Position Paper: Supply Chain Water Target Accounting

Background

Clean water is essential for nature, people, industry, and agriculture. With about 70% of annual freshwater used for agriculture, the public and private sector must work together to produce food sustainably to meet the demands of a growing global population. For that reason, Cargill is committed to enabling a water positive impact across our operations, supply chains, and communities by 2030 (Cargill, 2023). We will do that by addressing the shared water challenges of availability, quality, and access to safe drinking water, sanitation, and hygiene (WASH).

Despite there being ample guidance available for how to set water targets across corporate value chains (SBTN 2023, CEO Water Mandate 2021, WRI and Mars, 2016), to the best of our knowledge, at the time this document was written there was no consensus on how best to account towards meeting water targets in shared value chains. This lack of guidance presents a barrier to meaningful collaboration at scale by creating uncertainty on how two or more organizations can contribute and claim progress towards meeting value chain water targets.

To overcome this barrier, Cargill worked with subject matter experts across industries to develop an approach to accounting (including quantifying, attributing, and tracking) progress towards meeting its water targets, with the goal of enabling increased opportunities for collaboration between companies (and other entities) working across shared agricultural supply chains. The proposed approach builds on credible and vetted principles and guidance available in the public domain to document how Cargill will implement, quantify, attribute, and track water availability and quality benefits generated when working individually, bilaterally, or collectively with others both inside and outside of Cargill's value chain. Cargill is committed to updating this approach to align with and adopt emerging best practice whenever greater clarity on these topics is made available.

About our water targets

Following a data-driven, risk-based approach developed in close partnership with the World Resources Institute (WRI), Cargill committed to enable the restoration of 600 billion liters of water and reduction of 5,000 metric tons of water pollutants in water-stressed regions by 2030. These targets are measurable, actionable, and time-bound, designed to contribute towards meeting desired conditions for waterbodies in priority watersheds by driving actions at the local level that are proportional to the severity of the water challenge and Cargill's contribution to that challenge (WRI and Cargill 2021).

Cargill's target-setting approach (WRI and Cargill 2021) started by considering Cargill's entire value chain, and then prioritized target setting where water is most material, informed by existing guidance to set water targets at the enterprise level that respond to local context (CEO Water Mandate et al. 2021). Furthermore, by aligning Cargill's pressures on freshwater with local watershed thresholds, the approach is conceptually aligned with emerging expectations for how to set science-based targets (SBTN 2023).

Cargill's most material footprint is in the agricultural supply chain, and because of that our water targets are proportional to the pressures and thus proportional to Cargill's water footprint in the supply chain in water-stressed regions. These targets are therefore referred to as supply chain water targets.

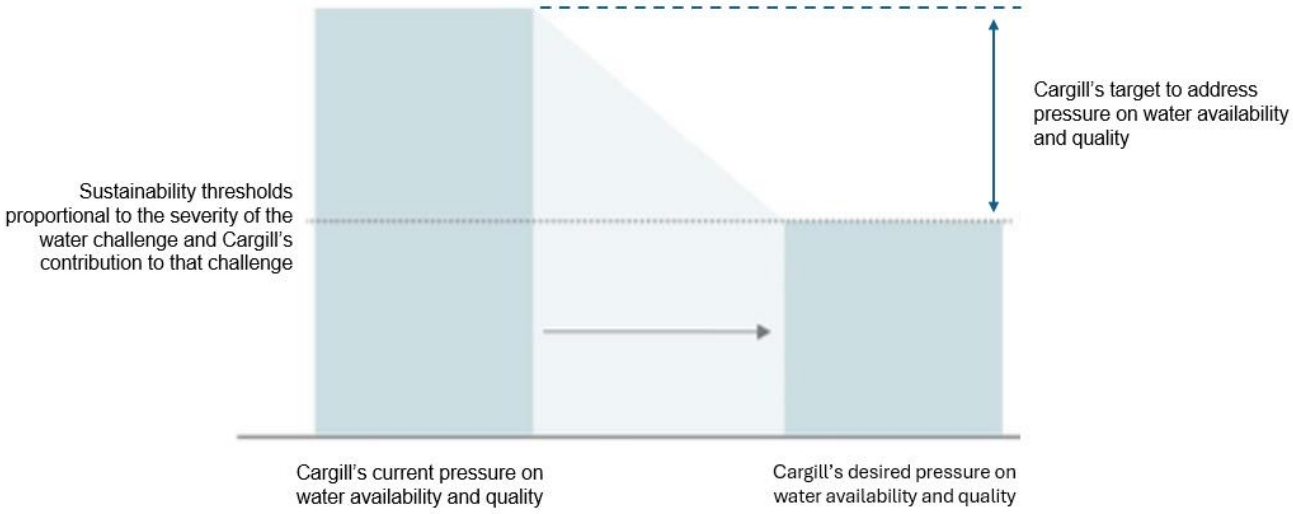
Cargill's water targets are not water balance targets (WWF 2016) or water replenishment targets (Bluerisk and Valuing Impact 2021), but rather targets that aim to reduce Cargill's value chain pressures on water availability and quality to within local sustainability thresholds (Figure 1). Though there is a volumetric component, Cargill's water targets differ significantly from water balance or replenishment targets both in scope and ambition, making them noncomparable to other existing corporate balance or replenishment programs. Specifically, to date corporate water replenishment targets have:

a) Been set to account for a company's direct operational water use (whereas Cargill's water targets include Cargill's agricultural supply chain)
b) Aimed to balance a company's operational water withdrawals (whereas Cargill's water targets aim to address Cargill's pressures on water availability and quality).

Cargill's supply chain water targets have a lot in common with scope 3 greenhouse gas (GHG) emission reduction targets, making them more comparable to scope 3 GHG emission reduction targets than to operational water balance or replenishment targets. The distinction is important since different types of targets could count the same benefits. However, this should not be considered double-counting if the claims are aligned with the target scope of the different stakeholders. Specifically, Cargill's scope 3 GHG emission reduction and supply chain water targets have the following in common:

- **Scope**: the targets involve locations not owned or controlled by Cargill (i.e., agricultural suppliers), but that Cargill indirectly affects in its value chain;
- **Ambition**: the target ambition is informed by Cargill's supply chain pressures on the environment and the change required (informed by the best available science) to align with Earth's limits and societal sustainability goals; and
- **Implementation**: the targets will be met following the SBTN's Action Framework (SBTN 2020), a set of actions that aim to avoid, reduce, restore, regenerate, and transform systems in which companies are embedded, which combined will help meet our water, land, and climate ambitions.

Figure 1. Approach to calculating Cargill's supply chain water targets.

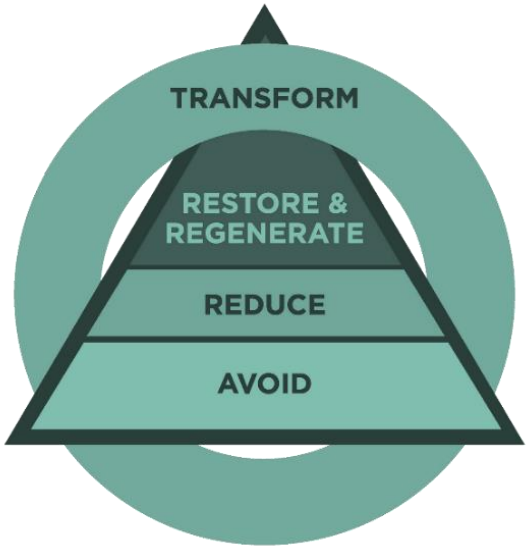


Source: authors

Meeting our target

Like our land use target and our scope 3 GHG emissions reduction target, we will meet our supply chain water target following guidance from SBTN's Action Framework (SBTN 2020), which includes actions to avoid increasing pressures, reduce current footprints, regenerate and restore ecosystems, and transform the systems in which companies are embedded (Figure 2).

Figure 2. SBTN's Action Framework



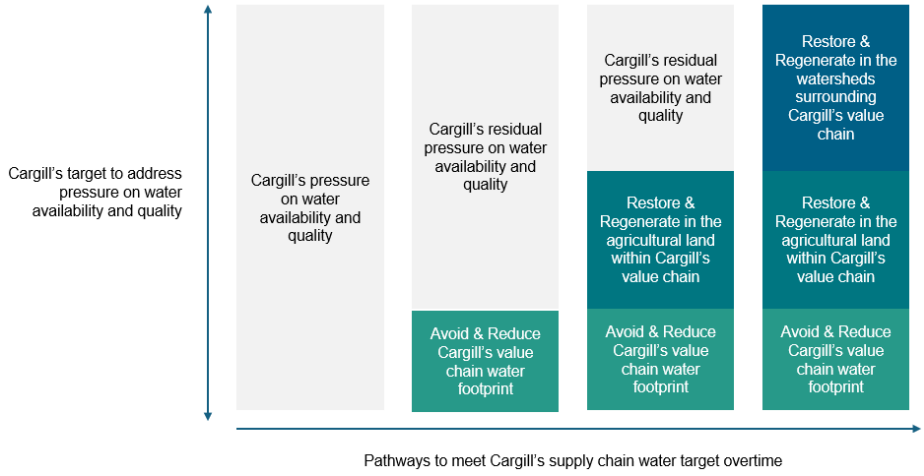
Source: SBTN 2024.

Because of Cargill's role in agricultural supply chains and commitment to support farmers and ranchers, we will meet our supply chain water target by prioritizing actions to avoid, reduce, restore, and regenerate on agricultural lands inside the value chain. Where possible we incorporate system transformation into our activities but recognize that the pathway to quantify benefits associated with transformative activities are still nascent. These actions are complemented with actions in the watersheds surrounding Cargill's value chain. Specifically, Cargill will identify and implement actions, following publicly available project eligibility criteria and selection considerations (WRI et al. 2023), that include the following steps (Figure 3):

- **Avoid and reduce**: We will aim to avoid creating pressures on water availability and quality in the first place and minimize the duration, intensity, and/or extent of Cargill's agricultural value chain pressures on water availability and quality that cannot be avoided (without necessarily eliminating them altogether). For example, changes in agricultural practices (e.g., nutrient management, precision irrigation) or footprint inside the value chain that result in avoided pollutants, reduced water withdrawals and water consumption, or reduced nutrient load to water.

- **Restore and regenerate:**
  - On the agricultural land in Cargill's value chain: we will support activities on agricultural land within our value chain to help remediate Cargill's agricultural supply chain pressures on water availability or quality that cannot be reduced and in doing so achieve measurable positive water outcomes. For example, implementation of regenerative agricultural practices that improve water-holding capacity in the soil, reduce run-off, and/or limit nutrient loading.
  - In the watersheds surrounding Cargill's value chain: we may address residual pressures on water availability or quality after implementing actions that reduce impacts and/or restore or regenerate land and water in the value chain. For example, by restoring a volume of water in the watershed through wetland restoration.

Figure 3. Pathways to meet Cargill's supply chain water target.



Source: authors

Quantification

Cargill's approach to supply chain water target quantification is informed by existing and well-recognized guidance on water benefit accounting. These approaches are applicable to actions on agricultural lands inside Cargill's value chain (i.e., avoid, reduce, restore, regenerate) and in the watersheds surrounding Cargill's value chain (e.g., restore, regenerate), and include:

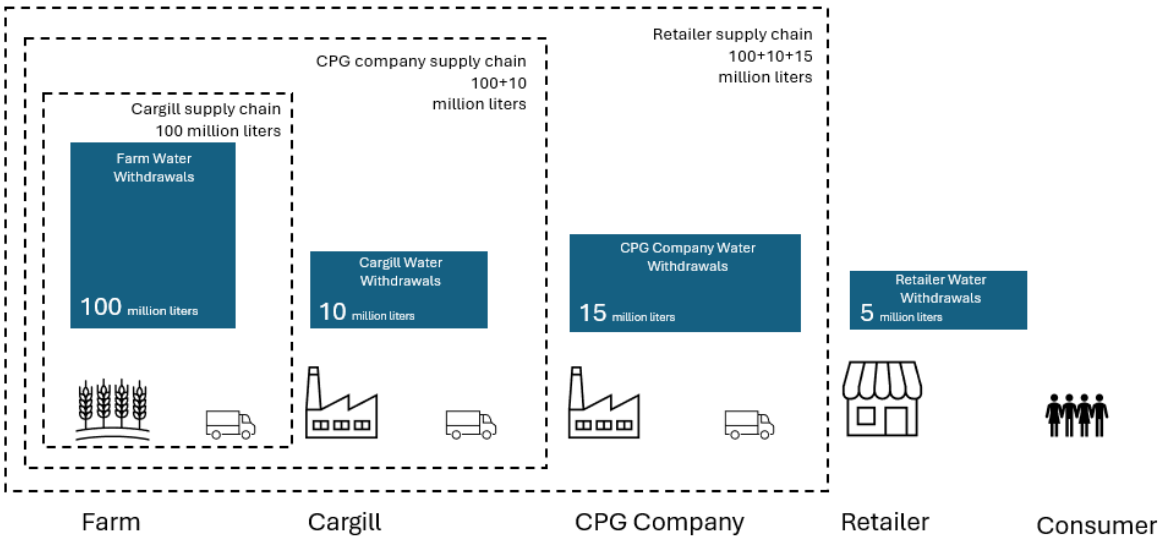
- **For the water availability target**, the principles, methods, and indicators available in "Volumetric Water Benefits Accounting (VWBA): A Method for Implementing and Valuing Water Stewardship Activities" (WRI et al. 2019) and in the updated VWBA 2.0 draft installments available in the public domain (WRI et al. 2023).

- **For the water quality targets**, informed by modelled baseline water quality loading of nutrients and standardized pollutant removal efficiencies obtained from scientific literature. Cargill's approach to supply chain water quality target quantification will be updated with the upcoming Water Quality Benefit Accounting guidance when made available.

Attribution

Given Cargill's role in agricultural value chains, the scope of Cargill's supply chain water targets inevitably includes the same agricultural supply chain as many of Cargill's customers (Figure 4), offering a unique opportunity for Cargill customers to partner with Cargill to drive water availability and quality benefits inside their shared value chain. Collective action within value chains is essential for scaling effective water stewardship, so developing attribution approaches which support, facilitate, and encourage collaboration is an important step, particularly in agriculture.

Figure 4. Overlapping water footprints across the value chain from farm to consumer.



Source: authors (numbers are for illustrative purposes only and not to scale).

Furthermore, because of Cargill's direct access to farmers across its value chain, the scope and ambition of Cargill's supply chain water targets also offers non-Cargill customers a unique opportunity to work with Cargill to support farmers and ranchers to drive water availability and quality benefits in watersheds of shared interest.

Because of this, to meet Cargill's water targets, Cargill may work unilaterally, bilaterally, and/or collectively with customers, farmers, ranchers, leading conservation organizations, and others to develop and scale solutions across:

- Agricultural lands inside our value chain (e.g., regenerative agriculture practices that improve soil health, climate and water resiliency, water quality, and farmer livelihoods); and
- The watersheds surrounding our value chain (e.g., nature-based solutions that improve watershed health, community livelihoods, and biodiversity).

Independently of who Cargill is working with, clear, transparent, and conservative attribution of benefits is necessary and foundational for making credible claims and ensuring aligned expectations between project sponsors, implementors, and other stakeholders. To that end, prior to supporting an activity or attributing benefits, Cargill and other project sponsors will align on the project objectives, roles in the project, funding, and resulting benefits. Collective understanding and agreement on these elements between project participants and sponsors will be used to develop an attribution approach.

In the absence of clear and consistent guidance and expectations on how best to attribute progress towards meeting supply chain water targets, Cargill's approach to attribution is informed by Cargill's role in delivering the water benefits (i.e., as a project implementer or as a project sponsor), and existing best guidance and standards for target accounting, most notably ISEAL's "Good Practice Guide for Making Credible Jurisdictional Claims v1.1" (ISEAL 2022), Volumetric Water Benefit Accounting (VWBA) 2.0, Installment 2 "Principles for Making Credible Claims" (WRI et al. 2024), and GHG Protocol Scope 3 guidance.

Specifically:

Water benefits generated by Cargill when Cargill's role is the project implementer: benefits may be attributed in full by Cargill provided the project:

- Reduces pressure on, restores, or regenerates water availability or water quality;
- Takes place on agricultural lands inside Cargill's value chain;
- Would not be possible without Cargill's involvement; and
- Is aligned with Cargill's public commitment to enable a water positive impact.

Cargill's targets are informed by Cargill's water availability and quality footprint (i.e., inventory), so any reductions in that footprint contribute towards Cargill's water targets if they represent changes in Cargill's value chain footprint.

As a project implementer, benefits generated by Cargill also create opportunities for collective and individual claims by project sponsors. For example:

- **Cargill customers with a shared value chain:** When one or more companies have a shared value chain, they can all claim in full the same benefits on agricultural land within their scope 3 value chain, as outlined in the corporate value chain (scope 3) accounting and reporting standard.

- **Non-Cargill customers without a shared value chain:** Both project sponsor and Cargill can claim benefits in full as long as claims from the generated benefits are aligned with all parties' water targets, are based on prior mutual agreement between stakeholders, and take place on agricultural lands in Cargill's value chain.

Water benefits generated by others (Cargill's role is a project sponsor): benefits may be attributed based on prior mutual agreement between project sponsors, typically claimed between Cargill and other project sponsors following a cost-share approach. This approach is aligned with the guidance in the updated VWBA 2.0 draft installments available in the public domain (WRI et al. 2023). Benefits can be shared between project sponsors that share the part of the value chain where the benefits are generated, upon prior mutual agreement between project sponsors, in alignment with the GHG Protocol.

Tracking

Cargill tracks progress towards the supply chain water targets on an annual basis by documenting evidence to confirm the following:

- **That the actions have been implemented as planned**, including actions inside Cargill's value chain (i.e., avoid, reduce, restore, regenerate) and in the watersheds surrounding Cargill's value chain (e.g., restore, regenerate).

- **That the water availability or quality benefits have been delivered,** through direct measurements or, when direct measurement is not possible, through scientifically credible modeled estimates. Due to the scale of Cargill's activities and value chain, Cargill may modify quantification and modeling approaches recommended in VWBA 2.0 for application at a landscape level rather than a project level. When using modeled estimates, following the guidance outlined in VWBA 2.0, Installment 3 "Principles for Tracking and Reporting VWBs" (WRI et al. 2024), Cargill also confirms that project and context-specific performance factors required to sustain the water availability or quality benefits over time are still in place, for example:
    - Legal agreements (e.g., contracts with farmers),
    - Structural components (e.g., irrigation infrastructure or decision-making technology), and
    - Operational or behavioral components (e.g., farmer management practices).

Key terms

Agricultural land within Cargill's value chain: area of land that is controlled or owned by Cargill suppliers or customers of agricultural materials and commodities.
Allocation: the distribution of water benefits among organizations when multiple organizations contributed towards generating a common water benefit.
Claim: any statement, accounting, or communication regarding the delivery of existing or anticipated water benefits resulting from voluntary actions taken by the entity making the claim.
Enable water positive impact: to provide the means or ability to effectively improve watershed health by addressing the shared water challenges of availability, quality and access to safe drinking water, sanitation and hygiene (WASH), using an approach that is informed by local context.
Pressures: Human activities that directly or indirectly change the state of the environment and ecosystem, as defined in the SBTN glossary.
Project implementer: organization responsible for carrying out a project, either directly or indirectly through a third party, and delivering the desired outcomes.
Project sponsor: organization or individual providing funds for a project or to the organization responsible for carrying out a project.
Value chain: all the upstream and downstream activities where Cargill has the ability to generate benefits by leveraging business activities, including all scope 3 categories as defined in the GHG protocol.
Water target accounting: actions and processes of quantifying, attributing, and tracking progress towards a water target.
Watersheds surrounding Cargill's value chain: area of land adjacent to Cargill suppliers or customers of agricultural materials and commodities that channels rainfall, snowmelt, and runoff into a common body of water.

Acronyms

CPG	Consumer Packaged Goods
GHG	Greenhouse Gas
SBTN	Science Based Targets Network
VWBA	Volumetric Water Benefit Accounting
WRI	World Resources Institute

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