

September 2024

Volumetric Water Benefit Accounting | Protocol and Messaging

PROCEDURE OWNER: Insights Department

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Procedure Overview

Volumetric water benefit accounting (VWBA) is a methodology developed and published by World Resources Institute, LimnoTech, Quantis, and Valuing Nature in 2019. It provides corporate water stewardship practitioners with a standardized approach and set of indicators to quantify and communicate the volumetric water benefits of activities that contribute to meeting SDG 6 targets and help solve shared water challenges. [The published paper is found here.](#)

In FY21 and FY22, Water.org piloted how to measure, verify, and report upon volumetric water benefits to restricted donors including AWS and Target. We found this measurement is important to corporate donors and we can readily provide the data inputs for the volumetric measurement for most of our direct and collaborative interventions.

Water.org measures impact primarily as people reached and capital mobilized, as they best align with how we work and what donors care about most. For some funding partners (primarily corporate partners and some cause marketing supporters), there is a desire to communicate impact by volume. The team agrees to use this with specific partners only if the above metrics are not sufficient for the partner's impact measurement and communications needs. The team agrees that this impact metric will not be communicated universally as a primary measure of impact for the organization for several reasons, including to ensure we don't overstate or overcount our total impact or detract from the truest, most accurate impacts of our work.

Therefore, Insights, Strategic Development and Marketing have agreed to have the estimated volume impact data and messaging available for specific use cases, as they arise. Details on the protocol for use cases and messaging, as well as background on revenue opportunities and our positioning and methodology are below. This document is for use in FY24 and beyond and will be revisited as needed, as Insights continues to work with LimnoTech to ensure our volume impact metric calculations are accurate. Insights will assess the current method annually and work with Marketing to update the messaging accordingly.

Protocol for use cases

Using the protocol below, we can forecast and report upon volumetric water benefits to unrestricted, flexible, and restricted donors, as determined by the fundraising team and specific relationship managers.

Criteria for use

- Insights, Marketing, and Strategic Development agreed to using the threshold of \$250,000 for unrestricted gifts, flexible funding, and restricted grants.
 - Below this threshold, donors will be asked to cover the costs of volumetric verification either by contracting directly with LimnoTech or by adding on to their donation to Water.org to cover verification costs.

- Above the threshold, Water.org will budget for volumetric water benefit verification in restricted grants or use Insights Department budget to pay for LimnoTech verification for unrestricted donations.
 - A donor may also group verification across multiple unrestricted, flexible, or restricted grants if the total gift exceeds \$250,000.
 - In rare circumstances, an exception may be made for consumer campaigns for cause marketing supporters. This metric will only be offered as a last resort.

Restricted grants

- In restricted grant proposals, the total water benefit can be forecasted as 7,300 liters per year multiplied by the number of people reached with water, based on the planned number of people reached and percentage of people reached with water in the specified countries (FY23 approved number).
 - For guidance on including this metric in restricted grant proposals, visit this document: [VWBA Guidance for Proposals.docx](#)
- Estimated volumetric impact can be provided throughout the course of the grant. For final reporting on the grant, LimnoTech will need to verify actual volumetric water benefits figures prior to Water.org sharing externally with the donor. Thus, the relationship manager will need to engage Insights to contract LimnoTech on a case-by-case basis to verify the measurement that we can attribute to the donor.
- Often, donors want to include all impact associated with their restricted grant in the verification so it is important to allow six weeks following the grant completion date for all partner reports to be submitted before the LimnoTech verification can begin.
- Messaging details are below.

Pooled Funding

- With Pooled Funding, the volumetric water benefit will be determined based on the impact directly attributed to the fund.
- Estimated volumetric impact can be reported in pooled fund update reports by multiplying the number of people reached with access to water by 7,300 liters per person per year.
- Insights will contract with LimnoTech to verify the volumetric impact of the fund every year.
- For messaging, we will report on the total impact of the pooled fund rather than attributing impact to fund donors based on the proportion of their funding.

Unrestricted or Flexible Funding

- LimnoTech will be responsible for estimating the volumetric measurement based on our people reached with water improvements. Water.org will provide LimnoTech the number of people reached by water improvement for verification on an annual basis.
- Based on LimnoTech's reports, Water.org can use that information to estimate volumetric impact from unrestricted and flexible donations.
- Volumetric impact from unrestricted donors will be calculated using the global cost per person (currently \$5). Once the number of people reached with water is determined, we will multiply by 7,300 liters per person per year to determine the total estimated volumetric impact.
 - The total water benefit can be forecasted by using the gift range metric tool. As an example, an unrestricted gift of \$5,000 would result in approximately 2.9 million liters per year. This is based on the planned number of people reached and the cost per person reached (FY23 approved number).
 - To include this metric in unrestricted or flexible funding proposals, use the calculation below and confirm the number is correct with Insights before sharing with a potential donor.

- For flexible funding, Insights and Finance will determine the appropriate cost per person based on the restrictions. From there we will multiply the estimate of people reached with water by 7,300 liters per person per year to determine the estimated volumetric impact.
- For reporting, LimnoTech does not need to verify the impact of unrestricted or flexible funding donations, however, Water.org will have our total volumetric impact verified annually.

Cause marketing supporters

- In rare circumstances, and only as a last resort to secure a partnership, Marketing may choose to offer this impact metric to cause marketing supporters for use in their per purchase consumer communications.
- The full perspective, calculations and messaging details are located here: [2022-10-13 POV on volume metric for cause marketing.docx](#)

Messaging the impact

Recommended language for use:

This [\$X] donation will empower [X number] of people with water access, providing an estimated [X number] liters per year.

Messaging requirements:

- The volume/liter benefit comes AFTER we empower people with access to safe water through small loans. It's an estimated result of empowering people with household water solutions, not HOW we do it.
- Volumetric impact should be counted 90 days (about 3 months) after the loan is disbursed to account for the time it takes to buy or build the improvement.
- In LimnoTech verification reports, impact is typically counted for 10 years.
- The message can be customized to add details specific to the donor's work, if there's a time or a specific region, as needed.
- It's important to note that the number of liters of water per year is estimated – whether using in a proposal or a report.
- Estimated volumetric impact can be included in proposals, restricted grant reports, and unrestricted gift reports. For donors to share volumetric impact numbers publicly, LimnoTech must verify the impact (this applies to restricted, unrestricted, or flexible funds).

Watch-outs:

- Do not mention "offset" or "positive net gain in water volume" – Unless implemented in a specific intervention, our programs do not return water back into the environment. Thus, these terms are inaccurate and misleading and must be avoided in all related communications.
- Do not mention the cost per cubic meter of water provided in external documents. While this can be calculated with accuracy, it dehumanizes the purpose of the investment (lives changed). Furthermore, the cost per cubic meter may vary significantly from one project to the next. Donors are welcome to calculate this on their own, but it should not be a selling point from Water.org.
- The volume impact metric, whether in a proposal or a report, is all estimated impact. Thus, we need to ensure we are not overly promissory or misleading when sharing this estimated volume impact metric. Keep the messaging general, in alignment with what's provided above!

Reference: Background on revenue opportunities

Strategic Development claims to find value in reporting the volumetric water benefit to donors, particularly corporate donors with environmental, social, and governance (ESG) goals. Water access is an important part of water stewardship outcomes and is included within the volumetric water benefit.

Volumetric water benefit accounting is a tool to support fundraising. A growing cohort of members from the Water Resilience Coalition and corporate donors, including AWS, Gap, Microsoft, RB, Stella, and Target, are interested in tracking and communicating the volumetric water benefit of their support of Water.org, in addition to other key measures including people reached, loans disbursed, and capital mobilized. For some donors, the volumetric benefit may be the preferred metric for connecting the donor's commitment to improving equitable access to water with their corporate ESG goals.

In addition to supporting revenue, we are well-positioned to facilitate collaborative efforts among members from the Water Resilience Coalition and other corporations to create together a framework and process for implementing the methodology and vetting the results. In theory, this could lead toward increased awareness among corporations about the importance of water access and how it ties into their ESG goals.

Reference: Current positioning on the methodology

The methodology offers a clear way to measure the volumetric water benefit that results from our work. We can easily track water access and verify it through our standard monitoring operations. However, we also recognize that the methodology does not give us perfect information, which is why it is important to continue to have LimnoTech verify the measurement and provide donors with benefit summaries.

How VWBA factors into our work

The VWBA fits within our work because it includes access to water to meet Sustainable Development Goal 6. Our VWBA and our work fit within water stewardship as well:

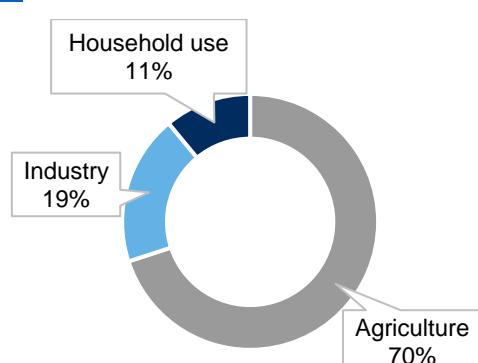
- We align with the widely used Alliance for Water Stewardships definition: "The use of water that is socially and culturally equitable, environmentally sustainable and economically beneficial, achieved through a stakeholder-inclusive process that includes both site- and catchment-based actions."
- The provision of safe water for all is a recognized integral part of water stewardship. Read more about our work and water stewardship in our ESG messaging, [found here](#).

Volumetric water benefits are the volume of water resulting from water stewardship activities, relative to a unit of time, that modify the hydrology in a beneficial way, including helping to meet the targets of Sustainable Development Goal 6.

A double-edged sword?

Access to water for human consumption could be viewed as a double edge to corporate ESG goals because water is consumed (as opposed to restored) and often in water stress areas where we work.

However, household water consumption (our work) accounts for less than 11% of global water use. It is not a major contributor to water



stressed basins compared to agriculture and industrial uses¹. Household water consumption is part of water stewardship – healthy communities depend on healthy freshwater ecosystems, and WASH services are the foundation of community and ecosystem health.

Ways that the methodology does NOT tie into our work

We are not using the volumetric benefit as a water offset – our focus is not about returning water back to the environment, but rather enabling households to have access to basic and safely managed water to meet their basic needs. While we do have some efforts like rain roof harvesting that can help provide additional water supply in high water stressed basin areas, this is less than 1% of our work to date and further information is needed to better understand the degree that rainwater is sufficient to meet household needs throughout the year.

Accordingly, companies will not be able to claim that they are “offsetting” their water use footprint (in operations and across their supply chains) by supporting our work. They are not replenishing water in basins in which they or their supply chains operate when they fund our work. Instead, donor investments are helping those in poverty gain access to improved water sources in those basins (or others if that is the case) – resulting in a more equitable distribution of water resources.

Reference: Methodology

During the FY21 pilot period, we worked with LimnoTech to vet and “certify” the volumetric impact calculation for corporate donors. This 3rd party certification process gives the measurement independent credibility as well as the opportunity to learn and evolve our approach.

The volumetric water benefit is calculated using the Volume Provided Method (Reig et al., 2019). The volume is calculated based on the number of direct beneficiaries receiving reasonable access to water, estimated at 20 liters (5.3 gallons) per person per day.

Calculations (for restricted grants): liters per year per person

The calculation looks at the rate of liters provided each year based on number of people reached with improved access to water or water & sanitation.

$$\text{Number of People Reached with Water} \times 7,300 \text{ LPY} = \text{Annual Rate Liters Access}$$

7,300 Liters per person per year is determined based on 20 liters per person per day for 365 days each year (Reig, 2019).

We then take the number of people reached with access to water (water + water & sanitation) and multiply it by 7,300 to get the rate of liters per year.

Example:

If a family of 4 takes out a loan for a water tap, their annual rate of improved access is:

$$4 * 7,300 = 29,200 \text{ liters per year}$$

Thus, the family is using an estimated 29,200 liters per year from their water improvement for drinking, cooking, and bathing.

Calculations (for unrestricted or flexible funding) – liters per year per person

¹ Our World Data. Accessed 3/31/20: <https://ourworldindata.org/water-use-stress> and from Food and Agriculture Organization of the UN. Accessed 3/31/20: <http://www.fao.org/aquastat/en/overview/methodology/water-use>

Based on the donation amount, we use the cost per person (global or regional) to determine how many people are reached. We then take the total people reached and multiply by the percent reached with water or water & sanitation.

$$\text{Step 1: } \frac{\text{Donation (USD)}}{\$5 \text{ Cost per person}} = \text{Total people reached}$$

$$\text{Step 2: } \text{Total people reached} \times \% \text{ people reached with Water} = \\ \text{People Reached with Water}$$

$$\text{Step 3: } \text{People reached with water} \times 7,300 \text{ liters per year} = \text{volume provided per year}$$

Example:

Step 1: \$5,000,000 donation divided by our \$5 cost per person = 1 million people reached.

Step 2: Given our current global percentages, 40% are reached with access to water or water & sanitation. This means 400,000 people gained access to water.

Step 3: Multiply people reached with water by 7,300 liters per year to get the estimated volume of water provided.

$$400,000 \text{ people reached (water)} \times 7,300 \text{ liters per year} = 2.92 \text{ billion liters per year}$$

Calculations (for cause marketing) – liters per year per person

In rare circumstances, cause marketing partners may be interested in communicating the volumetric impact of their contributions.

The “Volumetric Gift Range Metric” tab in our CPP spreadsheet [here](#) allows us to approach the calculation by entering either the donation amount or the number of liters the company is interested in providing, depending on what information is provided. For messaging examples, please see [Impact in Volume](#).

As with other volumetric calculations, we recommend vetting the final impact figures through LimnoTech.

Data and assumptions:

The above calculation includes the following:

- For Liters per Person per Day (LPD) we use 20 liters per person per day based on U.N. minimum standards² (WHO 2013). This is an assumption.
 - We believe this is a conservative estimate of water use across geographies.
 - If additional metered water use data indicates a different rate of consumption, we can adjust the calculations accordingly. We anticipate some donors will be interested in funding research to determine average water use at the household level.
- Liters per Person per Year (LPY):

$$20 \text{ LPD} * 365 \text{ days} = 7,300 \text{ Liters per person per year}$$

- We will only count people reached through the aggregate categories of water and water & sanitation.

² World Health Organization. 2013. “How much water is needed in emergencies.”

https://www.who.int/water_sanitation_health/publications/2011/WHO_TN_09_How_much_water_is_needed.pdf?ua=1.

- Water quality and sanitation improvements do not represent water volume accessed and these categories will not be included in volumetric water calculations.
- Impact from Direct (level 1) and Collaborative (level 2) interventions are eligible to be included in the calculation based on the level of information we can obtain. For example, level 1 partners typically provide geographic data which can be used to provide greater detail into where the water benefit is occurring. Level 2 partners do not typically report geographic data resulting in high level figures that cannot be mapped.
- We will include new, repaired, or maintained water improvements.
- For most benefit summaries, LimnoTech counts the volumetric benefit for 10 years.
- Typically benefit summaries are completed following the end of a grant to ensure that all impact is counted towards the volumetric water benefit reporting. Because of the delay in partner reporting, we suggest that final impact numbers be provided to LimnoTech eight weeks following the completion of a restricted grant to ensure all impact is included in the benefit report. Insights should coordinate with finance prior to the close of the grant to accrue costs associated with LimnoTech verification.

Examples of language that has been used (prior to February 2023 evaluation):

- AWS: "These projects provide 500 million liters of water annually to people who previously lacked consistent access to clean water. With reliable access to water, health is improved, kids stay in school, income increases, and opportunities for women and girls expand," said Michael Mayernik, Water.org head of corporate partnerships. "Water is the way to break the cycle of poverty, to protect and save lives, and to make a more equitable future possible."³
- AWS: See their 2 pager on water positive methodology.⁴
- AWS: "For example, in regions like Maharashtra and Hyderabad, India, and West Java, Indonesia, AWS is partnering with global clean water nonprofit Water.org to provide 250,000 people with access to safe water and sanitation. Building on its existing portfolio of water replenishment programs, AWS today announced several new projects, which, once completed, will provide more than 823 million liters of water to communities each year"⁵
- Amazon: Amazon's \$10 million donation will directly empower 1 million people with water access by 2025, providing 3 billion liters of water per year in areas facing water scarcity.
 - *Calculation note – \$10 million donation of which \$5M is unrestricted (\$5 cost per person = 1 million people reached). On average 45% of people reached receive water (or water & sanitation). This means 450,000 people reached with water X 7,300 liters per person per year or 3.2B liters of water per year. ← This is the math Insights helps with!*
- Ecolab: XX liters per year of recurring volumetric water benefit in high-stress river basins that overlap with operations. (Before committing to reporting this level of detail with a donor, please check with Insights. Not all partners provide details at this level.)

The method provides guidance to how we can determine the volumetric water benefit of people reached with increased access to water through our partners:

"If metered data are not available, the volume provided can be based on the number of beneficiaries with reasonable access and a conservative estimate of per-capita volume provided... Without metered data, the annual volume provided can be calculated by multiplying the number of beneficiaries by 20 liters per person per day and 365 days per year" (Reig 2019).

³ <https://www.aboutamazon.com/news/aws/water-org-wateraid-and-aws-collaborate-to-provide-safe-water>

⁴ <https://sustainability.aboutamazon.com/aws-water-positive-methodology.pdf> and

<https://sustainability.aboutamazon.com/environment/the-cloud/water-stewardship>

⁵ <https://www.businesswire.com/news/home/20221128005256/en>

Reference: Global Volumetric Water Benefit Messaging for UNR Donors

Water.org tracks the volumetric water benefit (VWB) for many restricted donors so that these donors can report on this important metric to external audiences.

This document provides guidance on how to message the global volumetric water benefit for UNR donors. In FY24, Water.org verified volumetric water benefit for all impact over the past 3 years. This guidance is primarily for the Revenue and Insights teams to effectively use the resources developed by LimnoTech.

Background

In June 2024, LimnoTech verified the overall volumetric impact of all Water.org programming for each country from October 2020 to December 2023. They verified and provided aggregated volumetric benefit quantities based on fiscal and calendar years at the country level. Having these details enables us to report on UNR donations with confidence knowing that the underlying volumetric impact has been vetted.

Often our volumetric water benefit impact is associated with restricted grants that require close vetting with third parties before impact claims are shared externally. Because Water.org has verified our total volumetric impact, we can report impact claims to UNR and lightly restricted donors who may also be interested in reporting this KPI.

Outputs

LimnoTech produced a memo and workbook as part of verifying Water.org's global volumetric water benefit.

- Memo: [Global_Water.org_VWB_Memo_20_June_2024.pdf](#)
- Workbook: [Water.org 2020-2023 Global VWB.xlsx](#)

The Memo outlines the methodology, data, assumptions, calculation and results of their analysis. Between October 2020 and December 2023, Water.org reached more than 13.8 million people with access to water resulting in volumetric benefit of 100,775.8 million liters provided per year.

The workbook contains two tabs; one structured around the calendar year, the other structured around Water.org's fiscal year. Each tab shows the country, month, total people reached, people reached with water, and volumetric water benefit. In the following example, we see the impact from Bangladesh for Fiscal Year 2021 which resulted in 6,781.4 million liters of volumetric water benefit per year.

Country/Year	Month	Year	New People Reached (all)	New People (volumetric loans only)	Volumetric benefit (ML/yr)
				FY2021	
Bangladesh	October	2020	181,981	64,543	
Bangladesh	November	2020	208,755	78,007	
Bangladesh	December	2020	286,826	112,379	
Bangladesh	January	2021	274,740	111,464	
Bangladesh	February	2021	273,571	113,706	
Bangladesh	March	2021	302,672	127,885	
Bangladesh	April	2021	73,615	26,453	
Bangladesh	May	2021	81,540	33,745	
Bangladesh	June	2021	256,215	105,933	
Bangladesh	July	2021	4,980	1,925	
Bangladesh	August	2021	152,858	56,966	
Bangladesh	September	2021	261,244	95,959	6,781.4

The Outputs are in megaliters per year (ML/yr). A megaliter is equal to one million liters. This can be converted to millions of gallons by multiplying the amount in megaliters by 0.264172.

$$1 \text{ megaliter} = 0.264172 \text{ million gallons}$$

Why is this important?

This information can be used by Water.org in a variety of ways:

1. **Quantifying UNR donations:** Previously, we contracted directly with LimnoTech to quantify unrestricted gifts using our \$5 cost per person and assumptions around how many people were reached with access to water. This analysis gives us greater confidence in reporting the impact of UNR gifts because *all* Water.org impact has been vetted by Limnotech. While we cannot attribute volumes in specific countries to UNR donors, we can have confidence in their overall volumetric impact. More on how to quantify UNR donations below.
2. **Impact reporting:** The data helps track the performance and impact of our water access projects which can be reported internally in impact reports (updated annually) and externally in annual reports, donor impact reports, as well as in presentations to stakeholders, donors, and partners.
3. **Strategic fundraising:** Through the linked workbook, we can quickly identify which countries are significant contributors to volumetric water benefit and which have limited volumes. This information should be used to inform where we pitch restricted grant proposals for those donors for whom VWB is a critical metric. Likewise, we can encourage funding to regions with less VWB for those donors less interested in tracking or quantifying the volumetric benefit of their work.
4. **Donor proposals:** By vetting our volumetric water benefit, we showcase our ability to deliver quantifiable volumes across our portfolio of countries. We have an evidence base through our previous restricted grants and now at a global level of reaching people with access to water in a way that yields quantifiable volumetric benefits. The numbers in this report can be included in donor proposals to articulate our past impact and commitment to quantifying their volumetric benefit.
 - a. **Geographic pooled fund example:** If pitching a geographic pooled fund for Latin America, and you want to share previous verified impact from the region, you can add up the volumes for Brazil, Mexico, and Peru for the previous calendar year in the workbook. Doing so would result in a total of 6.5 million liters of water via volume provided for 2023. We recommend that in addition to the volumetric water benefit, you also include the total number of people reached with access to water (902,631) and the total number of people reached (992,621). These figures help provide context and re-emphasize the importance of people reached as the primary metric. Be sure to calculate the people reached based on the latest [donor impact estimator](#).
5. **Advocacy and communications:** Sharing success stories and impact metrics with the public and media can further advance Water.org's mission and highlight the importance of water access. People reached will continue to be our headline message and volumetric water benefit gives us one additional metric to showcase our impact.

Messaging volumetric water benefit

Why it matters:

Tracking and communicating volumetric water benefits are important primarily to corporate donors with water stewardship or sustainability targets. The VWBA framework provides a standardized approach for measuring the positive outcomes of managing water carefully. For the vast majority of Water.org's target audiences, volumes of water are abstract and somewhat meaningless. However, for some donors, our ability to track and report on volumetric benefit as a metric may mean the difference between donating to Water.org or donating to another entity in the water stewardship space.

Just like GAAP (Generally Accepted Accounting Principles) is a set of rules and standards used in finance to ensure that financial statements are consistent and accurate, Volumetric Water Benefit Accounting (VWBA) is a specialized framework used in water management to measure and report water-related benefits. GAAP is mainly important to those involved in finance, VWBA is most relevant to professionals working in sustainability and corporate water stewardship. Most of our audience doesn't need to know about VWB but for some donors, it's important.

Volumetric water benefit accounting (VWBA): Method to estimate the volumetric water benefits of water stewardship activities, and associated guidance related to planning, project selection, and assessment.⁶

Volumetric water benefits (VWBs): Water stewardship activity outputs, estimated in volume per unit of time, that help reduce shared water challenges.⁷

Volumetric water benefit accounting allows us to systematically measure the amount of water people gain access to for their own personal use. It's one more way to measure the impact of our work in addition to people reached, loans disbursed, and capital mobilized.

Recommended language:

- Option 1, "this [\$x] donation will help empower [x number] of people with safe water access, providing an estimated [x number] liters per year."
 - "This \$250,000 donation will help empower 20,000 people with water access, providing an estimated 146 million liters per year."
- Option 2, "this [\$x] donation will help provide an estimated [x number] liters of water per year."
 - "This \$250,000 donation will help provide an estimated 146 million liters of water per year."

Watch-out:

- Do **not** mention "offset" as our programs do not return water back into the environment.
- We cannot count volumes for specific geographies when the donation is unrestricted. Only restricted donations yield volumetric impact that can be traced to specific geographic locations.
 - However, flexible funding allocated to specific regions can be broadly estimated based on the process outlined above. Using the [Flexible Funding Forecast](#) tab, you can determine the estimated VWB based on the donation amount, regional CPP, and percentage of people reached within the region gaining water access.

Additional examples of how to use these global verified volumetric benefit figures will be added as needed.

⁶ Reig, P., W. Larson, S. Vionnet, and J.B. Bayart. 2019. "Volumetric Water Benefit Accounting (VWBA): A Method for Implementing and Valuing Water Stewardship Activities." Working Paper. Washington, DC: World Resources Institute. Available online at www.wri.org/publication/volumetricwater-benefit-accounting.

⁷ Ibid.