What the Customer Thinks

Customer Attribution and the Role of Safe Water Enterprises in Social Impact Evaluation

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The Safe Water Enterprise Community of Practice (CoP) captures the collaborative efforts of seven implementers working to increase the prominence of SWEs to attract more financing to the sector, improve sector policies and strategies for a more favorable environment, strengthen best practices through information exchange among the members, and ultimately increase the impact of SWEs.

The CoP's research was done with the participation of the following organizations.

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Executive Summary

Water, sanitation, and hygiene (WASH) programs are intended to improve health through clean water and sanitation, which is why many imagine that evaluating health outcomes is the best way to measure success in these programs. Though this approach proves challenging as it is difficult to show causal links between the introduction of clean water and better health outcomes even in randomized control trials (RCTs). Moreover, societies will only gain the health benefits of clean water if a sizeable percentage of people commit to purchasing and drinking safe water regularly. Therefore, driving consumption is a prerequisite for achieving health benefits and customer satisfaction and attribution can be meaningful proxies for achieving impact.

Safe water enterprises (SWEs) are uniquely positioned to capture data on customer perceptions. The SWE business model already relies on increasing consumption for the benefit of customers and station sustainability. Understanding what motivates customers to purchase water is ingrained in the SWE practice. In effect, the capabilities and incentives of SWEs align with the pursuits of social impact evaluation, which presents an opportunity for implementers to contribute a rich layer of social impact data to the existing body of research, while simultaneously improving service delivery and financial sustainability.

The role of SWEs and their contribution to social impact evaluation is an important discussion for catalyzing funding to the sector. While the impact investing market has grown 10 times since 2012, WASH projects make up only 6% of assets under management. In a survey of 284 impact investors, representing $404 billion in assets, "sophistication in impact measurement and management" was rated as the greatest challenge to market growth over the last 10 years.[1] Clarity on this matter also poses a challenge to implementers, who see a disconnect between what they can and should measure with what external partners expect from them.

The Community of Practice (CoP) launched a *Social Impact Measurement Initiative* to tackle this challenge through a collaborative project with 14 SWEs. The project included a survey, follow-up interviews, workshops, and small working groups. The findings from this initiative highlighted areas of improvement, but they also helped the CoP define the role of SWEs in social impact evaluation and highlight the unique assets of the SWE model that make them ideal to collect customer-centric data.

Findings from the Social Impact Measurement Initiative are as follows:

- **Demonstrating causation is challenging for WASH interventions:** Research that shows causal links between safe water and improved outcomes can be difficult, even for research institutions. Implementers face the same challenges and attempting this resource-heavy task could detract from funds for program development and expansion. Moreover, the benefits of safe water are widely known and accepted.

- **Customer attribution is a powerful tool to demonstrate social impact:** This data demonstrates that customers believe safe water improves their life and this is a prerequisite for achieving outcomes. The greater value that customers place on safe water, the more likely they are to drink it and thus the more likely they are to see health and productivity benefits.
- **Implementers are uniquely poised to deliver customer attribution data**, as customer feedback is the foundation for improving service delivery. As such, the experience and access that SWEs have to customers is an asset for social impact evaluation.
- **There is an appetite for collaboration and benchmarking among safe water enterprises:** Implementers are eager to learn new methodologies for collecting social impact data that is right for SWEs. Many implementers want to work toward shared metrics and methodologies and are looking to increase evaluation capabilities and customer-experience data.

1. Hand, Dean, Hannah Ditrich, Sophie Sunderji, & Noshin Nova "2020 Annual Impact Investor Survey" Global Impact Investing Network, June 11, 2020.

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Introduction

Safe water enterprises (SWEs) are foremost interested in developing sustainable decentralized water systems. These systems require a synthesis of innovations to address multiple market challenges such as saving mechanisms for asset renewal, preventative maintenance teams, and experiential marketing techniques. Altogether, these innovations are driving toward one cohesive goal: for customers to purchase sufficient clean water to sustain a healthy lifestyle. To reach this goal is to forge a virtuous cycle where customers support sustainable water systems and the latter provides a service tailored to the customers' wants and needs.

Customer satisfaction and customers' attribution of benefits to the SWE intervention can thus become a proxy for achieving the double bottom line. These metrics are key to supporting the financial requirements of an enterprise model, but they are equally necessary for achieving the health and productivity benefits of drinking clean water.

SWEs have attributes that uniquely position them to capture this type of data such as strong relationships with customers, nuanced knowledge on implementation, and existing data management systems. This capability is an asset to enhance the existing body of research on social impact in WASH, which has evolved from financial measures such as income and wealth to a range of non-monetary and multidimensional measures of welfare that capture the complexity of human development. Scientific research has done a good job of demonstrating the links between contaminants and water-borne illnesses, which promotes the understanding that clean drinking water will lead to improved health and productivity. Subjective measures provide insight into whether customers' experience their lives better due to an intervention, but they also create a bridge between the health outcome purported in scientific research with the required uptake by customers to engage with the intervention. SWEs can offer a value-add to this research by uncovering the ideal implementation strategies to promote the consumption of safe water through their own evaluations of customer perceptions.

Impact evaluation is also a tool to catalyze funding. The practice can also be a tool to catalyze funding. The market for impact investing and results-based financing grew substantially over the past 10 years. Government investments are also guided by impact data that informs policy-making practices like cost-effectiveness and cost-benefit analyses. In addition, measuring outcomes across implementers creates the opportunity for benchmarking, which facilitates collaboration and efficient resource allocation. In order to reap the full benefits of these funding opportunities, SWEs must take the steps to understand specific challenges in their sectors and advocate for their role in delivering customer perception data and the value of this data in achieving outcomes.

To address specific issues in impact measurement for SWEs, the Community of Practice (CoP) launched an initiative with 14 SWEs to improve and align impact evaluation across the sector. We started with a survey and interviews to identify the challenges of impact evaluation that are specific to SWEs. From this we identified skill and information gaps that could be addressed through training and collaborative workshops. This process not only built capacity and alignment in impact measurement for SWEs, but it also highlighted the unique value of SWEs in the social impact landscape as an effective model for capturing customer attribution.

The Landscape of Social Impact Evaluation for Safe Water Enterprises

Social impact evaluation plays a vital role in ensuring that development interventions result in the intended positive impact. The practice also catalyzes funding and strengthens the feedback loop between implementers and customers to improve service delivery. Achieving these goals requires collaboration from all stakeholders. Figure 1 provides an overview of the different actors and their parts in utilizing social impact evaluation for improved service delivery and efficient capital allocation.

Figure 1: Players in the Social Impact Evaluation Landscape

Improving Impact			Improving Capital Allocation		
Research Institutions	**Implementers**	**Customers**	**Convener Organizations**	**Independent Evaluators**	**Investors and Governments**
Conduct evidence-based assessments on interventions to demonstrate causation	Use research findings, cultural knowledge, and customer feedback to design and implement interventions	Interact with implementers to provide quantitative and qualitative feedback on service delivery	Provide guidelines and metrics for benchmarking	Conduct independent studies to validate results for impact investors	Drive funding toward evidence-based interventions that can achieve outcomes

The push for rigorous social impact measurement to direct funding toward the most effective interventions received cross-sector popularity. In the private sector, impact investing rose to prominence as a giving vehicle that evaluates investments based on social and financial returns. The field has grown 10 times since 2012, exceeding $700 billion in assets. This practice includes results-based financing mechanisms and performance-based contracts that emphasize evaluation as a form of accountability—that is, tracking projects against set targets incentivizes better outcomes.

The world of academia and research embraced this practice too. In 2019, the Nobel Prize in economics was awarded to Esther Duflo, Abhijit Banerjee, and Michael Kremer for pioneering experimental research methods that now pervade the field of development economics. Their approach involved the use of field experiments to complement randomized control trials based on precise research questions with a narrow scope. Their approach also integrated the use of behavioral nudges, which emphasizes the role of customer perceptions in development interventions. These methods have successfully prompted investment and policy changes. One notable example was an experiment that linked a reduction in student absenteeism with school-based deworming in Kenya. This resulted in government investment in a nationwide fecal survey and mapping exercise and the national scale-up of school-based deworming.

Implementers operate between these worlds – trying to catalyze funding from the private sector and governments while using research findings to guide program design. Research forms the basis of many assumptions that underlie theory of change models and the selection of outputs and outcomes. However, ultimately the goal of monitoring and evaluation is to inform strategy and help implementers decide where to focus their resources.

Convener organizations and independent evaluators lend credibility to implementers' work. Independent evaluators provide cost-effective, objective reviews of results-based funding projects whereas convener organizations provide space for implementers to share best practices. Some of these organizations have attempted to standardize impact metrics such as the Global Impact Investing Network (GIIN)'s IRIS+ Catalog of Metrics or the United Nation's Sustainability Development Goals (SDGs).

The IRIS and SDG metrics mostly center around access, reliability, and environmental impact. They do not broach the long-term outcomes of SWEs, such as improving livelihoods or building capacity. The lack of shared metrics or evaluation practices around these outcomes is a pain point for both implementers and investors. In a survey of 284 of the world's leading impact investors that manage over 50% of assets under management, GIIN found that "sophistication of impact measurement and management practice" was the greatest challenge to market growth. Currently, WASH projects represent only 6% of impact investing assets. Thus, refinement of impact measurement and management is a necessary step to catalyze funding in decentralized water.

The Current State: The Challenges and Practices of Social Impact Evaluation

While the health benefits of safe drinking water are widely known and accepted, demonstrating causal links between SWE interventions and social and economic benefits is particularly challenging. Safe drinking water has the potential to improve many facets of life, yet it is impossible to eliminate omitted variable bias in an uncontrolled setting. Moreover, studies that attempt to demonstrate these links are also resource-intensive and could siphon funds from program development.[3] The inability to demonstrate these links can be an obstacle in fundraising, especially among impact investors. In March 2021, Safe Water Network launched a survey with 11 other SWEs, which asked six (6) questions on

Figure 2: Social Impact Survey Questions

Survey Questions

1. **What indicators do you use to measure social impact?**
2. **What methods do you use to collect social impact data?[4]**
3. **How frequently do you collect social impact data?[5]**
4. **What challenges do you run into in collecting and/or analyzing social impact data?**
5. **What do you think funders should know about measuring social impact for small water enterprises?**
6. **Are you currently or have you ever received funding for a program where the payment was contingent on social outcomes? How successful was the program? What were the lessons learned?**

3. See Appendix 1.
4. For responses on methodology, see Appendix 2.
5. For responses on frequency of collection, see Appendix 3.

methodology, experience, and pain points (see Figure 2). The objectives of the survey were to understand how SWEs are evaluating social impact, the challenges they face, and what they would like to communicate to funders. The goal was to develop solidarity around the role and practices of SWEs in impact evaluation. Consensus would help SWEs benchmark and give leverage to our findings.

After the survey was completed, we conducted follow-up interviews with participants to drill deeper into their answers and needs. The survey and follow-up interviews had three key findings:

- **Indicator Misalignment:** Implementers use a variety of metrics for social impact evaluation, but there is minimal overlap among different organizations. Of the 34 indicators listed, only eight (8) are shared by more than one implementer, making 76% of indicators unique to one SWE.
- **Mismatch of Expectations:** There is a mismatch of expectations between what implementers can and should do with what funders want to see.
- **Information Gap:** Implementers expressed a need to learn more evaluation methodologies that could be applicable for nonprofits or social enterprises.

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Indicator Alignment

Implementers were asked to provide the indicators they use for social impact. Altogether, the participants listed 34 indicators. Of these indicators, 76% were unique to one SWE and there was only an overlap of eight (8) indicators:

1. People with access (*n = 7*)
2. Water quality (*n = 4*)
3. Number of consumers (*n = 3*)
4. Jobs created (*n = 3*)
5. Water consumption (*n = 2*)
6. Time spent fetching water (*n = 2*)
7. Measure of equipment functionality or reliability (*n = 2*)
8. Distance to water source (*n = 2*)

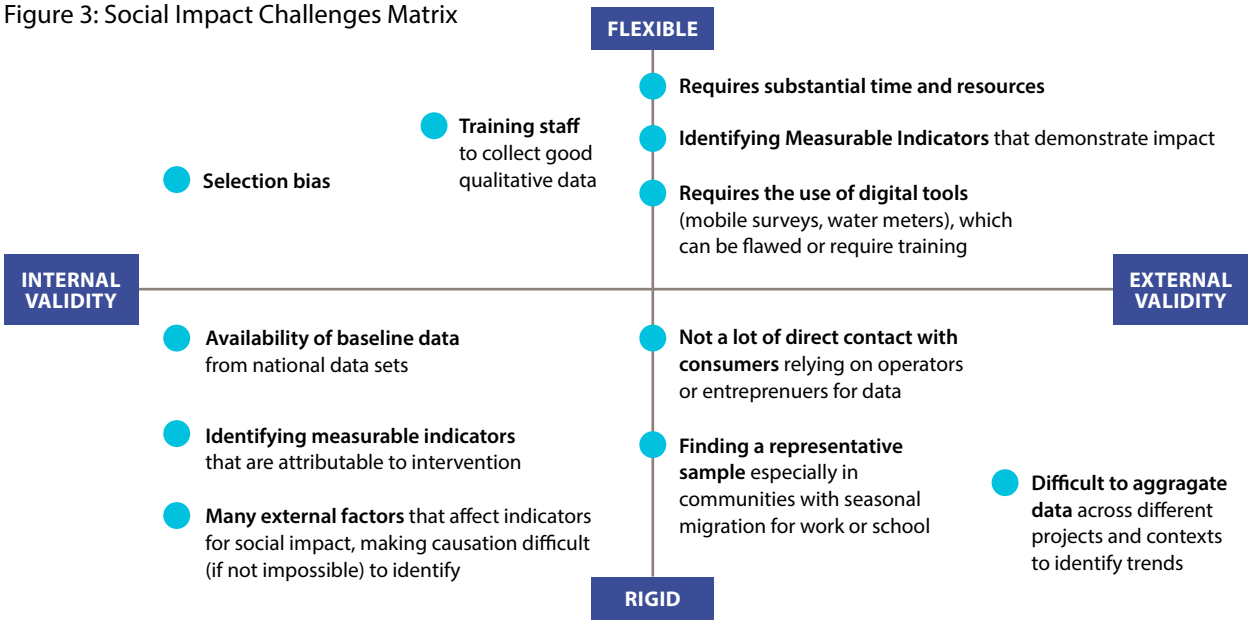
This data points to two initial findings: 1) There is considerable variation in the way SWEs measure and define social impact, and 2) some indicators like *people with access* are likely tracked by most implementers but only considered social impact indicators by some. This means there may be disagreements on how implementers draw links from indicators to outcomes.

There was some overlap for impact areas. Other indicators include measures of community trust, jobs created, CO2 emissions, female entrepreneurs, school absenteeism, and hygiene skills. Water quality was mentioned more than once as a health indicator and was the only health indicator specified.

Mismatch of Expectations

The bulk of field implementation funding is directed toward station construction and management. High-level evaluations require substantial resources that could detract from these activities. Moreover, even research institutions have struggled with impact evaluations in WASH. These factors make it difficult to meet the expectations of external partners if they are looking to show causation. In Figure 3, we organized the responses on the greatest challenges to social impact evaluation. The x-axis is a spectrum of internal to external validity.

Figure 3: Social Impact Challenges Matrix



The y-axis is a spectrum from rigid to flexible problems, where rigid problems are immutable and flexible problems can be addressed through the right resources and practices. The inability to demonstrate attribution and large resource requirements were the top challenges mentioned by implementers.

These challenges impact the ability for implementers to meet funder expectations. In addition, there are intrinsic qualities to social impact evaluation that need to be considered during the proposal process. In Table 1, we compiled a list of common obstacles that implementers face when designing evaluation programs. The table also includes suggested design solutions to align the expectations of funders.

Table 1: Common Obstacles and Design Solutions for Evaluation Proposals

Common Obstacle	Design Solution
Social impact evaluation requires substantial time, resources, specialized skills, and capital	Develop cost-effective methods for capturing social impact that don't disrupt normal workflows
It takes a long time to see impact and behavior change. Developing interventions for impact also requires a period of research and cocreation within the community	Set realistic outcomes for the desired timeframe
Trying to evaluate too many impact areas can water down results	Use open-ended questions to allow customer to signal which impact areas they associate with safe water
There is a risk of not meeting targets because service delivery is complex, difficult, and ambiguous	Social impact evaluations should be designed to play to implementers' strengths and outcomes should be attainable in the given context
Quantitative data is sometimes valued more than qualitative data even though both are important to uncover findings	User feedback is valuable and should be incorporated in the evaluation

Information Gap

In follow-up interviews, implementers expressed a desire to learn more about evaluation methodologies for collecting social impact data. SWEs wanted to see what others were doing and develop a process by which we could benchmark and collect data without a disruption to operations.

In a parallel initiative, *Safe Water Enterprise Consumer Knowledge Curation*, the CoP conducted an inventory of customer activation strategies and implementation guidelines from member organizations. Their work synthesized 65 tools and resources across 25 countries. The CoP conducted a survey to identify information gaps, and many organizations said they would like to invest in more customer-experience data. Learning techniques to capture this data is important to their customer activation strategies.

Playing to Our Strengths: The Role of SWEs in Social Impact Evaluation

The findings from our survey and interviews highlighted several areas for improvement. SWEs did not align on impact measurement metrics, which makes it difficult to benchmark progress. There was also a need to build capacity for evaluation methodologies that suited implementers, both in the resources available to them and to the specific strengths of their model.

As a next step, the CoP launched the second phase of the *Social Impact Measurement Initiative* that would consist of workshops and small working groups with 60 Decibels, a social impact measurement company that spun out of Acumen Fund's *Lean Data* approach. Three more SWEs joined the workshop to make a total of 14 participating organizations. The objectives of the second phase were threefold:

1. **Advance Alignment and Coordination on Social Impact Evaluation:** Drive toward clarity and agreement on social impact evaluation through collaborative workshops. The deliverable of these workshops is a *Lean Data* survey that can be customized and organized by impact area. This resource will not only assist implementers in executing evaluations, but also serve as a tool to guide and attract funders with a specific impact focus.
2. **Build Capacity for Social Impact Evaluation:** This project will include deliverables with practical tools for SWEs such as training, standardized surveys, and unique methodologies for gaining insights into customer experience and social impact. These tools and methodologies will be cost-effective and designed for regular evaluation.
3. **Catalyze Funding:** The objective to build evaluation capacity will provide SWEs with the tools for regular and cost-effective social impact evaluation, which can be used to attract funding and bring clarity to the role of SWEs in evaluating impact. Alignment on impact metrics will also provide a foundation to communicate and engage with funders on social impact topics.

Customer Satisfaction is Essential for Selling Water and Achieving Impact

Feedback from the survey broached a question that we explored further in our workshops: *Should SWEs attempt to measure social impact like a research institution?* Robust research has already demonstrated that consumption of safe water leads to benefits in health and productivity. To continuously re-establish these benefits is not only redundant, but also a misuse of resources. SWE resources are best used to deliver safe water and to do it well—a task that requires continuous and meticulous work.

However, social impact evaluation does not have to run counter to selling affordable, safe, reliable water. In fact, sustainable water systems are dependent on a strong feedback loop between customers and implementers that provides SWEs with the information to alter their service and cater to what their customers want. The more implementers provide customers with what they want, the more water people will drink and the more benefits customers can reap. Customer feedback and satisfaction is effectively a bridge that unites the needs of customers, implementers, and funders.

SWEs are uniquely poised to demonstrate customer attribution, which shows whether customers feel their life is improving and if they attribute this improvement to the SWE intervention. This form of social impact evaluation plays to the strengths of implementers. SWEs have close relationships with their customers and have built trust throughout years of operation. They also have the contextual and cultural knowledge to understand the nuances of feedback. Implementers have existing data management infrastructure to collect data and years of historical data to work with. They also have the ability to act quickly on feedback and integrate data into their strategy to see how optimizations impact customer perceptions. This research brings a new layer to social impact—not just customer attribution but also how interventions play out in different contexts and what steps are necessary to ensure effective implementation.

Is Attribution Necessary?

Is there value in impact evaluation without attribution? The answer is yes—the first step to evaluation design is understanding what data you need to make decisions. For example, demographic data can be used to demonstrate social impact if implementers target communities based on characteristics that make them less likely to receive access to safe water through other means.

Next Steps

Securing willingness to pay is a necessary step for achieving health outcomes from clean drinking water. In order for customers to reap these benefits, they must be willing to purchase it and drink it regularly and this requires not only the availability of water services but high satisfaction rates as well. This initiative has helped to define the role and capabilities of SWEs in capturing this data and increasing customer satisfaction to achieve impact. In the next phase, we will continue to refine our Lean Data survey and then test it with participating implementers. This phase will grow and improve evaluation practices. It will also produce research on social impact that can help improve service delivery and shed light on achievements in the SWE sector.

Our work on the *Social Impact Measurement Initiative* will continue and we have next steps lined up for future work.

- **Iterating Evaluation Practices:** As a result of our work with 60 Decibels, we have developed a *Lean Data* survey. The survey consists of 30 questions that address core and thematic impact areas. Implementers will be able to adjust the survey as needed. We plan to continue with in-depth interviews with each organization to get their feedback on the survey and continue to tailor it to the needs of SWEs and make it a resource that can be used by many in the sector.
- **Test and Benchmark:** Once our survey is finalized, we will test it with implementers in different contexts. This testing phase will help us iterate the survey and begin the early phases of benchmarking in the sector.
- **Share Results:** After we test the *Lean Data* survey, we will publish results and share findings and updates with the sector. In the long-term, we will seek to develop a benchmarking process for the SWE sector.

Appendix 1 – *Demonstrating Causation in WASH Programs*

It is well-documented that water sources can contain contaminants that lead to water-borne illnesses. In addition, there is a good understanding of how water quality controls and assurances can be used to reduce these contaminants. However, it remains a challenge to demonstrate causal links between WASH interventions and health outcomes for several reasons:

1. There are many variables that contribute to health outcomes and in some contexts, samples cannot be randomized to eliminate this bias.
2. Oftentimes, comprehensive interventions are required to have an impact in health. These interventions go beyond SWE offerings because they include broader WASH services and sometimes services outside of WASH5.
3. Detecting mortality from water consumption requires prohibitively large sample sizes.
4. There can be limited availability of baseline data in health.

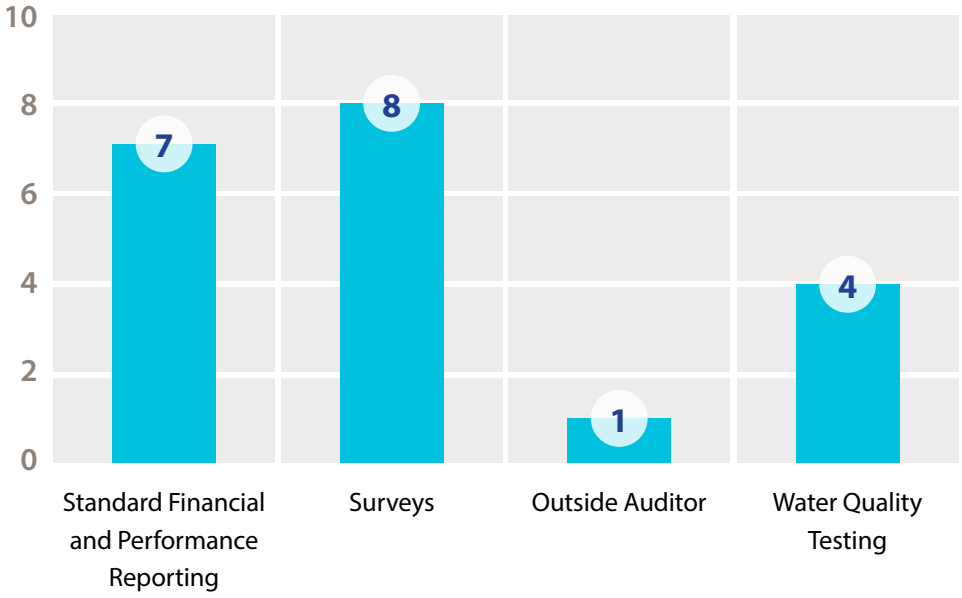
Despite these challenges, the plausibility that drinking water contributes to a healthy lifestyle is widely believed. However, this is only one component necessary to elevate the health of societies and families.

Appendix 2 – *Survey Results on Methods to Collect Social Impact Data*

What methods do you use to collect social impact data?

The methodologies listed were routine financial and operating performance reporting, water quality testing, outside auditors for carbon emissions, and field surveys (self-paced via mobile or tablet, computer-assisted personal interviews (CAPI), and computer-assisted field entry (CAFE)). Most implementers used a variety of methodologies.

Figure 4: Survey Results on Methodology for Collecting Social Impact Data



Appendix 3 – *Survey Results on Frequency of Collection of Social Impact Data*

How frequently do you collect social impact data?

Figure 5 shows the shortest interval for collecting social impact data. However, many implementers collect data at multiple intervals. The full count of all reporting is in Figure 3.

Figure 5: Shortest Interval of Collection

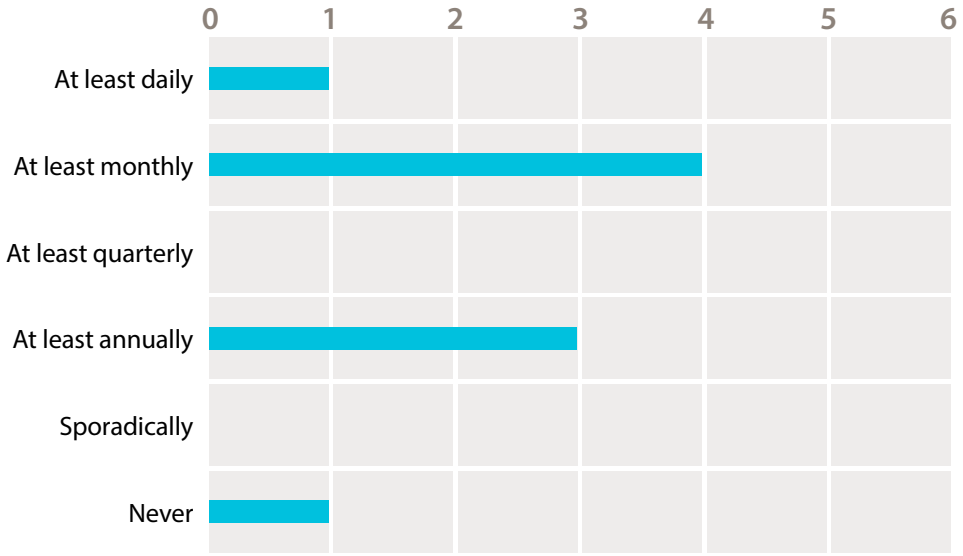
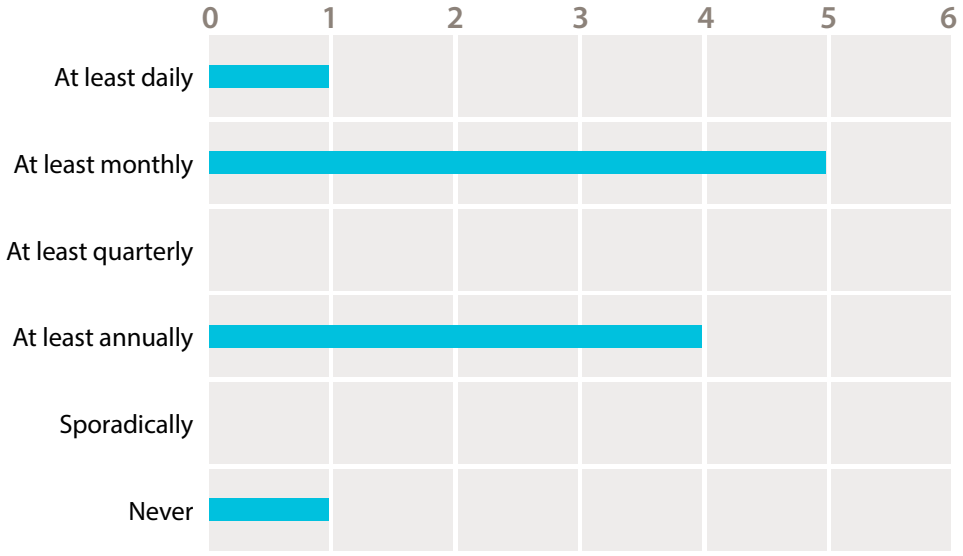


Figure 6: Frequency of Collection



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