Implementing Positive Water Impact

Step-in-Practice

2026

Version 2

UN Global Compact CEO Water Mandate

UN Global Compact Water Resilience Coalition

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Contributions
The development of this guidance is the culmination of several years of collaborative effort. The original conceptual framework was developed with support from Ross Strategic and Pegasys. This framework was subsequently expanded into an initial working draft by Bluerisk, informed by practitioner experience and published literature. This foundational work was carried out in close consultation with the CEO Water Mandate, the Pacific Institute, and the PWI Task Force. The working draft was piloted and reviewed by several CEO Water Mandate–endorsing companies: 3M, Danone, Diageo, GSK, Holcim, Kurita, and PepsiCo. Valuable additional insights were also provided by Ceres, Quantis, WaterAid, ERM, SWCA, and Orbia.

Based on feedback from the initial piloting phase, a working draft version of the framework was published in September 2024 under the title *Net Positive Water Impact (PWI) (Working Draft Version 1)*. The development of Working Draft Version 1 was made possible through the financial support of Danone S.A. and Holcim.

Since the publication of Working Draft Version 1, the framework has been further piloted and tested by several companies. Valuable practical lessons learned from these pilot phases were shared by companies and practitioners in various forums and workshops. Informed by this real-world feedback, along with strategic shifts in the overarching direction of the work, the framework has been refined and is now titled *Positive Water Impact*. This updated Step-in-Practice document (V2) reflects those critical lessons learned and ensures alignment with the framework's evolved strategic direction.

The authors extend their sincere gratitude to all companies and partners whose contributions have strengthened this guidance. The authors would also like to thank the many individuals and organizations that helped shape the strategic direction and technical elements of this work, including our colleagues at the CEO Water Mandate for their internal support.

As a living document, we encourage companies and practitioners to continue their engagement with the CEO Water Mandate, the Pacific Institute, the Water Resilience Coalition, and the PWI Task Force. Your ongoing participation will be vital to refining and improving this guidance over time.

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

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Figures and Tables

ABBREVIATIONS

EAG	Expert Advisory Group
ILO	International Labour Organization
ITF	Internal Tracking Framework
JMP	Joint Monitoring Programme
M&E	Monitoring and Evaluation
NGO	Non-Governmental Organization
PWI	Positive Water Impact
SDG	Sustainable Development Goals
TC 1, 2, 3, 4, 5	Textile Company Operational Site 1, 2, 3, 4, 5
WASH	Water Access, Sanitation and Hygiene
WG	Working Group
WRC	Water Resilience Coalition
WRF	Water Risk Filter
WRI	World Resources Institute
WWF	World Wildlife Fund

SYMBOLS

Availability

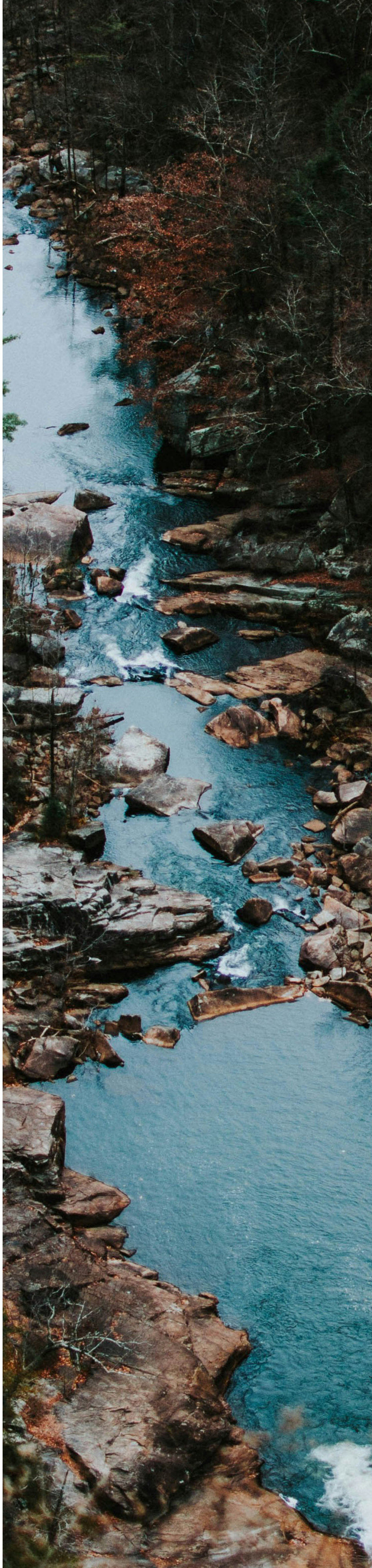
Quality

Accessibility

P1 **Pillar 1**

P2 **Pillar 2**

P3 **Pillar 3**



INTRODUCTION

The overarching objective of Positive Water Impact (PWI) is to enable long-term improvements in basin health and resilience by providing a strategic framework that directly addresses the root causes of water availability, quality and accessibility challenges.

This Step-in-Practice document provides a hypothetical case study illustrating the implementation of PWI within a textile manufacturing company based in South Asia (India and Bangladesh). By highlighting this example, we aim to offer practical guidance on operationalizing the various steps of PWI. While this case study is comprehensive and covers all PWI steps, it is not exhaustive, and all data used is for illustrative purposes. The case study has been constructed to mimic real-world conditions, except where explicitly referenced.

OVERVIEW OF THE PWI GUIDANCE

The series of PWI guidance documents is intended to support the advancement of PWI vision across direct company operations. Overall, the PWI guidance contains multiple documents, supplementary material and an upcoming online progress tracking tool (Internal Tracking Framework):

1. The **Executive Summary** provides a **high-level summary** for decision-makers and executives to understand the PWI ambition and implementation steps.

2. **Introducing Positive Water Impact** offers a comprehensive introduction to the objectives, value and structure of PWI, providing the entry point to the PWI guidance and suitable reading for corporate leadership and technical staff.

3. **Implementing Positive Water Impact: Technical Guidance** is an in-depth description of the five suggested steps across **the three Pillars of PWI and three dimensions of water stress.**

4. **Implementing Positive Water Impact: Step-in-Practice** (this document) provides a **practical example for operationalizing PWI** in the textile industry and is intended as an add-on to the technical guidance document.

5. **Internal Tracking Framework (ITF)** (upcoming) includes all **indicators and other metrics** to enable standardized data collection and progress reporting towards validated milestone achievements and site PWI claims.

6. **Positive Water Impact in Resilient Value Chains (upcoming):** This guidance component will expand PWI implementation from direct operations into corporate value chains. Specific effort is made to align this guidance to other value chain work in the water stewardship space. This guidance is upcoming and is anticipated to be launched in late 2026.

This is the **fourth** document (Step-in-Practice), and it should be read after the introductory document and Technical Guidance.

Given the huge diversity of companies and the nuance of local water issues, it needs to be understood that each PWI journey will look different and be context-specific. The PWI framework is designed to be flexible and enabling, supporting companies at every stage of their water stewardship journey. This **Step-in-Practice** offers a case study to demonstrate how a company might apply the PWI framework across a specific site and its surrounding basin. However, it will not delve into the impact of PWI across an entire value chain, keeping the focus on direct operations only.

This Step-in-Practice document mirrors the PWI Technical Guidance document's structure, outlining **five key steps** (Figure 1), starting with building an **awareness** of and **ambition** at the company level through to **assessment, action** and **measurement** of progress and outcomes at site and basin levels. The PWI framework emphasizes continuous improvement and collaboration, recognizing that meaningful water stewardship is a journey, not a destination.

FIGURE 1. FIVE STEPS FOR PWI 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 PWI. 2. Integrate PWI into company business goals and priorities.	1. Identify list of sites in water-stressed basins. 2. Prioritize where and when to achieve PWI across company sites.	1. For each site and its basin, develop a baseline/benchmark assessment. 2. For each site and its basin, translate PWI 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.

This guide presents a **hypothetical case study** of a textile manufacturing company in South Asia applying the PWI framework across its operations. The case study is designed to be **illustrative, not prescriptive.** Every company's PWI journey will be unique, shaped by local context, basin conditions and business priorities. This example demonstrates how the framework's flexibility enables companies to tailor their approach while maintaining rigor and credibility.

By sharing this practical example, the aim is to inspire and equip companies to embark on their own PWI journey, contributing to the WRC's commitments of delivering Positive Water Impact across 100 Priority Basins and providing WASH access to 300 million people worldwide.

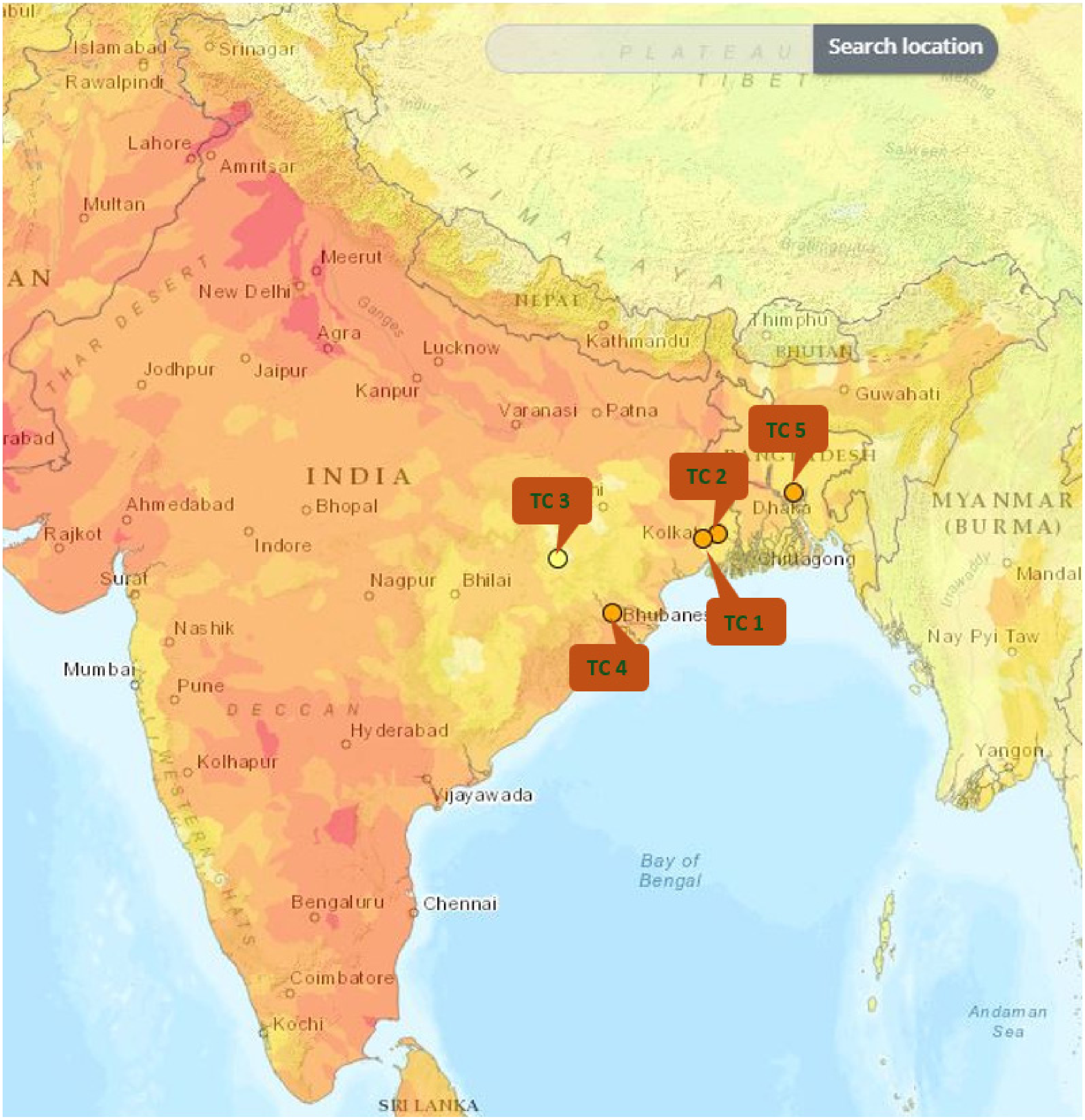
Company overview

The hypothetical textile company (TC) operates five manufacturing sites: four in India and one in Bangladesh (Figure 2). These sites are in water-stressed basins facing significant water access, sanitation and hygiene (WASH) challenges and have elevated levels of water pollution. The company sources raw cotton fibers from local suppliers who collect them from individual farmers in the region. Finished products are sold to garment industries located in India and Bangladesh.

The textile industry in South Asia is a major employer of both skilled and unskilled workers, and it particularly provides opportunities for women living in rural areas. The industry encompasses all stages of the textile production process, from fiber to finished cloth. India's garment and textile manufacturing involves numerous stakeholders in a complex system. Achieving environmental and social sustainability will necessitate collaboration and a circular economy approach from all parties involved.

This hypothetical example highlights the textile company's PWI journey since 2020. Its goal is to go beyond their operational footprint and become water positive in 2035 across all sites. The process presented in this document represents this ambitious timeline.

FIGURE 2. LOCATIONS OF THE FIVE TEXTILE PROCESSING SITES OF THE HYPOTHETICAL TEXTILE COMPANY



STEP 1: AWARENESS

The company has a proven water stewardship record of more than five years. The company's regional sustainability team was introduced to the concept of PWI while attending a water stewardship event at a global water conference. The team found that its ongoing work in building water stewardship in its site locations, and its efforts to reduce overall water risks to its business, could significantly benefit from aligning with PWI.

The regional sustainability team's initial online exploration led to a better understanding of the different aspects of PWI, including the relevant dimensions of water stress (availability, quality and accessibility), the three Pillars of PWI (Pillar 1 at the site/operational level, Pillar 2 at the local level near the site and Pillar 3 at basin level) and the various steps in operationalizing the PWI.

The team recognized PWI not as a compliance exercise, but as a key strategic mechanism to understand overall risk exposure and drive long-term system resilience. It prepared a brief presentation and overview report, highlighting how PWI can reduce water-related business risks while promoting social and environmental sustainability. Its analysis showed that adopting the PWI framework would form a sensible next step in the company's water stewardship evolution, building on its existing efforts while providing a structured yet flexible approach to guide future action.

The CEO of the company approved the report, and the sustainability team began amending its water strategy to align with PWI and developed initial goals, priorities and a budget for PWI implementation. Following approval of the PWI operational plan by the Executive Board, a **Working Group (WG)** was established to lead the initiative. To ensure comprehensive expertise, an **Expert Advisory Group (EAG)** was formed with internal experts, technical representatives from processing units, sustainability team members and other key decision-makers.

STEP 2: AMBITION

2.1 IDENTIFY LIST OF SITES IN WATER-STRESSED BASINS

The WG started by identifying the optimal sites for initial application of the PWI framework among the company's five cotton processing and manufacturing sites. The WG, in consultation with the EAG, used a multi-criteria approach to prioritize and select appropriate sites. The criteria considered:

1. **Basin Water Stress:** The WG ensured that the sites were included in the 100 Priority Basins identified by the Water Resilience Coalition (WRC).

2. **Water Risk Assessment:** The WG used the World Resources Institute's Aqueduct tool and WWF's Water Risk Filter (from WWF) to evaluate basin-level water risks. The WG also analyzed WASH data on the Water Action Hub (WAH) to determine accessibility to hygiene.

3. **Strategic Importance:** The WG used expert evaluations to consider each site's future significance for the company, based on business growth projections, potential climate change impacts, socio-economic dynamics and levels of environmental stress.

4. **Data Availability and Validation:** The WG assessed the local context regarding data availability, collection potential and limitations, which included evaluating local, regional and national databases for WASH access. The WG planned to have further dialogue with district municipalities and local WASH NGOs to identify the most relevant stakeholders to help with the collection of relevant data.

The WG conducted a high-level risk assessment of the five sites (Table 1) using global data from different tools and platforms (Table 2). This assessment employed selected criteria to screen different processing sites. Subsequently, primary reports were distributed to each location for further analysis and ground-truthing incorporating readily available local data and stakeholder perspectives.

TABLE 1. COMPANY MANUFACTURING SITES AND THEIR LOCATIONS

Sites	Site 1 (TC1)	Site 2 (TC2)	Site 3 (TC3)	Site 4 (TC4)	Site 5 (TC5)
Country	India	India	India	India	Bangladesh
Latitude	22.73439026	22.5740723	20.75611388	22.09581972	24.00256264
Longitude	88.36166382	87.99293518	85.55053711	84.01245117	90.34675598
Address	Mahesh Bose Para, West Bengal	Amta, Howrah, West Bengal	Kamakhyanagar, Odisha	Sundargarh, Odisha	Dhaka
Basin					
Major river	Ganges	Ganges	Brahamani	Mahandi	Meghna
Tributary	Hooghly	Damodar	Brahamani	Hirakud Reservoir	Brahmaputra

TABLE 2. RISK SCREENING RESULTS FOR USING GLOBAL TOOLS

Sites	Site 1 (TC1)	Site 2 (TC2)	Site 3 (TC3)	Site 4 (TC4)	Site 5 (TC5)
WRC 100 Priority Basins					
Included in the WRC 100 Priority Basins	Yes	Yes	Yes	Yes	Yes
Aqueduct Risk Atlas*					
Water Risk	High (3-4)	Extremely High (4-5)	Extremely High (4-5)	Medium - High (2-3)	Extremely High (4-5)
Water Stress	High (40-80%)	High (40-80%)	Medium - High (20-40%)	Low (>10%)	Extremely High (>80%)
Physical Risk (Quantity)	Extremely High (4-5)	Extremely High (4-5)	Extremely High (4-5)	Low - Medium (10-20%)	Extremely High (4-5)
Physical Risk (Quality)	Extremely High (4-5)	Extremely High (4-5)	Extremely High (4-5)	Extremely High (4-5)	Extremely High (4-5)
Unimproved/ no drinking water	Medium-High (5-10%)	Medium-High (5-10%)	Medium-High (5-10%)	Medium-High (5-10%)	Low (<2 .5%)
Unimproved/ no sanitation	Extremely High (>20%)	Extremely High (>20%)	Extremely High (>20%)	Extremely High (>20%)	Extremely High (>20%)
WWF Risk Filter*					
Water Scarcity	4	4	5	4	3
Water Quality	4	4	3	3	4
Basin Physical Risk	3.21	3.39	3.11	2.5	2.88
Basin Regulatory Risk	3.12	3.12	3 .12	3.16	2.72
Basin Reputational Risk	4.75	4.75	4.7	4.6	3.72
Drought Probability	2	2	5	3	5
Flooding	4	4	4	4	5
Access to Safe Drinking Water	2	2	2	2	1
Access to Sanitation	4	4	4	4	5

** Note: Risk score ranges from 1 (low risk) to 5 (extremely high risk) for the company's five sites (TC1 – TC5).*

The WG noted the difference in rating between the two global tools and compared the global risk assessment outcomes with local information. This was put together using municipal information, research papers on water for the area and a check-in with local stakeholders that have been approached for potential Pillar 3 partnerships. Results were ranked in risk, using the risk score ranges of the global tools (Table 3).

TABLE 3. COMPARISON OF RISK SCORES USING LOCAL VS. GLOBAL TOOLS AND DATA FOR ALL SITES

Sites	Risk scores related to PWI dimensions*					
	AVAILABILITY		QUALITY		ACCESSIBILITY	
	Global data	Refined with local data	Global data	Refined with local data	Global data (JMP data)	Refined with local data
Site 1 (TC1)	High (3.21)	Moderate (3)	High (4)	Extremely high (5)	Drinking water: Medium (3) Sanitation: Extremely high (4.5) Hygiene**: High	High (3.11)
Site 2 (TC2)	High (3.39)	Moderate (2.5)	High (4)	Extremely high (5)	Drinking water: Medium (3) Sanitation: Extremely high (4.5) Hygiene: High	Extremely high (5)
Site 3 (TC3)	High (3.11)	Extremely high (4.5)	Moderate (3)	High (3.5)	Drinking water: Medium (3) Sanitation: Extremely high (4.5) Hygiene: High	High (4)
Site 4 (TC4)	Moderate (2.5)	Low (1.5)	Moderate (3)	Moderate (2.5)	Drinking water: Low (1 .5) Sanitation: Extremely high (4.5) Hygiene: High	High (3.5)
Site 5 (TC5)	Moderate (2.5)	Moderate (2.5)	High (4)	High (4)	Drinking water: Low (1) Sanitation: Extremely high (5) Hygiene: Very High	Moderate (2.5)

**Note: Risk score ranges from 1 (low risk) to 5 (extremely high risk).*

***Note: Data on hygiene at the national level is obtained from the JMP database and converted into risk using WWF's Risk Filter Methodology (WWF, 2023).*

In summary, the WG utilized readily available global datasets to perform a high-level risk assessment (Table 2), which helped prioritize initial investigations. The WG then turned to credible local data and expert opinion to further refine the high-level risk assessment, which led to subtle changes in the risk profiles of these sites, as evident in Table 3. This comparison provided a more nuanced perspective and refined the selection of sites for initial PWI implementation. This assessment is developed further in Step 3.

2.2 PRIORITIZE WHERE AND WHEN TO ACHIEVE PWI ACROSS COMPANY SITES

While all identified sites could benefit from applying the PWI framework, the Executive Board determined that resource constraints necessitated a phased approach. By prioritizing sites based on water stress and strategic importance, the company demonstrates how PWI serves as an enabling framework for risk-based decision-making, not a static certification goal.

Utilizing the outcomes of global vs. local comparisons (Table 3), Site 2 (TC2) of the textile company emerged as the most suitable location to initiate PWI efforts. Located within a high-priority basin (WRI's 100 Priority Basins), TC2 faces the most severe water stress and a combination of physical, reputational and regulatory water risks. Additionally, the site experiences water quantity, quality and accessibility issues alongside frequent droughts and floods. A summary report on the site selection process was updated in their company data recording system for record keeping.

The company hopes to demonstrate PWI at the first selected site by 2030, using the PWI framework as a guide, and subsequently in the other four sites by 2035.

STEP 3: ASSESSMENT

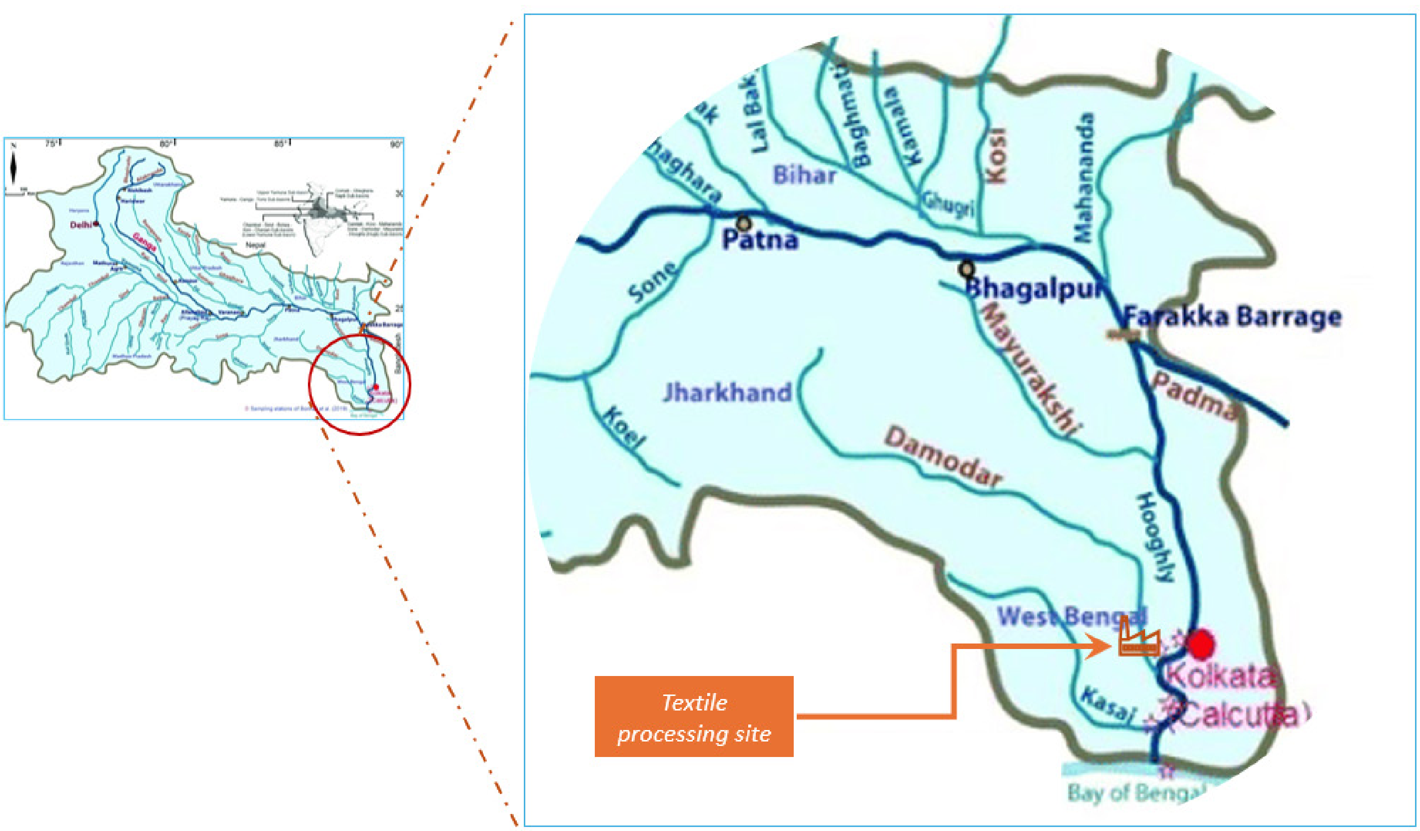
3.1 FOR EACH SITE AND ITS BASIN, DEVELOP A BASELINE/ BENCHMARK ASSESSMENT

Site overview

The WG started Step 3 by undertaking a thorough assessment of the selected site and its basin (Figure 3). **TC2, the selected site for initial PWI implementation,** is a medium-sized cotton textile processing plant located 10 km west of Kolkata, India, on the banks of the Damodar River (upstream from the Hooghly River, a Ganges distributary[1]). The company sources raw cotton from Indian farmers.

The PWI assessment currently **focuses solely on the processing site, excluding the cotton supply chain.**

FIGURE 3. GEOGRAPHIC LOCATION OF TC2 SITE IN THE GANGES BASIN AND ITS TRIBUTARIES



[1]A distributary is a river or stream which subdivides and flows away from the main river and is a frequent feature of a river delta. For example, the Hooghly River is a distributary of the Ganges River.

The TC2 site has an annual production capacity of 25,000 metric tons of cotton textiles. It employs 300 local workers residing primarily near the processing mills in Amta and within the Kolkata municipality. Currently focused on cotton, the company plans to expand its production to include polyester and other synthetic fibers within the next five years.

The site comprises three processing plants:

- **Unit 1:** Spinning (yarn manufacturing)
- **Unit 2:** Weaving/Knitting (fabric production: grey fabric)
- **Unit 3:** Dyeing/Finishing (wet processing: finished fabrics)

TC2 specializes in fabric production, not garment manufacturing. Its final products are yarn, grey fabric and finished fabrics, all ready for sale. Unit 3, responsible for dyeing and finishing, is the most water-intensive process and generates the bulk of the site's wastewater.

Basin overview

The company's TC2 site is in Amta within the Damodar River basin. TC2 primarily relies on water from the Damodar River; about 30% of the site's water is supplemented from onsite boreholes.

Damodar River drains into the Damodar Valley and the surrounding area. The river is about 592 km in length and flows into the Hooghly River about 50 km downstream of Kolkata. The river is also known as the Sorrow of Bengal, due to the extreme flooding events it causes during the monsoon period.

Hooghly River is one of the major distributaries of the Ganges River and drains many sub-basins, namely the Ajay, Falgu, Jaalangi, Churni, Rupnarayan, Mayurakshi, Damodar and Haldi. A part of the Hooghly River flow is supplemented by the water diverted from the Ganges River controlled by the Farakka Barrage, following an international treaty between India and Bangladesh (Figure 3).

The Ganges River is the longest river in India and the second largest by discharge in the world. Together with its tributaries and distributaries, expanding across international country borders, this water body is considered sacred to Hindus, a religion followed by most of the population in the basin.

AVAILABILITY

The region is one of the most water-abundant areas in India due to extreme rainfalls during monsoon periods. However, the Ganges basin and its tributaries experience substantial seasonal fluctuations, characterized by monsoon floods (June-September) and dry season scarcity. Hoekstra and Mekonnen (2011) identify a critical five-month period (January-May) of severe water scarcity. The Damodar and Hooghly Rivers are important water sources for human and industrial consumption and provide fish and other natural resources for large populations.

WATER QUALITY

The Damodar Valley, a hub for coal and mica mining in India, faces severe water quality threats from multiple sources. Industrial effluent, often exceeding regulatory limits for harmful chemicals, untreated sewage carrying pathogens and agricultural runoff laden with fertilizers and pesticides contaminate both the Damodar and Hooghly Rivers. Organic pollution is a primary concern, while groundwater faces threats from inorganic contaminants like arsenic, fluoride, nitrate and chloride. The direct discharge of partially treated or untreated industrial wastewater is a major cause of water quality degradation, exceeding established national standards. Additionally, geogenic processes, such as weathering in ophiolitic rock formations (e.g., Himalayas), can elevate specific elements (e.g., chromium) beyond desirable limits.

TEXTILE PROCESSING INDUSTRY AND WATER POLLUTION

Textile production processes consume large volumes of water (up to 200 liters/kg textile) for chemical application and rinsing. Discharging partially treated or untreated wastewater directly into rivers is a widespread practice, significantly degrading downstream water quality. This effluent often contains microfibers, organic chemicals, persistent dyes, high salinity and variable pH levels, exceeding established water quality standards. These dyes can be toxic, and production may involve inadequate worker protection (Gümüş and Akbal, 2011). Textile wastewater is characterized by elevated levels of pollutants (Eswaramoorthi et al., 2008) released at key processing stages such as:

- De-sizing (sizes, enzymes, starch, waxes, ammonia),
- Scouring (disinfectants and insecticide residues, NaOH, surfactants),
- Bleaching (H2O2, AOX, sodium silicate or organic stabilizer, high pH),
- Mercerizing (high pH, NaOH),
- Dyeing (chromium, arsenic, zinc, copper, salts, surfactants, organic processing assistants, sulfide, acidity/alkalinity, formaldehyde),
- Printing (urea, solvents, color, metals)
- Finishing (resins, waxes, chlorinated compounds, acetate)

Many of these pollutants can harm aquatic ecosystems and human health. While organic pollution is a major concern in surface water, groundwater faces threats from contaminants like arsenic, fluoride, nitrate and chloride.

WASH SERVICES AND ACCESSIBILITY

About 20% of the population in the Damodar and Hooghly basins lacks access to safe drinking water. Growing populations and competition for water resources create accessibility issues. Kolkata, the nearby metropolitan area where most of the site's employees reside, also faces significant WASH challenges. Despite significant groundwater recharge due to permeable strata, water utilities in Kolkata struggle to deliver consistent WASH services throughout the year. This is primarily due to a combination of factors: poor water quality, unreliable supply and aging infrastructure leading to inconsistent flow, low pressure and excessive leakage (Ray and Shaw, 2016).

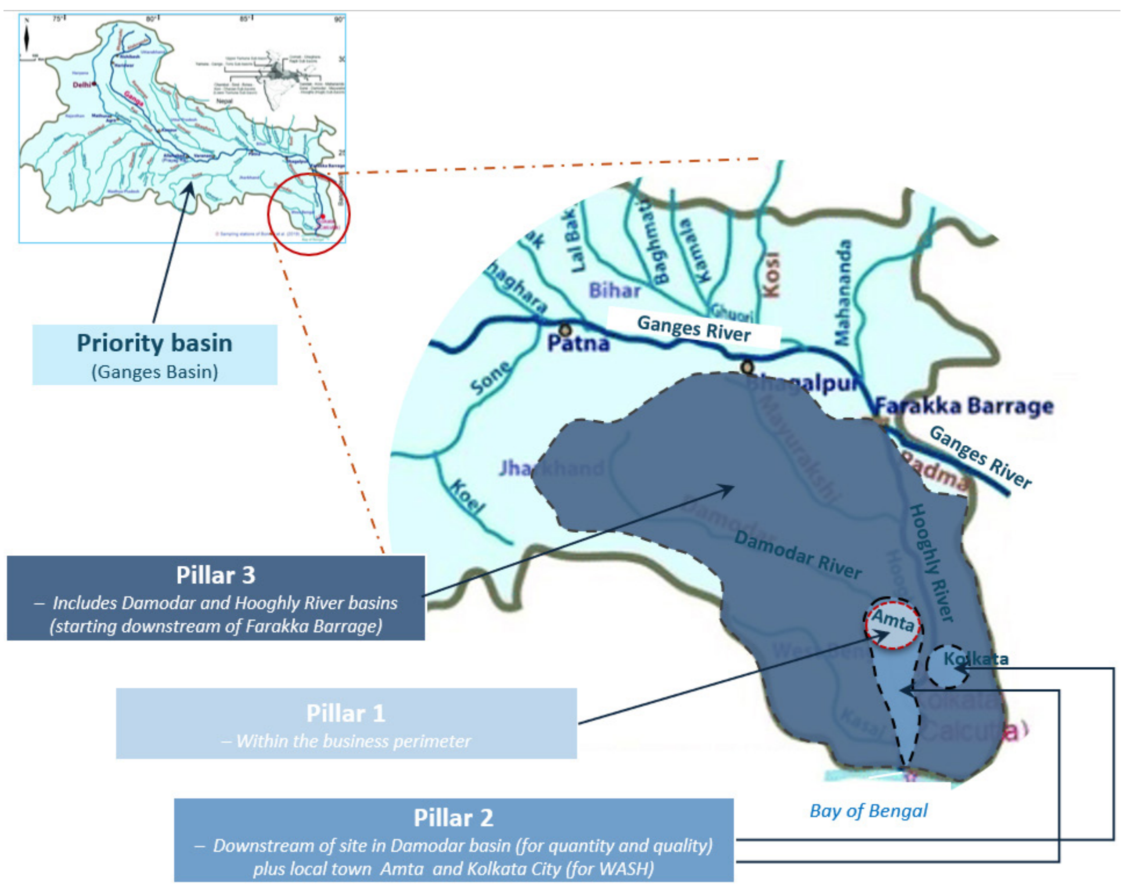
PWI assessment boundaries

To apply the PWI framework, the WG established clear assessment boundaries in consultation with internal and external stakeholders (Figure 4). These boundaries consider the three Pillars and dimensions of PWI and align with the company's potential influence at each scale.

P1	**Pillar 1** (direct operations): The **company premises** form the boundary for all three PWI dimensions.
P2	**Pillar 2** (local basin context): Water availability and quality are assessed within a smaller part of the Damodar River basin downstream of the site location, encompassing **Amta** where the site is located. Additionally, for WASH, **Kolkata** (a part of the Hooghly River basin) is included due to most employees residing there.
P3	**Pillar 3** (wider basin for collective action): Pillar 3's reach is expanded to the entire **Hooghly and Damodar basins** to maximize collaborative benefits. This expanded focus necessitates careful consideration of the balance between corporate influence and investment. However, the project's influence within the Ganges basin is strategically limited to the point of bifurcation of the Hooghly River from the River Ganges via the Farakka Barrage. This strategic decision allows for a more focused approach while acknowledging the interconnectedness of the basins.

For the sake of clarity, the **current illustration excludes the groundwater basin.** However, it is crucial to recognize the integral role groundwater plays in influencing river flows, particularly in the lower Ganges basin. A future, extended assessment that incorporates the groundwater basin would significantly enhance the comprehensiveness of this case study.

FIGURE 4. DELINEATION OF BOUNDARIES FOR PWI PILLARS AND DIMENSIONS FOR THE SELECTED SITE, TC2



Data collection

Next, the WG compiled key information on water use for all three processing units located on TC2 (Table 4). This information included the appropriate scale and type of data needed to inform its PWI assessments.

TABLE 4. DATA COLLECTION TEMPLATE USED FOR PWI ASSESSMENT

Data collection scale	Data type
Pillar 1 Site level (internal)	• Volume of site water intake (liters per day) • Water quality parameters of the source water (milligrams of pollutants per liter) • Volume of wastewater treated and recycled internally (liters per day) • Water quality parameters of the treated wastewater (milligrams per liter) • Volume of wastewater released downstream of the river (liters per day) • Volume of water evaporated from the processing units (liters per day) • Volume of surface water replenished near the sites, e.g. from local wetland restoration projects, (m^3/y) • Number of employees • Level of WASH services in the site perimeter • Number of instances in which inadequate WASH services were internally provided • Inventory of ongoing measures to reduce water withdrawal by improving production efficiency, increasing the use of recycled water or both
Basin/regional/national level	
Pillar 2 Damodar River (downstream of site location, Amta and Kolkata municipality)	• Water availability (river discharge, groundwater recharge rate*, or groundwater table) at the company's water intake site (m^3/day) • Water availability (river discharge, groundwater recharge rate, groundwater table) at the company's wastewater discharging site (m^3/day) • Water quality parameters of the wastewater receiving water bodies (milligrams per liter)
Kolkata municipality	• Stakeholders database • Location of employee households and status of WASH services for them (also includes access to public and private sanitation services) • Status of safely managed WASH services in Kolkata municipality
Pillar 3 River basins (Damodar and Hooghly)	• Water stress (water availability, withdrawal and key water status of Damodar and Hooghly basins) • Basin average water quality data on legacy and emerging pollutants • Basin average water quality data on key pollutants relevant to the company's site operations • Identification of stakeholders • Status of safely managed WASH services at basin scale • Inventory of ongoing water stewardship activities and opportunities for the TC2 site to engage
National/regional/local	• Guidelines/regulations on WASH services • Water quality standards for wastewater discharge to surface and groundwater • Water quality and quantity of Ganges River feeding Hooghly River at Farakka Barrage

*Note: *Since surface and groundwater boundaries often diverge, water-stress assessments require separate evaluations. However, for this downstream Ganges site fed by shallow upstream aquifers, the PWI assessment focuses solely on surface water for illustrative purposes.*

The company has been regularly collecting most of the above data. The WG collated relevant data into a dashboard to determine the nature of volume, quality and accessibility dimensions on site and in the basin. Some data is collected regularly (daily, weekly), while other data may be collected less frequently (quarterly, annually). The WG used this data, recorded internally on a site-level dashboard, to inform the assessment steps.

Analysis of risk scores (Table 3) reveals significant deviations between global datasets and local investigations for all sites. For instance, Site 2 (TC2) initially scored a 4 for water availability based upon global data. However, local investigations, including five years of company water utilization data, indicate moderate competition for resources due to its proximity to the lower Damodar River with a high groundwater table. Conversely, water quality initially scored 'High' but escalated to 'Extremely High' after considering credible local data. This is attributed to the region's poor wastewater treatment enforcement, resulting in untreated effluent directly discharged into the river, necessitating pre-treatment of water intake. Similarly, the WASH dimension score also shifted to 'Extremely High.' This example shows how the assessment can benefit from deeper insights by using local datasets that can capture site-specific nuances. The WG collaborated with local NGOs, Kolkata municipality, civil society groups and local communities in collecting these local data.

To account for seasonal variations in water quality, the company employs a tiered frequency approach when collecting baseline data. High-priority parameters, such as water intake and wastewater outflows, are measured daily. Water quality parameters in the wastewater are monitored monthly, while external data like river flow and basin-scale water quality are obtained at monthly and annual intervals, respectively. The chosen frequency balances cost, resource availability, measurement limitations and pollutant characteristics. As some datasets collected are at varying timescales, appropriate aggregation or disaggregation techniques are employed to create a consistent baseline reflecting the site's overall water status. While data averaging works for parameters with clear trends, factors like water availability require a timescale aligned with basin management policies, national water inventory guidelines and the desired level of detail. For instance, a company might track hourly water intake for efficiency gains but record daily data. To align with basin-level information like river flow and water demand, aggregating monthly data might be necessary. Table 5 presents data for a typical day at the site (for a single representative water quality parameter, nitrate).

TABLE 5. DATA INVENTORY FOR WATER AVAILABILITY AND WATER QUALITY (FOR NITRATE)

Parameters	Quantity (m^3/day)	Nitrate (mg/ liter)	Remark
Year 2020			
Intake water	50	4	Abstraction point: Damodar River (1 km upstream of the site).
Wastewater			
Total volume generated	30*	12	From three processing units combined.
Untreated volume of wastewater discharged	30	12	Untreated wastewater discharged 2 km downstream of the intake site in the Damodar River.
Year 2023			
Intake water	38	4	Due to increased production efficiency and recycling of wastewater.
Wastewater			
Untreated volume of wastewater discharged	20	12	Untreated wastewater discharged at 2 km downstream of the intake site in Damodar River.
Treated volume of wastewater discharged	8	2	Treated wastewater is discharged 2 km downstream of the intake site in Damodar River. In 2023, 2 m^3/day of treated wastewater was recycled and used on the site.

**Note: The site's processes consumed 20 m^3 per day, with most of this water being lost through evaporation in 2020.*

Baseline assessment

To assess progress towards PWI by 2030 using the PWI framework, the WG established a 2020 baseline for its operational water footprint across three key dimensions of water stress (Table 6). The baseline data for the year 2020 was uploaded into their own data recording system at the start of the PWI journey.

The WG collected staff WASH data through direct engagement at a site meeting using a pre-designed questionnaire approved by a local WASH NGO. Basin-level WASH information for 2020 was obtained from an active WASH NGO and the local government water department (Kolkata and Amta). Data for the Damodar and Hooghly basins were assumed equivalent to the national WASH data for India from JMP (WHO and UNICEF, 2023). This approach allows the WG to identify potential WASH interventions and leverage existing initiatives based on the company's comprehensive WASH player and project database. Finally, the ILO guidelines were used to establish WASH-related PWI targets.

TABLE 6. ESTABLISHING SITE OPERATIONAL FOOTPRINT AND BASELINE FOR 2020

Description	Data	Calculation steps, data source and remark
Availability		
Site's operational footprint	50 m^3/day	Water withdrawal
Wastewater volume released	30 m^3/day	Wastewater volume released
Water consumption	20 m^3/day	Water consumption = Water inflow – Wastewater released = 50 – 30 = 20 m^3/day
Water quality (for nitrate)*		
Pollutant load taken into the site together with water withdrawn from the intake site	73 kg/year	Water withdrawal (m^3/day) x concentration of pollutant at the intake site (4 mg/liter) = 50 m^3/day x 4 mg/liter = 50 x 4/1000000 x 1000 kg/day = 0.2 kg/day = 73 kg/year
Total pollutant load released to the Damodar River because of untreated wastewater from the site	131 kg/year	Volume of untreated wastewater (30 m^3/day) x concentration of pollutant in the wastewater (12 mg/liter) = 30 m^3/day x 12 mg/liter = 30 x 12/1000000 x 1000 kg/day = 0.36 kg/day = 131 kg/year
Net addition of pollutant load because of the site's operations to the Damodar River	**58 kg/year**	Pollutants released back to the river – Pollutant intake from the river. = 131 – 73 = 58 kg/year
Accessibility (site premises)		
Number of employees	300	Internal records
Number of drinking water stations	Quantity sufficient; Quality poor	There are local boreholes to provide drinking water on the site premises with limited treatment facilities.
Number of hygiene stations	20 washbasins: 1 per 15 employees	ILO recommendation: 1 for 6 workers.
Number of sanitation stations	10 toilets: 1 per 30 employees	ILO recommendation: 5 toilets for 110 workers ~ 1 per 22.
Accessibility (Amta and Kolkata municipality)		
Number of employees residing in Amta	**100**	
WASH services in employee households in Amta	60%	**Percentage** of employees having safely managed WASH services in their houses. The target is that 100% of employee households have safely managed WASH services in their houses.
WASH services in the local community	40%	**Percentage** of employees having basic sanitation services near their households via community services.
Number of employees residing in Kolkata municipality	**200**	
WASH services in employee households in Kolkata municipality	90%	**Percentage** of employees having safely managed WASH services in their houses. The target is that 100% of employee households have safely managed WASH services within their houses.
WASH services in the local community	10%	**Percentage** of employees having basic WASH services near their households via community services.
Accessibility (Damodar and Hooghly basins)		
Safely managed WASH services		**Percentage** of the population with safely managed WASH services in their houses in the Damodar and Hooghly basins.
Drinking water	65%	Inadequate
Sanitation	45%	Inadequate
Hygiene	65%	Inadequate

** Note: This calculation only includes one pollutant type, nitrate. However, the company must consider all released or legacy pollutants in the PWI assessment.*

Progress evaluation of ongoing activities

Before defining the quantifiable objectives and targets, the WG carried out the current progress evaluation of the company's ongoing water stewardship measures, assessing their contribution to each PWI Pillar by 2023 (Tables 7, 8 and 9). These measures included improved internal water-use efficiency, reduced water withdrawal, minimized release of untreated wastewater and participation in wetland restoration projects along the Damodar and Hooghly Rivers.

The WG conducted a standardized WASH assessment, evaluating data from two distinct areas, namely the Amta site (Damodar River basin) and Kolkata (Hooghly River basin), where employees reside. Data on drinking water, sanitation and hygiene practices were collected separately for each area.

TABLE 7. ESTIMATING SITE OPERATIONAL FOOTPRINT AND PWI ASSESSMENT YEAR 2023 FOR AVAILABILITY

Description	Data	Remark
Pillar 1		
Reduction in water consumption	10 m^3/day	There was a 50% reduction in water consumption because of ongoing efficiency measures = 0.50 x water consumption = 0.50 x 20 = 10 m^3/day
Use of recycled wastewater	2 m^3/day	Recycling units/infrastructures (to treat and circulate wastewater internally) installed in Unit 1 with recycling capacity = 2 m^3/day
Reduction in operational impact at the site level	12 m^3/day	= Reduction in water consumption + Recycled volume = 10 + 2 = 12 m^3/day
Remaining site operational water footprint Pillar 1	= 38 m^3/day	Operational footprint (2020) – Reduction in operational impact at site level = 50 – 12 = 38 m^3/day
Pillar 2		
Replenished/restored operational footprint	20 m^3/day	**Contribution of Pillar 2 =** Volume of freshwater replenished. There is an increase of 20 m^3/day in baseflow attributed to the company for its investment in a wetland restoration project situated about 20 km upstream of the abstraction point in Damodar River recharging the groundwater and baseflow.
Remaining water use to be balanced	18 m^3/day	Remaining water use in Pillar 1 (Year 2023) – Restored operational footprint in Pillar 2 (Year 2023) = 38 – 20 = 18 m^3/day
Pillar 3		
Outcomes of collective action	41 m^3/day	Collaborative action and engagement of community initiatives and basin planning authorities, resulting in mutual investment in large-scale restoration projects (NBS) located 100 km upstream of Kolkata in the Hooghly basin. In 2023, collective action initiatives increased the baseflow of the Hooghly River by 60,000 m^3/year = 60,000 / 365 m^3/day = 164 m^3/day Following the project's mutual benefit-sharing principles, 25% of the benefit is attributed to the company's efforts = 0.25 x 164 m^3/day = 41 m^3/day
PWI assessment outcome	**+ 23 m^3/day**	= Outcomes of collective action in Pillar 3 - Remaining water use Pillar 2 (Year 2023) = 41 – 18 = 23 m^3/day

*Note *: Initiated in 2020, a large-scale wetland restoration project demonstrates positive impacts on the Hooghly River's baseflow. By 2030, the project is expected to achieve its full effect, increasing baseflow by an anticipated 200,000 m^3/year.*

TABLE 8. ESTIMATING SITE OPERATIONAL FOOTPRINT AND PWI ASSESSMENT WITH RESPECT TO WATER QUALITY FOR NITRATE IN 2023

Description	Data	Remark
Pillar 1		
Pollutant load taken into the site together with water withdrawn from the intake site	55.5 kg/yr	Water withdrawal (m^3/day) x Concentration of nitrate at the intake site (4 mg/ liter) = 38* m^3/dayx 4 mg/liter = 38 x 4/1000000 x 1000 kg/day = 0.15 kg/day = 55.5 kg/year
Total pollutant load released to the Damodar River because of untreated wastewater from the site	87.6 kg/yr	The volume of untreated wastewater (20 m^3/day) x Concentration of nitrate in the wastewater (12 mg/liter) = 20 m^3/day x 12 mg/liter = 20 x 12/1000000 x 1000 kg/day = 0.24 kg/day = 87.6 kg/year
Total pollutant load released to the Damodar River because of treated wastewater	5.8 kg/yr	The volume of treated wastewater (8 m^3/day) ** x Concentration of nitrate in the wastewater (2mg/liter) = 8 m^3/day x 2 mg/liter = 8 x 2/1000000 x 1000 kg/day = 0.016 kg nitrate/day = 5.8 kg nitrate/year
Total pollutant load released to the Damodar River because of treated and untreated wastewater from the site	93.4 kg/yr	Nitrate from untreated wastewater + Nitrate from treated wastewater = 87.6 + 5.8 = 93.4 kg/year
Net addition of pollutant load because of the site's operations to the Damodar River (The remaining pollutant load to be addressed)	**37.9 kg/yr**	Nitrate released back to the river – Nitrate intake from the river. = 93.4 – 55.5 = 37.9 kg/year (Net pollutant load added from the site's operations to the Damodar River)
Reduction in operational impact at site level	20.1 kg/yr	= Net addition of nitrate load in 2020 – Net addition of nitrate load in 2023 = 58 – 37.9 = 20.1 kg/year
Pillar 2		
Removal of pollutant in wetland restoration program Dilution effect	10 kg/year ~ 0	The company's investment in local community wetland restoration project also helps capture and remove 10 kg of nitrate per year*** Volume of water replenished = 20 m^3/day (from Pillar 2 of water availability dimension, Table 6). River flow rate at wastewater discharging point in the Damodar River = 1 m^3/sec = 86,400 m^3/day Based on daily average river flow rate, the contribution of pollution-free, replenished volume in diluting the selected pollutant concentration should be evaluated. Total nitrate load in the river without site's operations = 86,400 x 4/1000000 x 1000 kg/day = 345.6 kg/day Total volume of water in the river due to replenishment and site water withdrawal = River discharge with no site operation – water withdrawal + replenished volume. = 86,400 - 38 + 20 = 86,382 m^3/day **As there is only 0 .02% increase in the river flows, the dilution impact is negligible!****

Description	Data	Remark
Remaining operational pollutant load in the system	= 27.9 kg/ year	Remaining pollutant load in Pillar 1 (Year 2023) – Removal of pollutant load from projects in Pillar 2 (Year 2023) = 37.9 – 10 = 27.9 kg/year
Pillar 3		
Removal of pollutant load from the catchment restoration program in the Hooghly basin	78.5 kg/year	River discharge at the downstream end of the wetland restoration project in Hooghly River = 1 m^3/day/sec = 86,400 m^3/day Nitrate level before the wetland restoration project = 4.00 mg/liter Nitrate level in 2023 (three years after the start of the restoration project) = 3.99 mg/liter Total nitrate load removed from the wetland restoration project in 2023 = (4.00 – 3.99) x 86,400 x 1000/1000000 kg/day = 0.86 kg/day = 314 kg/year Based on a mutually agreed benefit-sharing framework, 25% of the removed load is attributed to the company's efforts in collective action projects. = 0.25 x 314 = **78.5 kg/year**
Dilution impacts of the catchment restoration program in the Hooghly basin	~0*****	Collaborative action and engagement community initiatives and basin planning authorities resulted in adding 164 m^3/day to the Hooghly basin, and out of this 41 m^3/day is attributed to the company (2023). As the Hooghly River discharge is 86,400 m^3/day, the addition of 164 m^3/ day has ***insignificant dilution impact*** for the concerned pollutant.
PWI assessment outcome with respect to water quality*****	- 50.6 kg/ year	Outcomes of collective action in Pillar 3 (Year 2023) - Remaining operational nitrate load to be removed after Pillar 2 (Year 2023) = 78.5 - 27.9 = 50.6 kg/year (Net nitrate load removed from the system)

* Note: *Ongoing measures have reduced the daily water withdrawal to 38 m^3/day.*
** Note: *Wastewater recycling and reuse have reduced the volume of treated wastewater discharged into the Damodar River to 8 m^3/day.*
*** Note: *Total pollutant load removed = (Initial concentration of the pollutant - Final concentration of the pollutant) x River discharge.*
**** Note: *Currently this value is negligible but could become significant through greater investments.*
***** Note: *This calculation only includes one pollutant type. However, the company must consider all types of released or legacy pollutants in the PWI assessment.*

TABLE 9. PWI ASSESSMENT FOR WASH SERVICES IN 2023

Description	Data/Assessment	Remark
Pillar 1: Site premises		
Number of employees	500	200 additional employees hired.
Number of drinking water stations	Quantity sufficient 100 % treated to drinking water quality standards	The drinking water treatment unit is established and fully operational.
Number of sanitation stations	25 toilets: 1 per 20 employees	ILO *recommendation is **met.**
Number of hygiene stations	50 washbasins: 1 per 10 employees	ILO *recommendation is **not met.**
Level of WASH services **Pillar 1**	Moderate to sufficient	Needs further provision of hygiene stations to score 100%.
Pillar 2: Amta and Kolkata municipality		
Number of employees residing in Amta	**150**	

Description	Data/Assessment	Remark
WASH services in employee households in Amta	80%	Percentage of employees having safely managed WASH services in their houses. The target is that 100% of employee households have safely managed WASH services in their houses.
WASH services in the local community	20%	% of employees have basic WASH services near their households via community services.
Number of employees residing in Kolkata municipality	350	
WASH services in employee households in Kolkata municipality	95%	Percentage of employees having safely managed WASH services in their houses. The target is that 100% of employee households have safely managed WASH services in their houses.
WASH services in Amta	5%	Percentage of employees with basic WASH services near their households via community services
Level of WASH services **Pillar 2**	Moderate to sufficient	Needs further provision of safely managed WASH services in all households
Pillar 3: Damodar and Hooghly basins		
Percentage of the population with safely managed WASH services in their houses in the Damodar and Hooghly basins		
Drinking water	66%**	Inadequate. The company has started co-investing in drinking water treatment facilities in the basin upstream of the site location in the Damodar River basin.
Sanitation	46%**	Inadequate. The company, in collaboration with the Kolkata municipality, has started working towards providing safely managed WASH services to **100%** residents in Hooghly basin.
Hygiene	68%**	Inadequate
Level of WASH services **Pillar 3**	Insufficient	Needs further provision of safely managed WASH services in all households and/or communities in the Damodar and Hooghly basins

Note: ILO Recommendations.
**Note: JMP data for India's national average.*

The WG has planned for another PWI assessment in 2027, like the one conducted in 2023, to track progress and refine the company's actions and strategies (see Step 4: Action). While the full benefits of these actions/initiatives may not be realized until 2030, these interim evaluations allow for course correction and ensure the WG remains on track to achieving PWI.

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

Guided by the benchmark assessment (Step 3.1) and interim progress assessment (2023), the WG defined quantifiable objectives and targets for each PWI Pillar. Leveraging PWI targets and indicators, the baseline assessment (previous section) identified existing company efforts that partially met the guidance's minimum requirements. This foundation facilitates the development of further measures for site TC2 to advance its PWI objectives by 2030. Informed by the baseline assessment, the WG established a comprehensive list of objectives, targets and corresponding indicators (Table 10) to monitor and report progress, also recorded in their IPTD for monitoring progress.

TABLE 10. PWI OBJECTIVES AND TARGETS FOR THE TEXTILE PROCESSING SITE TC2

Objective	Target 2027	Target 2030
Pillar 1 (site level)		
Reduce water withdrawal	50% (Reduction volume = 50% of 50* m^3/day = 25 m^3/day)	60% (Reduction volume = 60% of 50 m^3/day = 30 m^3/day)
• Reduce water consumption (from 20 m^3/day in 2020 by using efficiency measures, best-in-class practices etc.)	8 m^3/day	5 m^3/day
• Increase water recycling rate (by treating wastewater to required water quality standard internally)	5 m^3/day (Recycled) Remaining wastewater volume = 17 m^3/day	5 m^3/day (Recycled) Remaining wastewater volume = 15 m^3/day
Reduce pollutant load** released from the site	**60%**	**90%**
• Minimize treated and untreated volume of wastewater discharge (e.g., optimizing wastewater treatment plants, implementing advanced pollutant reduction technologies, etc.)	43% (13/30 = 43%)	50% (15/30 = 50%)
• Use fewer chemicals or reduce pollutant concentration in wastewater by implementing best-in-class practices	50%	80%
Provide 100% of employees with access to safe drinking WASH promotion programs	100% target met	100% target met
• Provide drinking water (quality and quantity)	Enough water of sufficient quality for all employees	Enough water of sufficient quality for all employees
• Increase number of hygiene stations	1 washbasin per 6 workers	1 washbasin per 6 workers
• Increase number of sanitation stations	1 toilet per 22 workers	5 toilets for 110 workers ~ 1 per 22
Pillar 2 (Downstream of site in Damodar Basin and Kolkata City)		
Increase the volume of water replenished by the ongoing wetland restoration project[2]	25 m^3/day (100 % of the remaining operational footprint from Pillar 1)	Maintain and exceed 100% operational footprint
Reduce nitrate* load from the wastewater (by capturing and removing pollutants from the wastewater)	37.9 kg/year (Net addition to Damodar River from TC2's operations)	Zero liquid discharge (no pollutant added to the system)
Ensure all employees in their households have 100% access to safely managed WASH services in their households in Amta and Kolkata	95%	100% of employee households have safely managed WASH services
WASH services in the local community	5%	
Pillar 3 (Damodar and Hooghly basins)		
Replenish volume of water during dry seasons through the ongoing Hooghly River basin wetland restoration project (outcomes of collective action projects)	50 m^3/day	100 m^3/day
Collaborate with relevant stakeholders (NGOs, government bodies) to improve water quality in the Damodar and Hooghly basins downstream of Farakka Barrage (Specific objectives for pollutant reduction will be determined upon further analysis)	Develop targets for pollutants (legacy and site relevant) set, and the stakeholder engagement process started for collective action projects	
Partner with public and private entities (PPPs) and key NGOs in Kolkata and the Hooghly basin to ensure WASH services in the Damodar and Hooghly basins meet national regulatory standards	Local and regional standards adapted	Align with SDG 6 "By 2030, ensure availability and sustainable management of water and sanitation for all."

[2] The wetland restoration project is situated about 20 km upstream of the abstraction point in Damodar River, recharging the groundwater and baseflow.

* Note: *In 2020, water withdrawal was 50 m^3/day.*
** Note: *This was done for all pollutants individually.*

STEP 4: ACTION

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

The WG prepared a progress assessment report based on the findings from Step 3 and compiled a list of activities that the company can take to mitigate shared water risks and build basin resilience. The findings were presented in an internal workshop with the EAG, decision-makers and experts from all three units in the site TC2. Following the outcomes of the workshop, the WG prepared a list of recommendations for the Executive Board to consider while developing its annual and long-term action plans for the company.

Table 11 outlines the approved list of activities for implementation across each Pillar and dimension for TC2. Pillar 1 and 2 activities were readily achievable using internal resources. Conversely, Pillar 3 activities were broader, requiring external collaboration for successful implementation. To address this, the company identified and convened the first of a series of stakeholder meetings including local communities, NGOs, government agencies and collaborating companies within the basin. Existing collective action projects were identified through this collaborative effort. The WG presented identified basin risks and facilitated stakeholder input to refine potential collective action efforts. A joint decision was made to either establish a new collective action partnership/ platform/project or enhance an existing initiative (wetland restoration project in the Hooghly River basin).

The WG developed a list of activities to improve access to safely managed and climate-resilient WASH facilities for both employees and the surrounding community. In the workplace, four additional WASH stations were installed, reducing congestion and wait times for employees. There were six existing stations in 2020, which were also upgraded to enhance safety and ensure they could withstand potential climate challenges. Within the community, 10 new WASH stations were built in partnership with Kolkata municipality and local WASH NGOs, providing residents with greater access and reducing the distance and wait times for employees who utilize these resources. Additionally, the company offered support to employees with existing plumbing to improve their household WASH infrastructure for climate resilience and appropriate use. These investments demonstrate the company's commitment to employee well-being and the health of the surrounding community by ensuring access to safe and sustainable WASH facilities.

TABLE 11. APPROVED LIST OF ACTIVITIES FOR IMPLEMENTATION ACROSS EACH PILLAR AND DIMENSION FOR TC2

	List of activities	Target year of completion	Priority (and cost implication)
Pillar 1 (site level)			
	Implement good water management practices* in all three units	2027	High (Low cost)
	Implement efficiency measures: • Install moisture-capturing components (steam condenser) in wet processing Unit 3 • Install proper water flow regulating devices and meters	2027	High (Low cost)
	Recycle/re-use • Install wastewater treatment components in all units, and connect them back to the water supply pipes as appropriate • Re-use wastewater generated during water-jet weaving within the jet looms and in the de-sizing or scouring process • Use recycled water to flush the toilets and wash the factory floors	2030	Medium (High cost)
	Reduce pollutant load** released from the site • Use of eco-friendly chemicals • Recycle treated wastewater to non-critical areas • Use best practices in wet processing in Unit 3 e.g., re-use collected water from various bleaching processes, recycle scouring bath after adding chemicals, develop proper cleaning methods (e.g. nozzle-based cleaning)	2030	High (Low cost)
	Minimize treated and untreated volume of wastewater discharge • Install low liquor ratio jet dyeing machine • Install new wastewater treatment plants in Units 1 and 2 • Install steam condenser in Unit 3	2030	Medium (High cost)
	Provide drinking water • Connect all drinking water with treated drinking water supplies • Add proper filtration units in isolated drinking water units	2025	High (Low cost)
	Provide hygiene • Add adequate washbasins (1 washbasin per 6 workers)	2030	High (Medium cost)
	Provide sanitation • Add adequate washbasins (1 toilet per 22 workers)	2030	High (Medium cost)
Pillar 2 (Damodar Basin and Kolkata City)			
	Replenish water through the wetland restoration project, situated about 20 km upstream of the abstraction point in Damodar River	2030	High (High cost)
	Purify water through the wetland restoration project, situated about 20 km upstream of the abstraction point in Damodar River	2030	High (High cost)
	Ensure WASH services in employee households • Distribute water filtration equipment and financial support to all the employees	2027	High (Medium cost)
	Collaborate with Amta and Kolkata municipality • Build 10 community-level WASH services • Engage and collaborate with residents to provide community WASH services where these are lacking	2024 - 2030	Low-Medium (High cost)

List of activities	Target year of completion	Priority (and cost implication)
Pillar 3 (Damodar and Hooghly basins)		
Engage in collective action Policy engagement at the basin level	2024 - 2030	High (Low cost)
Collaborate with other stakeholders to develop and implement large-scale wetland restoration project in the Hooghly basin	2030	Medium (High cost)
Engage in collective action to reduce pollutant load in the basin: Policy engagement at the basin level	2024 - 2030	High (Low cost)
Collaborate with other stakeholders (NGOs, government bodies) to improve water quality in the Damodar and Hooghly basins downstream of Farakka Barrage. Specific objectives for pollutant reduction will be determined upon further analysis.	2024 - 2030	Low (High cost)
Partner with public and private entities (PPPs) and key NGOs in Kolkata and the Hooghly basin to ensure WASH services in the Damodar and Hooghly basins meet national regulatory standards	2024 - 2030	Low (High cost)

** Note: A list of good examples in the textile industry to reduce water consumption can be found in ISC (2020).*
***Note: To be done for all the pollutants individually.*

4.2 ESTABLISH AND SECURE INPUTS NEEDED FOR FINANCING AND PARTNERSHIPS

The management plan identified resource needs for prioritized PWI activities, acknowledging limitations in existing budgets and human resources. To address this, a comprehensive budget was developed for all the activities listed in Table 11. The WG collected quotes and budget estimates for these activities. This involved assistance from its finance experts and external consultants. The final budget was presented to the Executive Board for approval and inclusion in upcoming annual budgets. For collection action projects, internal and external discussions were also explored for funding opportunities such as cost-sharing, blended finance options and access to grant funding.

The WG also conducted internal assessments to identify departments with relevant budgets for high-priority, low-cost projects alongside continued exploration of the outlined funding opportunities to achieve the company's PWI objectives.

Regarding external partners, the WG undertook substantial stakeholder engagement to identify relevant partners for collective action projects. Multiple sectors made up the collective action projects under Pillar 3, including other companies, public-sector agencies, farmers, local communities, NGOs and academic institutions. Each stakeholder group was identified and collaborated with to ensure its unique perspectives, resources and expertise were included in the projects. The WG feels that by including multiple parties, the success and sustainability of collective action initiatives can be ensured.

All parties agreed to sign a joint memorandum of understanding, co-developed by all parties. This document laid out the roles and responsibilities of each actor/sector, presented the shared visions and goals of the project and laid out processes for information sharing, resource allocation and management and governance structures. Roles were divided around several areas, including data gathering, model development, skills training, funding and financing and communications. Some wording around adaptive and inclusive approaches was also included to reflect changing or future conditions, technological advancements and added information.

4.3 IMPLEMENT ACTIVITIES

Through internal and external discussions, the WG identified an appropriate set of actions required to meet its PWI objectives by 2030 (Table 11), using the PWI framework as a guide for prioritization and implementation. These actions were based on the outcomes of other steps and the context of the basins in which the sites were located. The WG developed an implementation plan to ensure the effective execution of activities. This implementation plan includes prioritization of activities, a timeline for implementation, budget and resource allocation and monitoring and evaluation elements. Governance and monitoring arrangements, both within the company and collective action initiatives, were established to ensure the desired outcomes are clear, resources are effectively mobilized and responsibility for delivery is established. Accountability structures were put in place to ensure effective implementation of all activities.

Most activities were implemented by external organizations. The company identified that it did not have the necessary internal resources to undertake some of the more technical projects. Where capacity and technical expertise existed, internal staff were used to implement certain activities. The WG maintained oversight on all projects, regardless of internal- or external-resource use.

Throughout implementation, the company recognized that PWI is not about achieving a perfect 'net' balance, but about making meaningful, measurable contributions to basin health through continuous improvement and partnership.

STEP 5: MEASUREMENT

Following the implementation of activities, the WG began to monitor and evaluate the success and impact of interventions. The WG developed appropriate plans to evaluate projects, undertake analyses and report these outcomes to different stakeholders. The final goal is to ensure continuous improvement while adapting existing projects and using key lessons learned to apply the PWI framework across all sites.

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

The WG developed a comprehensive ten-year monitoring and evaluation (M&E) plan for TC2, extending beyond the company's target NPWI achievement date of 2030. This plan outlines the data collection approach, timeline and budget for evaluating progress against the site NPWI objectives and targets. It highlights what will be included in annual assessments, a progress evaluation in 2027 and a completion report in 2030. The M&E report also documents the value of a centralized data repository on the ITF and how it ensures data comparability for future multi-site evaluations. The M&E plan includes:

- **Resource identification:** Human and financial resources needed for effective M&E.
- **Data collection:** Strategies for gathering data and collaborating with external stakeholders for basin-scale data.
- **Budget allocation:** Financial resources allocated for M&E activities until 2030 and beyond.
- **Success measurement:** Clearly defined metrics to assess progress towards PWI goals.
- **Adaptive management**: Mechanisms to update the plan based on internal/external changes and evolving company strategies.
- **Communication strategy**: Processes for internal and external communication of success stories within and beyond operational basins.

This plan was collaboratively developed with the finance department, Executive Board and unit heads across all five sites, and it incorporates the company's long-term vision of achieving PWI requirements at all sites by 2035.

5.2 ANALYZE AND EVALUATE OUTPUTS AND OUTCOMES WITH RECOMMENDED INDICATORS

The WG plans to organize an annual data review workshop to facilitate progress assessments for site TC2 using recommended PWI indicators (see the full list in Technical Guidance) for each of the Pillars. The workshop will identify necessary corrective actions and explore opportunities for optimization beyond initial gains under each PWI Pillar. As prioritized (Table 11), the implementation starts with high-priority, low-cost activities. However, to achieve PWI, the WG is planning a strategic shift towards Pillar 3, focusing on collective action projects that bring the greatest potential impact.

The company is also collaborating with a third-party consultancy to support developing its PWI objectives and targets established in previous steps. This partnership will be extended to validate company PWI claims in 2030. Recognizing the potential for changes in operational footprint due to business growth strategies and external factors (e.g., water availability, basin dynamics), the company has committed to continuously refine its targets within the PWI framework to demonstrate meaningful progress. A contract with the third-party consultancy ensures ongoing support in target refinement and final validation of PWI claims for site TC2 by 2030. Additionally, the company plans to leverage this partnership to implement its PWI ambitions across other sites. It is anticipated that the third-party consultancy will receive training in PWI methodology by the CEO Water Mandate.

The progress under each Pillar for TC2 is recorded in their company's data recording system or ITF. The WG will gather annual feedback from the sustainability team on progress, challenges and potential roadblocks in achieving output, outcomes and impacts. All findings and solutions will be documented and shared with internal and external stakeholders to promote inter-site learning in the form of a progress report that informs communication in the next step. When ready, the company will reach out to the CEO Water Mandate and obtain a list of qualified third-party consultants to share the data from TC2 who will assess all data points and validate any PWI claims the company wishes to make.

5.3 REPORT AND COMMUNICATE OUTPUTS AND OUTCOMES

The WG has recorded its 2023 PWI assessment within their companies data recording system. Following the plan outlined in Steps 5.1 and 5.2, an update will be conducted biennially. While public disclosure of Pillar 1 results is still under consideration, the company recognizes the value in sharing high-level progress on Pillars 2 and 3, along with lessons learned, with external stakeholders. At a minimum, annual updates on progress towards PWI objectives and targets will be provided to relevant stakeholders and shareholders.

Initial assessments indicate that achieving targets is feasible for Pillars 1 and 2 by 2030 for site TC2. However, Pillar 3, while expected to deliver the most significant outcomes, necessitates substantial long-term investments and collaboration with external stakeholders. The WG anticipates exceeding the minimum PWI requirements for TC2 by 2030. These learnings will be instrumental in effectively implementing PWI across the remaining four sites, with the potential to achieve full PWI for all five sites.

Communication strategy: The company's communication department will communicate progress towards positive water impact at the pilot site (TC2) using the PWI framework. This includes:

- **PWI ambitions, initial site investments (2023) and anticipated progress assessment results (2027).** Success stories will be shared internally and externally, following company policy, through various channels like newsletters, social media and investor reports. Key updates on progress made will also be shared with the external stakeholders engaged in collection action in Pillar 3.

- **Annual progress updates** will be incorporated into ESG reports, impact reports and social media. This approach provides a comprehensive view of the company's PWI journey.

- **To promote PWI implementation across other sites,** an "PWI Implementation Toolkit" will be developed. This toolkit will document the process and capture key learnings.

- **Leadership engagement.** The CEO will champion PWI at high-level events, fostering collaboration with basin stakeholders for collective action and broader basin-scale PWI adoption. Site managers will also promote PWI at industry events and with other businesses in the basin to maximize program uptake and scalability.

Overall, this communication strategy aims to champion the company's water stewardship efforts internally and gain external recognition as a leader in sustainable water management.

5.4 LEARN, IMPROVE AND ADAPT OVER TIME

The WG will conduct a systematic review of annual and progress reports to identify implementation challenges at site TC2, extract key learnings and evaluate rollout effectiveness. These insights will inform the optimization of the PWI rollout strategy for achieving enterprise-wide application across all five sites by 2035. Regular knowledge-sharing workshops and progress reporting will promote continuous improvement and maintain internal commitment to the program's success. Additionally, the strategy will emphasize:

- Regular PWI training to ensure workforce competency.
- Improved M&E practices to gather data-driven outputs and outcomes for informed decision-making.
- Adapting activities based on results to ensure a flexible and effective program for each site.
- Investing in advanced technologies, data augmentation options and collaborative actions to further enhance program effectiveness.

By adopting this comprehensive approach, the company aspires to become a best-in-class leader, potentially influencing industry standards. This optimized PWI strategy, informed by learnings from Site TC2, positions the company for successful replication across all sites demonstrating how the framework’s flexibility supports meaningful action at any scale.

The value of the PWI framework lies in its adaptability and capacity for continuous refinement. As implementation expands to the remaining sites, the company will apply insights gained from previous implementation, strengthen practices and adjust approaches to reflect site-specific contexts and emerging evidence. In doing so, water stewardship will be embedded as a sustained, evolving commitment, and will be integrated into operations as a core business priority rather than a finite initiative.

REFERENCES

Eswaramoorthi S, K. Dhanapal, D. Chauhan (2008). Advanced in textile wastewater treatment: the case for UV-ozonation and membrane bioreactor for common effluent treatment plants in Tirupur, Tamil Nadu, India. Environment with People's Involvement and Co-ordination in India, Coimbatore, India.

Gümüş D, F. Akbal (2011). Photocatalytic degradation of textile dye and wastewater. Water Air Soil Pollut. 216(1–4): 117–24. https://link.springer.com/article/10.1007/s11270-010-0520-z

Hoekstra, A.Y., M.M. Mekonnen (2011) Global water scarcity: monthly blue water footprint compared to blue water availability for the world's major river basins, Value of Water Research Report Series No. 53, UNESCO-IHE, Delft, the Netherlands. https://ris.utwente.nl/ws/files/5131824/Report53-GlobalBlueWaterScarcity.pdf

Ray, B., R. Shaw (2016). Water Stress in the Megacity of Kolkata, India, and Its Implications for Urban Resilience. Urban Disasters and Resilience in Asia (pp. 317-336). https://doi.org/10.1016/B978-0-12-802169-9.00020-3

World Health Organization and United Nations Children's Fund (2023). Progress on household drinking water, sanitation and hygiene 2000–2022: special focus on gender. https://www.unwater.org/publications/who/unicef-joint-monitoring-program-update-report-2023

WWF (2023) Water Risk Filter: Methodology Documentation. https://cdn.kettufy.io/prod-fra-1.kettufy.io/documents/riskfilter.org/WaterRiskFilter_Methodology.pdf

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.