
- The spatial scale *should* be recorded in the ITF.
- The approach for measuring results *should* be recorded internally.
- The time scale and cadence for monitoring, evaluation and recording progress *should* be clearly outlined and recorded internally. These *may* align with internal protocols or be externalized. They *should* be set up as a parallel real-time evaluation (link), especially for Pillar 3 collective action projects or any other M&E approach that is suitable to capture progress regularly.
- For the benefit of NPWI, entries *should* occur in the ITF either annually or biannually.

TABLE 4: RECOMMENDED NPWI INDICATORS AND METHODS FOR PILLAR 1

NPWI pillar	Desired outcomes by 2050	Minimum requirements to achieve NPWI at site level		
P1 **Avoid or reduce operational impact**	Reduce the fraction of the operational impact contributing to availability, quality and accessibility challenges.	• Minimize water withdrawals by reaching best-in-class water management practices (where available) or highest operational standard in water efficiency, reuse and recycling rates. • Minimize consumptive water use by reaching best-in-class (where available) or highest operational standard water efficiency, reuse and recycling rates.	• Reduce (strive to entirely remove) pollutant* load released from site operations** to below acceptable thresholds, regulations or best-practice standards.	• Adhere to leading practice standards of safely managed and climate resilient WASH (for all employees in all premises).
Recommended indicators		• Consumption: Water efficiency (volume unit/ year /production unit). • Withdrawal: Total volume of water withdrawn from basin per unit of time (monthly or annually).	• Percentage (or total) pollutant load reduction in mass or volume/year (percentage of pollutant mass/volume).	• 100 per cent of employees with safely managed and climate-resilient drinking water services. • 100 per cent of employees with safely managed and climate-resilient sanitation services. • 100 per cent of employees with safely managed and climate resilient hygiene services.

**Note: This includes legacy pollutants and known contaminants of emerging concern as well as all water quality parameters of potential impact.*

*** Note: in-line with best-in-class practices*

TABLE 5: RECOMMENDED NPWI INDICATORS AND METHODS FOR PILLAR 2

NPWI pillar	Desired outcomes by 2050	Minimum requirements to achieve NPWI at site level		
				
P2 **Replenish, restore or regenerate operational footprint**	Balance the company's remaining operational footprint in the basin in ways that address availability, quality and accessibility challenges.	• Replenish, restore or regenerate a volume of water to balance the site's operational footprint.	• Reduce and ultimately balance operational pollutant loads* from the receiving (downstream) water bodies • Reduce pollution levels of key pollutants below their respective thresholds in the basin.	• Contribute positively to the human right to WASH by working collaboratively with employee households and/or communities living around site to close existing gaps in universal access to safely managed and climate-resilient WASH.
Recommended indicators		• Total volume of water replenished, restored or regenerated (volume unit/year)	• Percentage (or total) pollutant load reduction in pollutant mass or volume/year • Percentage reduction in pollutant concentration	• 100 per cent of employee households and/or communities have access to safely managed and climate resilient drinking water • 100 per cent of employee households and/or communities have access to safely managed and climate resilient sanitation • 100 per cent of employee households and/or communities have access to safely managed and climate resilient hygiene services.

**Note: This includes legacy pollutants and known contaminants of emerging concern as well as all water quality parameters of potential impact.*

TABLE 6: RECOMMENDED NPWI INDICATORS AND METHODS FOR PILLAR 3

NPWI pillar	Desired outcomes by 2050	Minimum requirements to achieve NPWI at site level		
P3 **Collaborate to deliver measurable basin outcomes and impacts**	Long-term improvements in basin health by addressing the underlying root causes of the availability, quality and accessibility challenges.	Work collaboratively in the basin to deliver measurable, sustained, long-term basin outcomes that address shared water challenges and stakeholder priorities in ways that improve basin health, reduce risk and deliver social, cultural or environmental benefits. Basin outcomes can include good water governance, sustainable water balance, good water quality status, important water-related areas and/or safely managed and climate resilient WASH for all.		
Recommended indicators		Outcome and impact indicators identified by the project partners and local stakeholders, for example: • Percentage of unsustainable groundwater consumption reduced in the basin • Percentage of unsustainable seasonal surface water consumption reduced in the basin[#]	Outcome and impact indicators identified by the project partners and local stakeholders, for example: • Percentage of excess nutrients removed from the basin • Percentage of excess pollutants removed from the basin • Percentage of increased wastewater safely treated in the basin	Outcome and impact indicators identified by the project partners and local stakeholders, for example: • Percentage of the population in the basin with safely managed and climate-resilient access to drinking water, sanitation and hygiene services.

[#]Sustainable surface water use, whether annual or seasonal, can be obtained from local water authorities who have records and water balance calculations to identify basin limits and determine sustainable drawdown values based upon availability. Availability values versus consumption rates are often publicly available on dashboards, websites or tools. If not, a collaboration with the local water authority to jointly establish a basin threshold is recommended.

5.2 ANALYSE AND EVALUATE OUTPUTS AND OUTCOMES WITH RECOMMENDED INDICATORS

Company progress tracking

Once the monitoring and evaluation plan is in place, collected data *should* be regularly analyzed to evaluate the level and rate of progress. It is recommended that progress is recorded and tracked using the ITF. The setup and recommendations in the ITF are designed to enable and support standardized data reporting for companies. The ITF also allows companies to track high-level NPWI progress across multiple sites (if NPWI is being implemented at scale). This allows companies to identify where some sites are on track to achieving NPWI and others where additional resources may need to be applied.

Data for the ITF may be collected from several sources including a company's water dashboard, internal reporting mechanisms, environmental, social and governance (ESG) reports and other internal and external sources. It is optional (but recommended) for those completing their ITF to attach relevant data sources (including PDFs, screenshots, ESG reports, communications, etc.) to easily link each data point to an internally approved source.

This data *may* help a company track progress at a site and ensure that adequate resources are being applied and investments are being made at the appropriate scale to ensure a positive impact at both the site and basin scales. Any information entered in the ITF will be stored securely as described in Data and Security Privacy section.

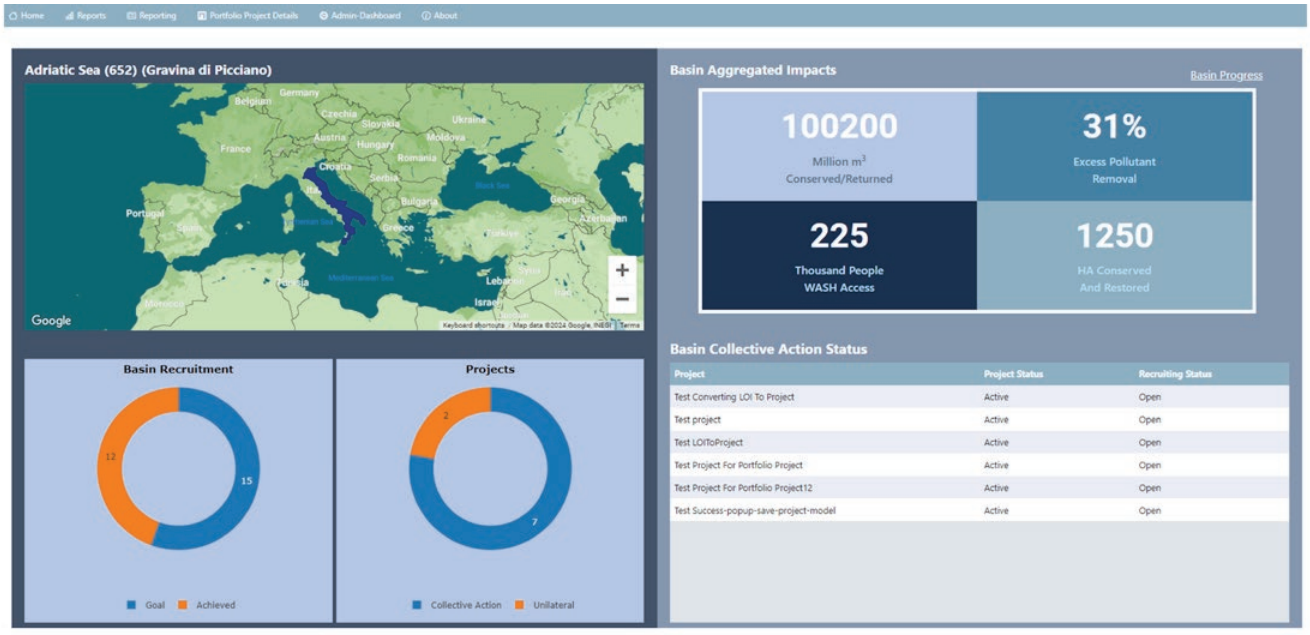
ITF DATA SECURITY AND PRIVACY

The ITF is part of the 100 Basins app, a secure and private application that follows the United States NIST SP800-53 IT security framework to protect and secure data. This includes enforcing best practice password management, multi-factor authentication, encrypting all data during transmission and when at rest and managing user access based on roles. All data is hosted in the Microsoft Azure cloud, a SOC II compliant hosting facility, and only approved System Administrators have direct access to the cloud environment. A copy of the Data Security Policy for the 100 Basins app can be provided upon request.

Depicting basin impact – using anonymized data

The standardized format of reporting outputs and outcomes in the ITF not only supports streamlined record keeping at company level, but also enables the WRC to show impact in the 100 priority basins. The standardized data reporting format of the ITF makes the aggregation and anonymized display of basin progress possible. For dashboards and other reports that aggregate data across a basin or other geographic area, all data is anonymized and there is no attribution of individual company data to any reported impact (see Figure 10).

FIGURE 10: VIEW OF DRAFT IMPACT DASHBOARD IN 100 BASINS APP



5.3 REPORT AND COMMUNICATE OUTPUTS AND OUTCOMES

Reporting and communicating the outcomes of NPWI progress are critical to the NPWI journey, and some decisions *may* be made as to how a company wishes to communicate progress. The NPWI journey presents an opportunity to celebrate milestones and successes and to highlight areas for improvement and to share learnings. **Reporting of results *may* take multiple forms**, including:

- **Internal company updates** to department heads or the board and/or via internal communication channels (e.g., regular updates, emails or newsletters to the company).
- **External updates or progress reports to and from stakeholders in all collective action projects** (Pillar 2 and 3 where relevant). These partners *should* be informed in a manner that was previously agreed to in Step 4.2. Communication of results *may* include emails, regular or annual reports, information on websites, social media posts, statements at public events, etc.
- **Disclosure platforms** (e.g. CDP) *may* be used to publicly share some data and progress.

It is not a requirement that NPWI become a public commitment or that the outcomes of activities be communicated externally. Some **companies *may* opt to use NPWI as an internal ambition**, providing direction to their corporate water stewardship programs. In this case, it is still recommended that the ITF be used to record progress, even if progress is not communicated publicly. It is also recommended that companies communicating milestones internally have their data validated to ensure an accurate representation of NPWI progress (see Box 5.)

BOX 5: VALIDATION OF VOLUNTARY SITE NPWI CLAIMS AND/OR PROGRESS MILESTONES

Claiming NPWI is **voluntary**, but if external communication of milestones or claims is desired, then a straightforward validation process is proposed, ensuring rigor, accountability and robustness. Due to the anticipated length of the NPWI journey, the validation process is broadly outlined here and may be altered or adapted based upon the context of the company wanting to make a claim.

For this purpose, we define two types of claims: milestone claims and a full NPWI claim.
Milestone NPWI claim: Where a site achieves a major milestone (e.g. meeting the availability dimension under Pillar 1) or a combination of smaller achievements (meeting two dimensions of water stress across Pillars 1 and 2).
Full NPWI claim: Where a site achieves NPWI across all three pillars and dimensions of water stress.

For now, the following sequence is proposed for NPWI claim validation:

V1. A company proposes making a site or milestone claim.
The first step to making an NPWI claim for a specific site or multiple sites is for a company to ensure that it has the required level of data as outlined in the ITF. This data *should* be reported for several years (as per Step 3: Assessment) and show progress across all three pillars and dimensions.

V2. A company arranges third-party validation.
For a company to state that it has achieved a milestone or full NPWI after the appropriate length of time of implementation across a site or multiple sites, it is recommended that data and supporting evidence captured in its ITF be shared with an approved third-party organization for validation. This process allows a company to have an independent organization confirm its progress.

Third-party validation organizations will be trained and officially recognized by the CEO Water Mandate to ensure a consistent and robust approach to validation. A company has the option to select third-party validators from a list of pre-approved organizations that will undertake NPWI validation. Should a company wish to appoint an organization not pre-approved, it is recommended that that organization undergo appropriate NPWI training.

V3. The third-party organization receives and reviews data.
It is highly recommended that the validation process be done by an independent third-party organization to maintain accountability and transparency. Appointed third-party validators *should* be given access to all relevant data on the ITF and, upon request, any other relevant background information that might be stored separately. For validation, this third-party organization *should* work through each data point captured for each of the outputs and outcomes and confirm that these data are:

- Accurate and appropriate
- Supporting any NPWI claims (i.e., making a net positive impact on the basin)
- Fulfilling the minimum requirements of full NPWI or a milestone claim

Placing as many supporting resources as possible on the ITF to complement each data point will streamline and expedite the third-party validation process. All data points *should* be compared to baseline information and any baseline updates over time.

Achieving NPWI is not a static point and will require ongoing improvements at the site and basin levels. To maintain NPWI status, the validation process *should* be undertaken biennially by a third-party.

V4. Communication post validation.
Once the NPWI claim is validated, a company *may* internally communicate or publicly claim that it has reached a certain milestone in its NPWI journey or that its site or sites have achieved NPWI for that year.

Although communication of NPWI progress is **voluntary**, companies *are encouraged to* report and communicate results, either internally or externally, for each site and its basin throughout the NPWI journey. This is to:

- Demonstrate progress at the company level, explaining to stakeholders how the actions being undertaken contribute to the company's NPWI ambition.
- Ensure project accountability and build credibility for the project among both internal and external stakeholders.
- Encourage other stakeholders to partner, support or engage in collective action to advance NPWI in strategic water-stressed basins.
- Share experiences and allow for greater learning opportunities across companies and stakeholders and the continued refinement of the NPWI process and the field of corporate water stewardship.

Regular reporting and communication of progress is encouraged. NPWI is a long-term journey of continued improvement, hence a company's reporting and communications efforts *should* reflect the achievements over time.

SUPPORT OFFERED BY THE CEO WATER MANDATE UPON REQUEST

If a Mandate-endorsing company or a WRC member wishes to sound-proof the third-party report, the CEO Water Mandate can offer and additional review of the reports before claims/validation reports are made public. This optional secondary review will ensure that the correct validation methodology was applied and that all data was accurately assessed.

5.4 LEARN, IMPROVE AND ADAPT OVER TIME

The NPWI journey is a long-term endeavor, taking place in a time of rapid change and growing need for resilience and adaptation in water-stressed basins around the world. As much as a monitoring and evaluation plan *should* keep track of quantifiable outputs and outcomes over time, it also needs to be dynamic and adaptable to be able to be updated based upon the changing needs of the company or the fluctuating basin conditions.

Review and adaptation of baselines

Robust and reputable data for baselines is critical to the NPWI journey and for building long-term water resilience in the basin. Referencing this data *should* be done to ensure that the interventions and actions implemented by a company meet with the realistic circumstances on the ground. Over time, these baselines will change, based on multiple social, economic and environmental factors in the basin (e.g., population growth, migration, climate change, increased industrialization, environmental disasters, etc.). If the baseline is outdated, or misleading or non-credible data are used, then a company would run the risk of developing inappropriate interventions and actions that are not aligned with the reality on the ground. A review of the baseline (Step 3.1 Assesment) *should* occur every three to five years to see if parts of the baselines remain static or if the baseline needs to be adapted to an evolving reality. Activities and projects *should* adapt, remaining responsive to current baseline conditions. Table 7 presents examples of how baselines for each of the three dimensions of water over time could change. There can be cases where baselines show a reduction in progress across one or more of the three dimensions of water stress. Any changes in the baseline need to be reflected in NPWI interventions or actions being taken by the company to ensure alignment with the changed basin conditions/context.

TABLE 7: HYPOTHETICAL EXAMPLES OF CHANGES IN BASELINE OVER TIME

	Baselines			
DIMENSIONS	**2024**	**2027**	**2030**	**2033**
Availability	Demand outstrips supply by 32 %	Demand outstrips supply by 35 %	Demand outstrips supply by 28 %	Demand outstrips supply by 20 %
Quality	Pollutant X has a concentration of 15mg/liter	Pollutant X has a concentration of 14mg/liter	Pollutant X has a concentration of 13mg/liter	Pollutant X has a concentration of 12mg/liter
Accessibility	62 % of people in the basin have access to WASH services	63 % of people in the basin have access to WASH services	74 % of people in the basin have access to WASH services	75 % of people in the basin have access to WASH services

Comparing progress against baselines will help companies determine if they are achieving the requirements for NPWI. A company *should* keep track of changing conditions in the basin, so that by the time it makes its NPWI claims, these reflect and respond to the trajectory of basin change over time.

NPWI objectives are to make net positive contributions to basin conditions for availability, quality and accessibility - to a point where stakeholders collectively agree - even if the conditions might never reach near-natural conditions. This reflects the reality of freshwater systems globally as human impact has pushed these systems well beyond the point of ever returning to pristine conditions.

Review and adaptation of actions

As baselines change, a company *should* evolve and adapt its NPWI actions accordingly. The summarized success of revised/additional actions *should* be captured under the outputs and outcomes for each pillar and dimension of water stress in the ITF.

As progress is evaluated, companies *should* integrate experiences and learning so that difficult, unsuccessful or even negative project outputs and outcomes can be adapted and improved upon. There are always uncertainties, and projects rarely evolve exactly as anticipated, as comprehensively summarized in this learnings document (Microsoft Corporation, 2023). Companies *should* proactively seek opportunities to deepen engagement with stakeholders and project partners so that there is open communication and a sense of trust, which could help resolve issues of unintended consequences. Where these consequences are identified, a company (and other stakeholders in the basin) *should* try and mitigate these as a matter of priority.

As on-site or basin conditions change, actions, partnerships and the M&E plan *should* be adapted. Once a company has achieved NPWI, it *may* continue to maintain this status, if criteria continue to be met and this can be validated. Companies can maintain their NPWI status by continually learning, improving and adapting over time. This process, like the dynamic movements based on baseline conditions, *should* be iterative and require a company to ensure that it meets the requirements for the three pillars and dimensions of water stress annually/biennially. Documented proof of specific data points inserted into the ITF *should* indicate how progress has been assessed over time. Third-party validation organizations *should* assess ongoing NPWI status on this timeline.

Importantly, as technology, approaches and collective action initiatives evolve, companies implementing NPWI *should* adopt new or adapted approaches to ensure that they continue to play a positive role in the basin. Additionally, companies *should* never stop being the advocates for stronger legislation, policies and practices for water and *should* strive to bring more actors into collective action initiatives. Continuous, proactive participation and efforts will be the only way NPWI can scale across every water-stressed basin.

Maintenance and adapting interventions

In most cases, investments made across the three dimensions of water stress will require appropriate maintenance to ensure benefits are provided over the long term. Additionally, certain interventions can be adapted or transformed based on innovative technologies or the changing needs of users in the basin. In both instances, appropriate planning and resource considerations *should* be factored into the long-term planning of NPWI projects. These plans *should* include how M&E, communication of benefit accrual and maintenance operations are undertaken.

CONCLUDING STEP 5

At the end of Step 5: Measurement, a company *should* have:

1. A monitoring and evaluation plan in place, which speaks to all components of the previous NPWI steps, including the desired spatial and time scales, approach to measuring results and consideration for longer-term monitoring, communication and maintenance.
2. Understanding and quantification of the outputs and outcomes of activities and how progress towards NPWI is delivered.
3. Clear and structured communication on NPWI progress, performance and results.
4. Recorded learning of any modifications required in a company's objectives or targets as well as in the project scope, partnership or monitoring and evaluation plan.
5. Ongoing improvement and adaptation in project baselines, partnerships, performance and contributions to NPWI, as appropriate to the conditions in the basin.

This section contains two helpful information tables:

- A table with indicative roles and responsibilities that may be needed by different role players to complete this step.
- A table with links to reading and reference materials that help to inform, guide and support this NPWI step.

Step 5 Measurement	
Who (role)	**What (responsibility/ies)**
CEO Water Mandate	Provision of information, guidance and thought leadership; advice and support; Prescreening of NPWI claims; WRC data aggregation of basin impact; final approval of claims
Company leadership	*Development of a monitoring and evaluation plan;* reporting and/or communication of NPWI progress; allocation of resources and budget to NPWI activities; ongoing support and approvals
Company sustainability team	Development of a monitoring and evaluation plan; reporting and/or communication of NPWI progress; review of baselines, benchmarks and actions
Site and other internal expert staff	Development of a monitoring and evaluation plan; collection of data using ITF; report and/or communicate NPWI progress; review of baselines, benchmarks and actions
Third Party	*Development of a monitoring and evaluation plan; collection of data using ITF*; validation of data and NPWI claims; verification of any publicly published progress; *support of reporting and/or communicating NPWI progress; reviewing baselines, benchmarks and actions*
Basin stakeholders	*Reporting and/or communication of NPWI progress*

*Note: *All italicized activities are optional for a particular stakeholder or group.*

HELPFUL RESOURCES FOR STEP 5: MEASUREMENT									
Resource Type	Resource Title and Link	Relevance to Pillars			Relevance to Dimensions			Context
		P1	P2	P3				
	AB InBev and TNC Measuring and Evaluating the Impact of Corporate Watershed Projects	✓	✓	✓	✓	✓	✓	✓
	AB InBev and TNC A Recipe for Impact			✓	✓	✓		
	AWS International Water Stewardship Standard Step 4	✓	✓	✓	✓	✓	✓	
	AWS International Water Stewardship Standard Step 5	✓	✓	✓	✓	✓	✓	
	BIER Decision Guide for Water Reuse and Recycling	✓			✓	✓		
	CEO Water Mandate Stakeholder Engagement Guide for NBS		✓	✓				✓
	Diageo Water Collective Action Implementation Guide Step 3.3			✓	✓	✓	✓	
📖	GRI 303: Water and Effluents	✓			✓	✓		
	TNC Water Fund Toolbox: Partnerships			✓				
	US EPA Total Maximum Daily Loads (TMDLs)	✓	✓	✓		✓		
	Volumetric Water Benefit Accounting (VWBA): Practical Guide		✓		✓			
	WASH Pledge Guiding Principles	✓	✓				✓	
	WASH4Work: Baseline and Monitoring Indicators	✓	✓				✓	
	WBCSD Business guide to circular water management	✓			✓	✓		
	SBTN: Step 5 **	✓		✓	✓	✓		
	Volumetric Water Benefit Accounting (VWBA) 2.0	✓	✓	✓	✓			
⚙	IPIECA Water management framework	✓			✓	✓		
	International Labour Organization (ILO) WASH@Work: A Self-Training Handbook (2016) – WASH4Work	✓					✓	
	Volumetric Water Benefit Accounting (VWBA): A Method	✓	✓	✓	✓	✓	✓	
⚙	WASH Benefit Accounting	✓	✓	✓	✓	✓	✓	
	WHO/UNICEF Joint Monitoring Programme (JMP)			✓			✓	
	Water Quality Benefit Accounting (WQBA)**	✓	✓	✓	✓	✓	✓	
🔧	Aquaveo Water Management System	✓	✓	✓	✓	✓		

** *Upcoming*

CONCLUSION

NPWI is an ambition that is available to all companies. It is a long-term leadership commitment that is implemented in water-stressed basins, ensuring that the water user's contributions exceed their impacts in the same region. The objective of NPWI is to make long-term improvements in basin health and resilience by addressing the underlying root causes of the availability, quality and accessibility challenges.

NPWI is quantifiable and addresses three dimensions of water stress, namely availability, quality and accessibility. NPWI is implemented at the site and basin level addressing a company's direct impact (Pillar 1), footprint (Pillar 2) and creating positive impact at basin level through collective action (Pillar 3).

This technical guidance provides in-depth and practical information on how to implement NPWI as part of a corporate water stewardship journey. The guideline is principles based rather than prescriptive and is structured to direct the reader through the five steps of NPWI.

- **Step 1: Awareness** provides the background and foundation to NPWI, building an understanding of how NPWI can act as a north star to reduce water risk and drive measurable basin impact at scale.
- **Step 2: Ambition,** undertaken at the company level, acts as a planning step to address how companies should identify sites in water-stressed basins and how to prioritize where and when these sites should pursue NPWI.
- **Step 3: Assessment** zooms in on the operational level, guiding the reader through a baseline/benchmark assessment and translating NPWI requirements into site specific objectives and targets across all three pillars and dimensions.
- **Step 4: Action** covers the aspects of identifying tangible projects and activities for availability, quality and accessibility, securing all inputs needed and implementing them across site and basin scales.
- **Step 5: Measurement** outlines required monitoring, quantification, reporting and communication of all tangible project outputs as well as outcomes - short- to medium-term changes that result from projects and activities. The step introduces the Internal Tracking Framework, through which all NPWI progress is recorded and tracked. Step 5 explains how all NPWI milestones and full claims undergo a robust validation process.

The technical guidance is bolstered by a supporting Step-in-Practice document, which provides a practical example of NPWI implementation for a hypothetical textile company.

NEXT STEPS AND CALL TO ACTION

Currently, the NPWI guide material consists of an Executive Summary, an Introduction to NPWI, the Technical Guidance (this document) and the Step-in-Practice document. These documents will be updated periodically, based on lessons learned during implementation and when new indicators and methods relevant to this work become available. Additional elements are already under consideration and will be added to the NPWI guidance series over time. These include:

- The addition of biodiversity as a possible fourth dimension of water stress
- Another technical guideline document outlining NPWI implementation across supply and value chains
- Detailed crosswalks with the design of new SBTN steps and all unfolding and updated benefit accounting frameworks (e.g., VWBA, WQBA, BioBA, etc.)
- A detailed outline of NPWI and how it fits into all WRC-related initiatives, including the emerging work on the collaborative approach

Another future opportunity is to explore data-import options. The goal is to enable data imports from reporting platforms, such as CDP and/or GRI, in upgraded versions of the ITF.

Importantly, continued efforts will be made to align NPWI with different corporate water stewardship approaches to ensure that NPWI efforts support broader water-related objectives. Different stakeholders will be engaged to ensure complementarity and interoperability wherever possible and to ensure that NPWI metrics and activities are represented in other approaches.

It is noted that this guidance does not yet include a detailed list of sector-specific pollutants. This will be investigated going forward, in collaboration with the WQBA framework and other target and framework initiatives.

As a call to action, all companies operating in water-stressed basins are encouraged to adopt and promote NPWI at the enterprise level and implement NPWI at each of their sites. It is only by scaling this work that we will see a net positive impact for water in basins globally.

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APPENDICES

APPENDIX A: DETAILED GLOSSARY

TABLE A1: DETAILED GLOSSARY

Accessibility (water)	Everyone has the right to water and sanitation services that are physically accessible within, or in the immediate vicinity of, the household, educational institution, workplace or health institution.	Link
Availability (water)	In this guidance document, water availability refers to the volumetric abundance or lack of water in a basin. It can be related to water scarcity – typically calculated as a ratio of human water consumption to available water supply in each area.	Link
Basin	Basin refers to the geographical zone in which water is captured, flows through and eventually discharges at one or more points. The concept includes both surface water catchments and groundwater catchments.	Link
Basin health	Basin health refers to the water quantity, quality, and ecosystem conditions within a basin. A healthy basin has balanced water quantity, good water quality and healthy ecosystems, supported by appropriate infrastructure and good governance. A healthy basin protects human health, maintains viable ecological functions and processes and supports self-sustaining populations of native fish and wildlife species.	NPWI definition
Best-in-class	Refers to the highest achievable standards or benchmarks set in the industry or within a particular context for conserving, reusing and recycling water resources. This term signifies the most effective and efficient practices or rates of water usage that lead to significant conservation and sustainability. Defining "best-in-class" rates involves comparing and setting standards based on the most innovative, effective and environmentally friendly practices in water management across industries or sectors. This benchmark often evolves with advancements in technology, changes in regulations and improvements in sustainability practices, aiming to continually raise the bar for water conservation and management.	NPWI definition
Collective action	Coordinated engagement among interested parties within an agreed-upon process in support of common objectives. Water-related collective action refers to specific efforts to advance sustainable water management, whether through encouraging reduced water use, improved water governance, pollution reduction, river restoration or other efforts.	Link
Contaminants of Emerging Concern	Contaminants of Emerging Concern (CECs) refer to a diverse group of pollutants that are not commonly monitored or regulated in the environment but have the potential to impact ecosystems and human health. These contaminants encompass a wide range of substances, including pharmaceuticals, personal care products, pesticides, industrial chemicals and other compounds, often resulting from human activities. It is important to note that this list still grows with time and hence regular checks against the list are recommended.	Link (adapted) See also Link
Ecosystem / ecological function	The natural processes, products or services that living and non-living environments provide or perform within or between species, ecosystems and landscapes. These *may* include biological, chemical, physical and socio-economic interactions.	Link
HydroBASINS	HydroBASINS is a data layer that has been generated as part of the HydroSHEDS database. HydroBASINS has been extracted from the HydroSHEDS core layer, and it depicts sub-basin boundaries at a global scale. The HydroBASINS data layer has been generated to consistently cover sub-basins at different scales across the globe.	Link

Legacy pollutants	Legacy pollutants refer to persistent and often harmful organic or inorganic chemical substances that have been released into the environment through historical industrial activities, agricultural practices or other human-made sources. These pollutants have long-lasting effects due to their stability, resistance to degradation and ability to persist in various environmental compartments such as soil, water, air and even living organisms. Legacy pollutants include heavy metals such as mercury and lead but also are contained in a variety of products including pesticides, personal care products, pharmaceuticals, plasticizers, illicit drugs, flame retardants, dioxins polychlorinated biphenyl's (PCBs), PFAs and VOCs. These are defined by national organizations such as the EPA and listed, for example in the Stockholm convention.	Link (adapted) See also Link
Operational footprint	Site operational footprint is the volume of water withdrawn from the basin or total load of pollutants released into the basin from site operations in the base year of NPWI assessment. This is also referred to as "footprint" or "site operational footprint" throughout this document.	Link
Replenish	The act of returning a volume of water to a site's local catchment areas in ways that address the local water challenges shared by local communities and stakeholders, align with leading practice for corporate water stewardship, are informed by the best available information and catchment context and have a measurable and positive impact on the catchment's water availability, quality and accessibility.	Link
Restore and regenerate	An intervention that involves returning degraded, damaged or destroyed ecosystems to a near pre-disturbance state. Considered synonymous with reforestation, rehabilitation, revegetation and reconstruction.	Link
Safely treated wastewater	Wastewater is safely treated if it can be released back into the environment, or it can be used again for purposes such as drinking, stock watering, recreation or irrigation, without any arising health and environmental problems. The required treatment level depends upon the water quality guidelines, set for downstream uses at either national or international levels (WHO).	Link
Shared water challenge	A water-related issue, concern or threat shared by a company site and one or more stakeholders within the catchment. Examples include physical water scarcity, deteriorating water quality and regulatory restrictions on water allocation.	Link
Total Maximum Daily Load (TMDL)	Total Maximum Daily Load (TMDL) is the calculation of the maximum amount of a pollutant allowed to enter a waterbody so that the waterbody will meet and continue to meet water quality standards for that pollutant. A TMDL determines a pollutant reduction target and allocates load reductions necessary to the source(s) of the pollutant.	Link
Validation	An independent, third-party process involving expert review to ensure any NPWI claim meets the minimum requirements.	Adapted from Link
WASH	WASH is both a concept and an acronym, formed from the first letters of water, sanitation and hygiene. The grouping of water supply (access to drinking water services), sanitation and hygiene into an overarching concept is done deliberately because these three fields overlap very closely, and any shortcoming in one of them has significant impact on the other two. Basic WASH service: water should be accessible for beneficiaries within a 30-minute round trip (including queuing), sanitation should be on-premises and not shared with other households and hygiene should be on premises.	Link
WASH - climate resilient	WASH services and behaviors that continue to deliver benefits or that are appropriately restored within a changing climate context and despite climate-induced hazards.	Link
WASH - safely managed	Safe WASH means there are no transmission pathways for diseases through: Intake of contaminated water – through feces or chemicals; lack of water leading to inadequate personal hygiene; contact with disease-containing water; and closeness to polluted water bodies. Safely managed drinking water services: Safely managed drinking water services require that people have a drinking water source that is accessible on premises, sufficient and available when needed and is free from contamination. Safely managed sanitation services: Access to adequate sanitation facilities, which could include toilets, latrines or other waste disposal systems that prevent the spread of disease. Safely managed hygiene services: Presence of a hand-washing facility with soap and water is the key criterion for basic hygiene at any premise.	Link Link

Water consumption	Water consumption (also known as consumptive use of water): The volume of water that is extracted (withdrawn) from a freshwater source and not returned/discharged to that source after use. Water is consumed due to evaporation, being incorporated into a product, leakages, etc. For example, water that is used as an ingredient in a beverage and therefore does not return to the basin is consumed. Water is also considered to be consumed if it is returned to a different catchment or the sea.	Link
Water efficiency	Minimization of the amount of water used to accomplish a function, task or result.	Link
Water quality	A measure of the suitability of water for a particular use based upon selected physical, chemical and biological characteristics.	Link
Water risk	The possibility of an entity experiencing a water-related challenge (e.g., conflicts over water with communities, water scarcity, water stress, flooding, infrastructure decay, drought). The extent of risk is a function of the likelihood of one or several specific challenges occurring and the severity of the challenge's impact. The severity of impact itself depends upon the intensity of the challenge and the compounding effect of experiencing multiple challenges simultaneously as well as the vulnerability of the actor.	Link
Water scarcity	The amount of water that can be physically accessed varies as supply and demand changes. Water scarcity intensifies as demand increases and/or as water supply is affected by decreasing quantity or quality.	Link
Water stewardship	The use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that includes both site- and catchment-based actions.	Link
Water stress	The ability, or lack thereof, to meet human and ecological demand for fresh water. Compared with scarcity, water stress is a more inclusive and broader concept. It considers several physical aspects related to water resources, including water availability, water quality and the accessibility of water (i.e. whether people can make use of physically available water supplies), which is often a function of the sufficiency of infrastructure and the affordability of water, among other things. Both water consumption and water withdrawals provide useful information that offers insight into relative water stress. There are a variety of physical pressures related to water, such as flooding, not included in the notion of water stress. Water stress has subjective elements and is assessed differently depending on societal values. For example, societies *may* have different thresholds for what constitutes sufficiently clean drinking water or the appropriate level of environmental water requirements to be afforded to freshwater ecosystems and thus assess stress differently. It needs to be noted that water stress is defined differently across guidelines and tools (e.g., Aqueduct), hence referral to the glossary for each product is important.	Link
Water withdrawals	Water diverted or withdrawn from a surface water or groundwater source.	Link

Language

The wording in this guidance is deliberate and has been carefully considered in the face of multiple suggested terms in the review. Table A2 provides reasoning behind key terminology choices.

TABLE A2: TERMINOLOGIES

Terminology	Reasoning
The difference between water **"access"** and **"accessibility"**	In the context of water, access and accessibility are used synonymously. Although they refer to related issues, they are distinct concepts. **Access to Water:** This term primarily denotes the physical availability or presence of water sources and facilities that people can use for various purposes such as drinking, sanitation and hygiene. It encompasses the existence of infrastructure like wells, taps, boreholes or piped water systems within reasonable proximity to communities or individuals. Having access to water means that there is a water source that people can reach or use. **Accessibility of Water**: This concept goes beyond mere availability and considers factors that *may* hinder or facilitate the ability of individuals or communities to obtain and use the available water. It involves factors like affordability, reliability, cultural acceptability, physical accessibility (such as distance and ease of reaching the water source) and socio-economic barriers. For instance, even if a water source exists nearby, if people cannot afford the costs associated with obtaining the water, or if social norms prevent certain individuals (like women or marginalized groups) from accessing it, the water is not effectively accessible to them. In summary, "access to water" refers to the presence of water sources, while "accessibility of water" delves into the various barriers or facilitators that affect people's ability to obtain and use the available water resources effectively. Achieving sustainable access to safe water involves not only ensuring the availability of water sources but also addressing the multiple factors that influence people's ability to use these resources consistently and safely.
"Basin" vs **"watershed"**	The terms "watershed" and "basin" are often used interchangeably. A watershed delineates the land draining into a specific outlet such as a stream or river, whereas a basin encompasses multiple watersheds and the entire network of streams and rivers that collectively drain into a common body of water. Due to the strong link of NPWI to the 100 Priority Basin initiative and the aim to aggregate all quantified NPWI outcomes at the basin scale, this guidance refers to basins instead of watersheds. It is, however, open to each company to delineate the scale (HydroBASINS 4, 5, 6, 7, 8) at which it implements NPWI, if it is clearly recorded as such in the ITF, stating clearly which overall basin it is.

"Output," "outcome" and **"impact"**	Outputs, outcomes and impact are terms used to describe changes at distinct levels. The following definitions are used in this guidance: **Outputs** are tangible or intangible products, services or deliverables produced because of activities. For example, the indicators for a wetland restoration project outputs include the area of wetland restored, the number of native plant species replanted, the length of erosion control structures installed, and the quantity of sediment captured or prevented from entering waterways. **Outcomes** build upon these, reflecting short-term improvements. In wetland restoration, an outcome could be the immediate improvement in the aquatic ecosystem within the restored wetland area. Indicators for assessing outcomes of the wetland restoration project encompass biodiversity metrics, water quality parameters, habitat quality assessments for aquatic species and community perceptions or stakeholder feedback on observed changes in the wetland area. **Impact** emerges from these successes, influencing wider systems. For example, impact refers to the broader, longer-term effects or changes that occur because of the outcomes. This impact goes beyond the immediate outcomes of the restoration efforts and has a wider-reaching effect on human health and well-being. Indicators for evaluating impacts of the wetland restoration project include downstream water quality improvements, reductions in flood frequency or severity, economic benefits like increased revenue from ecotourism or improved agricultural productivity and human health improvements such as reduced instances of waterborne diseases.
"Operational impact" vs **"operational footprint"**	This document distinguishes between "operational impact" and "operational footprint" within a specific basin. Operational impact refers to the direct consequences of a company's actions at the site level, where control lies solely with internal decisions. In contrast, the operational footprint encompasses broader consequences influenced by the company's activities but requiring collaboration with external stakeholders for significant reduction.
"Pillars" vs **"tiers"** (Steps)	NPWI has three pillars, as defined in the introduction. They were named 'pillars' because they are of equal importance, and they can be addressed simultaneously or sequentially. Tiers or steps refer to a hierarchical or phased approach which does not reflect the nature of NPWI.

APPENDIX B: DETAILED EXPLANATIONS

Global versus local data

The NPWI guideline incorporates key lessons from company pilot efforts. One is the recognition that site identification and any risk or baseline assessment steps need to include global as well as local data. There are clear benefits and drawbacks to both data options, as outlined in Table B1.

TABLE B1: THE PROS AND CONS OF GLOBAL VS LOCAL DATA USE (ADAPTED FROM QUANTIS – DIAGEO REVIEW)

	Global data	Local data
PROS	Overall, global data is **more accessible** than local data as it is published through online portals such as Aqueduct (WRI) or WWF's Water Risk Filter. In addition, global data is **easier to manipulate**, as it has been pre-treated before its publication and the format is more end-user-friendly. Global data published through **recognized** sources has gone through **intensive quality checks** before its publication.	Local data can **better capture the local reality** of the region as they are defined in finer scales. Local data commonly include specific variables that enable a robust diagnosis of the situation in the region (e.g., it is more likely to find detailed data on the state of groundwater in regions exposed to significant groundwater stress).
CONS	Global data may struggle **to reflect the local reality**, as it is computed at coarser scales which are not sufficient to represent small-scale contexts. The **indicators** published through global data may **not be as specific** as those needed to precisely diagnose the stress on the region (e.g., baseline water stress that is global v. local stress on groundwater).	**Some countries** may **have robust local data** including multiple indicators**, while others** may not. Local data is commonly **available only for a limited geographical area,** and the same database may not cover wider geographical perimeters (e.g., local data is not generally available at the country, transboundary basin or continental levels). Local data could be **harder to manipulate.**

The NPWI guideline recommends the use of both global and local data in Step 2: Ambition and the use of local data in the generation of an information baseline (Step 3: Assessment).

Step 2: Ambition requires the screening of company sites against three sets of global data to get a good understanding of water risks for each site across all water-stressed basins. The next step is to verify the global data findings with local data – or local stakeholders in the absence of solid local datasets. In that way, the global risk ranking of water availability, quality and accessibility is double-checked, ensuring there is no false positive or false negative result.

Step 3: Assessment requires the establishment of an information baseline. Here, local data use is recommended to ensure that the local reality is captured in the baseline assessment

Groundwater and NPWI

Groundwater, as a resource, has historically not received the same attention as surface water. Consequently, it is less understood and its importance as a resource, for human and natural systems, is only now gaining global acknowledgment. Defining and quantifying the benefits of, and risks to groundwater thus lags behind that of surface water. At the same time, governance policies and groundwater resource management approaches are often not as clearly defined as those for surface water.

Groundwater is defined by underlying geology and biophysical features in the landscape. That distinguishes it from surface water and ultimately dictates different monitoring and management needs for surface water. Another distinguishing feature is its slow flow and rate of natural replenishment – hence groundwater monitoring is a long-term exercise, requiring the right investment in equipment and personnel over several years.

As part of NPWI, groundwater *should* be addressed in the best possible and pragmatic way, acknowledging that this is an evolving and previously neglected space.

Data collection

As a company works through the Assessment, Action and Measurement steps of NPWI, it is recommended to consider the following points in collecting, processing and managing data on groundwater:

- Regional or global groundwater models are typically unreliable, outdated or non-existent, even though many efforts exist to address this challenge. A basic orientation on global models is a good start, but reliance on other data sources is essential. Transboundary, national and regional water authorities or utility boards are all good sources of data. In case of limited data, it may be necessary to request the services of a local hydrogeological expert, to collate data that may be held by local specialists or that might not be easily accessible.
- Ongoing local groundwater information gathering, interpretation and sharing is important. As much as local groundwater data gathering and regular interpretation provide insights into the sustainability of site-level operations, the sheer lack of groundwater data globally makes it highly valuable to share local groundwater data, to be integrated into bigger datasets.
- Due to a lack of groundwater information in many parts of the world, investment in additional long-term groundwater monitoring equipment and protocols is likely needed. This needs to be budgeted and planned for.

In the Assessment and Action steps, it is important to understand the groundwater use of your selected site, including the quantity of use (via water meters), the type of use (site water audit), and its quality (regular testing). Regular water level measurements (weekly to monthly, either manually or with data loggers link), together with regular water quality data and fully documented permit and pump test conditions would constitute a sound baseline for understanding groundwater at the site level.

Beyond the site level, some baseline groundwater information *should* be gathered:

- A basic understanding of the local geochemistry, to discern between land-use pollutants and natural groundwater chemistry.
- Basic aquifer characteristics (aquifer type, groundwater movement, permeability, infiltration rate).
- Key land uses that pose a risk to groundwater.
- Key uses and users of groundwater and basic overview of sustainability of use.

P1 Pillar 1

Availability - Measuring the progress towards availability under Pillar 1 should be checked against the level of the groundwater table. However, often for a small company, it is hard to see a direct correlation of groundwater decline and their use of groundwater. In such cases, a starting point should always be the volume of groundwater used in its operations and measure the baseline groundwater level. A company should not only monitor the groundwater table directly beneath their abstraction point, but also beyond factory fences such that the drawdown curve is stabilized and represent a true use. As the true impact of groundwater abstraction can only be measured further downstream or beyond the abstraction point, a company may need to collaborate with a basin authority, hydrogeologist, water utility or groundwater board that the aquifer being relied on is sustainably used (unsustainable groundwater use would be picked up through a gradually declining groundwater table over several years). Weekly or monthly water-level monitoring at the site level and beyond *should therefore be protocol.*

Quality – Monitoring and measuring the groundwater quality can be done in several ways. The water quality of the intake water is often measured and recorded by a company. However, any site operation can potentially pollute the groundwater in two ways: either by releasing pollutants to the soil in and around the site facilities that directly percolates in rainy season, or by discharging polluted water to the rivers and lakes that feed into the groundwater. Achieving NPWI with respect to groundwater quality, should thus be measured and reported in collaboration with subbasin-level stakeholders as for availability. Internally, a company can track it by measuring the discharge of pollutants into the surface water **as described in detail in Step 5: Measurement.**

Accessibility – Besides the general approach described in Step 5: Measurement in achieving and monitoring the progress towards NPWI with respect to accessibility under Pillar 3, special care needs to be taken to ensure that the water is safe for WASH purposes. Conversely, all sanitation facilities should be built in ways to ensure aquifer safety.

P2 Pillar2

Availability and quality – One of the ways to balance operational water footprint with respect to the withdrawal and any pollution of groundwater can be achieved via groundwater recharging practices. However, it may not be a viable solution as it depends on the hydrogeology and the depth of the aquifer. Particularly if it is a deep aquifer, artificial recharge may not financially feasible. A cost-benefit analysis *should* be undertaken to determine if recharge is the most cost-effective and strategic investment to enhance local groundwater availability. Additionally, it is also important to understand local rules and regulations around recharge and obtain formal permission from utilities or basin planners and managers. Recharge projects *should* adhere to the strictest water quality protocols to safeguard potential pollution of an aquifer.

The restoration and regeneration of wetlands may also improve groundwater **quality** under Pillar 2, as wetlands act as ecological interfaces between groundwater and surface water and their filtration processes can benefit water resources above and below ground.

Groundwater provision and/or treatment, allowing for greater WASH **accessibility** for communities in which staff live, is an option if plant construction, effluent discharge, and ongoing monitoring are handled according to applicable rules and regulations or best practices.

P3 Pillar 3

Collective action around groundwater can take the form of **large-scale recharge** or **rehabilitation** projects, especially if several stakeholders are involved and benefit. It can also include the provision of boreholes in areas without sufficient water **accessibility**.

Alternatively, small-scale groundwater treatment plants in areas with low-quality groundwater, to raise the quality of water for WASH to the required standards. This may be applicable in areas with naturally high salinity levels or areas with high groundwater pollution for example. Saltwater intrusion, through coastal systems or inappropriate drilling, is a significant issue in many parts of the world and should be avoided as a priority. Saltwater and certain pollutants can render an aquifer completely unviable for human or biological systems and can have major impacts on some ecosystems, communities, or businesses.

Given the global need for greater groundwater data collection and sharing, any collective studies, data gathering, and groundwater data sharing *may* form part of projects and activities under Pillar 3. In some countries, the sharing of groundwater data is required by law. In other areas, the sharing of data towards public groundwater databases or water partnerships *may* be of value (link).

Helpful groundwater maps and other resources:

- Bundesanstalt fuer Geowissenschaften und Rohstoffe (BGR): BGR - WHYMAP - Groundwater Resources of the World
- European Soil Data Centre (ESDAC): Groundwater Resources maps of Europe - ESDAC - European Commission (europa.eu)
- American Geosciences Institute: Interactive map of groundwater information from around the world | American Geosciences Institute
- International Groundwater Resources Assessment Centre (IGRAC): Focal Areas | International Groundwater Resources Assessment Centre (un-igrac.org)
- Southern African Groundwater Management Institute (SADC GMI): Projects – SADC-GMI

Desalination and NPWI

Use of water from desalination either to acquire water for site operations or to reduce freshwater withdrawal can be a costly, resource-intensive option. Desalination may only be feasible in locations, particularly in coastal areas, with extreme water scarcity and limited freshwater availability or where it is a legal requirement to treat non-potable or non-freshwater sources. The acceptance of desalination as part of the NPWI process needs to be evaluated within the local context, based on how the process positively changes the baseline conditions.

Desalination is energy-intensive, and the use of renewable energy sources *should* be essential for desalination to be considered as an asset towards NPWI. Equally, desalination processes are associated with brine production, hence there *should* be best-practice storage and/or treatment options to avoid negative water quality impacts. The negative aspects of desalination brine *may* move towards the positive when these waste products can be tied into the circular economy (Ihsanullah et al., 2022).

Water reuse and NPWI

Water reuse is an activity that is directly supported under availability and water quality in Pillars 1 and 2 at the operational level. Companies are asked to reduce and reuse as much water internally as possible which ultimately helps minimize water withdrawals. If the reused water is treated to potable standards, it can also be counted towards the accessibility dimension for Pillars 1, 2 and 3. Water reuse at Pillar 3 in collective action projects *may* be equally positive for accessibility (depending on the level of treatment), quality (depending on the pollution load reduction between incoming and outgoing water), and availability (e.g. reuse plant for a community in a water-scarce area). It is important that:

- All waste materials from the process *should* be treated, stored, and broken down according to best practices.
- The reuse process *should* be continuously and tightly controlled, ensuring that the outgoing water is safe to use for all further intended and clearly defined uses (e.g. industry use or irrigation or environmental flows or WASH).

Collective action

Collective action is a form of collaborative effort in water projects that involves multiple stakeholders, often from different sectors, organizations or communities, working together towards a common goal related to water management, conservation or accessibility. Here are elements that explain **what collective action contains**:

- **Stakeholder involvement**: Involves engaging various stakeholders such as government agencies, local communities and Indigenous Peoples, NGOs, private-sector actors and academic institutions, among others. Each actor brings unique perspectives, resources and expertise to the table. Involving local communities, Indigenous Peoples and individuals in decision-making processes, learning from them about water-related issues and empowering them to actively participate in water management initiatives can drive the success and sustainability of collective action initiatives.
- **Partnerships and networking**: Collaboration often involves forming partnerships and networks among stakeholders. These collaboratives can include public-private partnerships, community-based organizations or international collaborations, where opportunities exist to pool resources and expertise for effective water governance and management.
- **Shared vision and goals**: Establishing a shared vision and common goals is crucial. This helps align the efforts of diverse stakeholders towards a unified purpose, whether it is improving water quantity and quality, ensuring access to WASH services or implementing sustainable water-management practices.
- **Information sharing and transparency**: Open communication and transparent sharing of information among stakeholders foster trust and understanding. This might include sharing data on water usage, quality or infrastructure plans, ensuring everyone is informed and contributing effectively.
- **Resource allocation and management**: Collaborative efforts involve coordinating the allocation and management of resources – financial, technological and human – to ensure efficient and effective implementation of water projects.
- **Adaptive and inclusive approaches**: Recognizing the dynamic nature of water-related challenges, a collaborative effort often involves an adaptive approach that can accommodate changing conditions, technology advancements or added information. It also aims to be inclusive, considering the needs and perspectives of all stakeholders involved.

The nature of collective engagement is based on the scale of the problem: Collective action can take multiple forms. It can entail a group of farmers collaborating around a water quality problem or be a multinational, multistakeholder transboundary initiative to secure the sustainable use of an aquifer. The nature and scale of the collective action should

reflect the challenge being addressed and include relevant stakeholders who can support the collaboration most strategically. As mentioned above, collective action projects can take different forms and require different resources for each context. In some examples, companies and other actors provide financial contributions or resources that help drive the operations, maintenance or sustainability of the initiative. In other cases, voluntary contributions can be impactful. Companies can also decide to act as basin champions, driving and leading required projects more actively with stakeholders in water-stressed regions. Regardless of how different stakeholders engage or support projects, it is important for all actors to understand what is required of them before they join collective action initiatives and provide opportunities to revisit these inputs throughout the lifespan of the collective action project.

In areas with limited data and monitoring, it *may* be essential to invest in data generation before being able to engage in collective action projects that can bring about quantifiable outputs and outcomes. If such projects are seen as a priority to basin stakeholders, they *should* be recognized by companies for their long-term value. Catalytic and enabling activities that pave the way for long-term basin outcomes and impacts can include:

- Data gathering
- Model development
- Skills and development training
- Investments in monitoring equipment
- Development of monitoring protocols
- Transparent information sharing

Other examples are flow-volume measurements in surface waters, or the monitoring of water use in larger areas, like a municipality, a village or an irrigated valley.

Stakeholder engagement

Due to the collective nature of some activities in Pillars 2 and 3, it is essential to engage with relevant stakeholders throughout the NPWI journey. It is loosely described who the likely stakeholder groups are that *should* be engaged, although these may differ based on local conditions.

Basin stakeholders can include:

- Individuals or groups of people directly dependent on good basin conditions and who are directly affected by changes in basin conditions. This includes communities, their representative bodies, environmental institutions, and/or NGOs with a mandate to support community and environmental interests.
- Any institution with a mandate to maintain, regulate, protect, and/or improve basin conditions around availability, quality and accessibility. This includes public sector institutions, as well as NGOs with a relevant mandate to provide services, e.g., WASH.
- Anyone who directly affects basin conditions and who is open to making a meaningful difference by changing practices. This can include any private company, a wider sector (e.g., agriculture) and public institutions like municipalities (e.g., wastewater treatment works) that operate in the basin.
- Nature and the environment should also be a key stakeholder in all NPWI activities. Although voiceless, the proper functioning of natural systems is a key factor in NPWI success.

The Stakeholder Engagement Guide for Nature-Based Solutions (Brill *et al.*, 2022) acts as the key guideline and reference material here on **how to engage and what to be mindful of**. The overall intention is to facilitate co-design, co-development, and/or co-ownership of collective NPWI projects and thus increase project relevance to basin stakeholders and basin health.

There are ten principles of best practice that *should* guide how all stakeholder engagement *should* be conducted throughout all five NPWI Steps and all collective efforts in Pillars 2 and 3.

1

Engage a Diverse Range of Stakeholders

Stakeholders in collective action initiatives should represent a diversity in demographics as well as a diversity in organizational affiliation. Diverse and equitable engagement brings many different perspectives to the table, which expands the knowledge base of the collective team, and increases buy-in for the project, so long as stakeholder needs are met, and trade-offs are negotiated. Stakeholders *may* include individual representatives from stakeholder groups or already established fora or collectives.

2

Build Long-Term Relationships and Trust

Stakeholder engagement is a long-term effort, with NPWI activities forcing project managers and stakeholders to work together for several months or years. It is particularly important when undertaking long-term activities to cultivate long-lasting, intentional relationships and trust. Re-establishment of any broken or difficult relationships can be challenging but remains necessary.

3

Communicate with Empathy

The art of listening and personal story exchange can help to foster deep relationships, help to build trust, and better match the goals of the NPWI activity in a culturally responsive way. If good listening is followed up by the prioritization of stakeholder needs, there is much higher social buy-in and chance of long-term success. A quick "box-checking" style of community engagement is counterproductive to forming meaningful relationships.

4

Prioritize Transparency and Accountability

Project information and updates should be readily accessible to stakeholders through previously agreed and accessible sources (e.g., websites, newsletters). An organized and agreed upon system for stakeholder feedback, concerns and grievances should be in place to address any issues. Third-party facilitators can assist in easing any tensions, creating spaces for open conversations.

5

Co-Create rather than Impose

Engage stakeholders through an iterative, co-creation process, where everyone has an equal say in how a collective project is designed, implemented, monitored, and evaluated. If stakeholders feel that they are part of the design, implementation or monitoring phases, they tend to be more vested in the successful outcomes of projects.

6

Recognize Mutual Benefits

Strong partnerships form when project implementers and stakeholders recognize that mutual benefits can be amplified when working collaboratively. Stakeholders will be personally invested in a project and committed to its success, in the short- and the long-term, if their values and benefits are being considered and prioritized.

7

Remove Barriers to Engagement

All barriers restricting involvement need to be actively mitigated or removed. To consider are:

- **Time of day**: Provide participants with opportunities to engage at various times of day to accommodate schedules and work/home demands.
- **Demands on time**: Often stakeholders have commitments that limit their engagement. Providing multiple methods of participation and being demonstrative that stakeholder time is valued builds goodwill.
- **Transportation**: If stakeholders are asked to travel for project meetings, transportation for some *may* need to be provided, or meetings should be held in their location.
- **Language**: When working with groups that speak different languages, ensure that translation of meetings and any following documentation occurs promptly.
- **Communications and technology access**: If stakeholders are asked to participate remotely, provide other means of participation if internet and smartphone access are significant barriers.
- **Knowledge levels**: Meet people at their level of knowledge and present information in an understandable way and present it in a respectful manner, with the aim of getting everyone onto the same page.
- **Levels of participation**: Not everyone is equally comfortable expressing themselves. This needs to be noted and requires the creation of safe spaces to ensure their voices and opinions are heard.

8

Formalize Relationships

Stakeholders will have varying degrees of involvement in an NPWI project. As influence and input increases, formalization of the relationship should increase. Creating grant agreements, memorandums of understanding or contracts can provide clear roles, responsibilities, expectations, and timelines as well as provide a means for continuous communication.

9

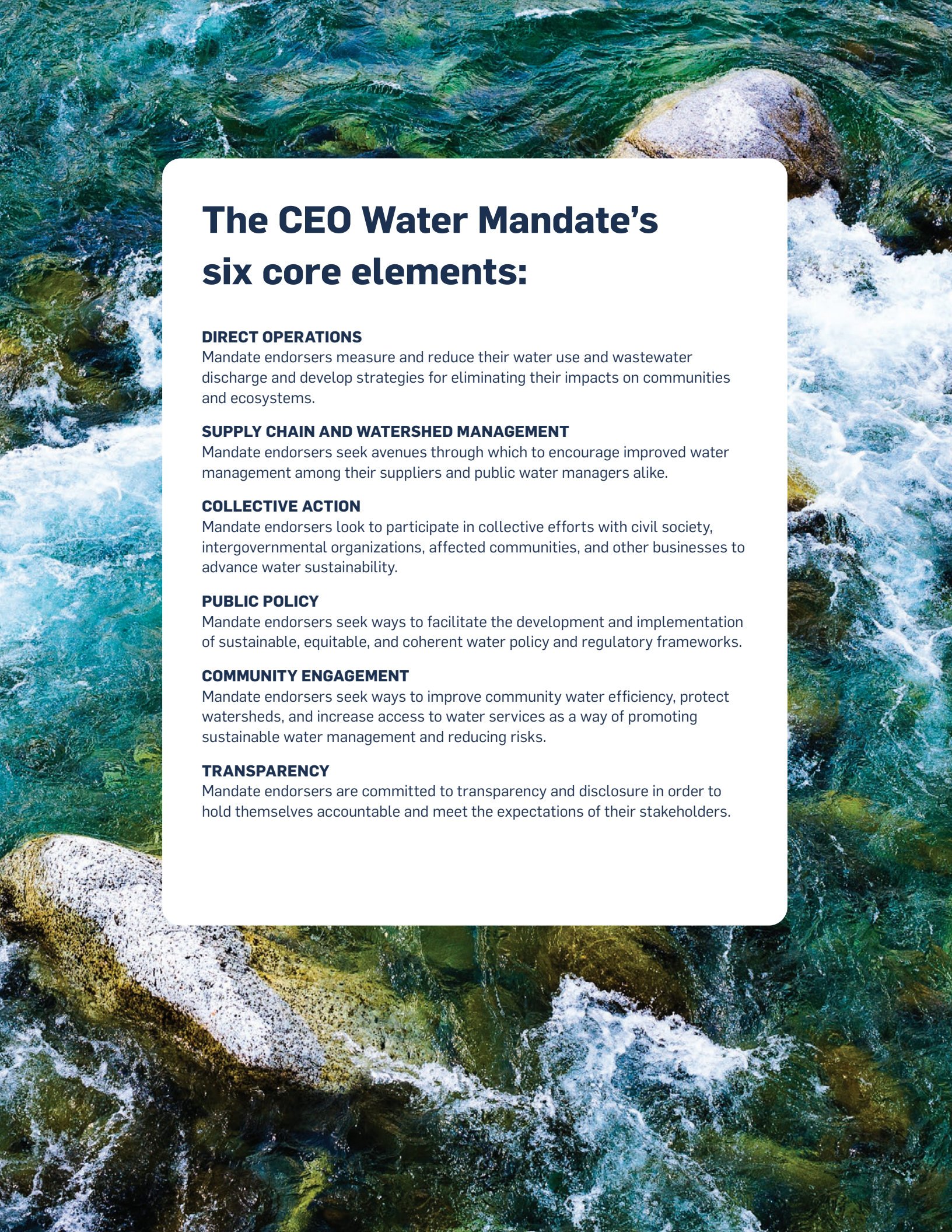
Ensure Adequate Financial Support

Stakeholder engagement comes with costs, and adequate financial resources should be made available for travel costs, venue hire, translations, meals, and stipends. Any third-party facilitator requires remuneration.

10

Appoint Well-Trained, Knowledgeable Facilitators

An important consideration for NPWI projects is to ensure that leaders of stakeholder engagement (whether company staff or third party) are well trained and knowledgeable about local contexts, stakeholder networks, customs, and practices.



The CEO Water Mandate's six core elements:

DIRECT OPERATIONS
Mandate endorsers measure and reduce their water use and wastewater discharge and develop strategies for eliminating their impacts on communities and ecosystems.

SUPPLY CHAIN AND WATERSHED MANAGEMENT
Mandate endorsers seek avenues through which to encourage improved water management among their suppliers and public water managers alike.

COLLECTIVE ACTION
Mandate endorsers look to participate in collective efforts with civil society, intergovernmental organizations, affected communities, and other businesses to advance water sustainability.

PUBLIC POLICY
Mandate endorsers seek ways to facilitate the development and implementation of sustainable, equitable, and coherent water policy and regulatory frameworks.

COMMUNITY ENGAGEMENT
Mandate endorsers seek ways to improve community water efficiency, protect watersheds, and increase access to water services as a way of promoting sustainable water management and reducing risks.

TRANSPARENCY
Mandate endorsers are committed to transparency and disclosure in order to hold themselves accountable and meet the expectations of their stakeholders.