Ministry of Foreign Affairs

Adding value with smallholder data

Unlocking the value of farmer data to create fairer, sustainable, and more inclusive value chains

Practical lessons learned from the Fund against Child Labour (FBK), Fund for Responsible Business (FVO), and Subsidy Programme for Responsible Business (SPVO).

>> *Sustainable. Agricultural. Innovative. International.*

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Introduction

The Dutch government promotes responsible business conduct in international trade, guided by the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises. The Netherlands Enterprise Agency (RVO), on behalf of the Ministry of Foreign Affairs, supports this ambition by managing subsidy programmes that support companies with their responsible business conduct.

Over the past eight years, RVO has implemented the Fund against Child Labour (FBK), the Fund for Responsible Business (FVO), and the Subsidy Programme for Responsible Business (SPVO). These programmes have supported more than 150 projects across various sectors and countries. The projects address key social sustainability themes, including child labour, living wages and incomes, and working conditions in value chains.

An emerging theme across these projects is the collection and use of smallholder data. Companies and other stakeholders collect data from (smallholder) farmers for various purposes, such as compliance with legislation, calculating living income benchmarks, understanding the impact of project interventions, segregating farmers or farm groups to customise support, substantiating sustainability claims, and enabling traceability from the farm plot down the value chain.

This increasing need for data from (smallholder) farmers raises ethical, legal, and practical questions. Including questions about data ownership, privacy, and the extent to which farmers actually benefit from the data collected about them. There is also a risk that the unequal distribution of information across the supply chain results in even bigger power asymmetries in the supply chain. Therefore, it is important to make sure that smallholder farmers can also benefit from this hunger for data. At the same time, there is significant potential to promote inclusive information sharing and build greater collaborative impact. Actors in the supply chain must work together to ensure that data contributes to fair and inclusive value chains.

Reading guide

This practical guide includes case studies from different companies to help explain the ideas in a real-world context. Icons are used to help you quickly find the case studies that are most relevant to your organisation:

Agro-food industry

Supporting organisations

About this paper

This paper provides practical guidance for companies and stakeholders about the responsible collection, use, and governance of smallholder farmer data. It draws on lessons learned from RVO-supported projects and highlights best practices. Beyond responsible data handling, it also explores how data can be meaningfully shared with farmers themselves, empowering them with insights that support decision-making, improve productivity, and strengthen their position in the value chain. The insights presented here aim to support companies in making informed and responsible choices when it comes to gathering and working with smallholder data, while also ensuring that farmers benefit directly from the data collected about them.

Contact us

Interested and motivated to make an impact in your value chain? Visit www.rvo.nl/spvo to learn more about funding opportunities for social sustainability in international supply chains.

1. Understanding smallholder data

Data is increasingly being collected throughout agricultural value chains, serving a variety of purposes for different stakeholders. This section explores why more and more data is collected, the types of data that are collected, and the actors involved in data collection. It also introduces key dilemmas related to data ownership, access, and responsible use, particularly in the context of smallholder agriculture.

1.1 What is data?

Data is defined as information, especially facts or numbers, collected to be examined and considered, and used to inform decision-making . Data can be qualitative in nature, focusing on opinions and feelings, or quantitative, focusing on hard facts and figures. A mix of different types of data often provides the most reliable and effective insights.

For example:

- Qualitative data: focuses on how a smallholder farmer perceives the impact of climate change.
- Quantitative data: focuses on the changes in yield, water patterns, and drought as a consequence of climate change.

Increasingly, companies in the value chain are interested in data from the upstream companies and producers in producing countries. They, for instance, need to know the exact location of all farm plots for the European Union Deforestation Regulation (EUDR), are interested in income data to calculate the household income to meet living income commitments, and collect information about the carbon footprint of crop production for a company's carbon commitments. Data matters, and data has a value.

"In our experience, collecting 100% reliable data from farmers can be challenging. There's always a risk that figures like land size, labour costs, or income are (un)intentionally over- or underestimated. To improve reliability, we use a combination of methods. We start with surveys and then follow up with focus group discussions. This helps us validate the data and better understand the context behind the numbers."

- Pratap Thapa, co-founder and CEO of aQysta. aQysta is a company that connects brands with smallholder farmers by ethically sourcing organic, traceable ingredients.

"Often, it could be easy to underestimate how much data is actually needed to inform effective and strategic business decisions. It is therefore crucial to work together to pool data across multiple stakeholders. Data pooling could include multiple companies sharing anonymised data sets for a specific geography or value chain. Before designing any data pooling initiative, one must ensure that there is a clear vision and value proposition for how this data can support action towards the intended impact. This can lay a strong foundation in generating interest and building trust amongst stakeholders."

- Vaibhav Panpaliya, senior innovation manager on better income at IDH. IDH is a global organisation that brings together public and private stakeholders to make agricultural markets more sustainable and more inclusive.

"We collect and use data for multiple purposes, from assessing the effectiveness of regenerative agricultural practices at the field level to evaluating whether farmers are earning a living income. While income data can be gathered through extensive surveys, we also use more qualitative methods, such as farmers' perceptions on income, combined with existing (publicly available) key datapoints. This approach ensures meaningful insights without placing a large burden on farmers' time."

- Thijs Hofman, impact manager at We Wonder Company. We Wonder Company sells organic coffee and tea.

"At ETG Group, we collect demographic information, farm-specific information, and traceability information. In the past period, the EUDR was the most urgent reason to map our farmer network. However, we don't want to collect all this information for one purpose only. It is essential for us to learn about the needs of the farmers, to also work on climate commitments, and to collect information for broader responsible sourcing commitments. We try to make one survey for all these different purposes. We also believe that the farmers should be able to benefit optimally from the insights shared. That is why we make sure the data feeds into the programs we design, think about extension services, shade trees, and new coffee trees. With the data, we can unlock access to targeted services for the farmers."

- Anne van der Veen, head of sustainable coffee at ETG. Export Trading Group (ETG) is a leading agri-business originating in Africa and dealing with agri-inputs and commodities such as coffee, cocoa, and cashew.

[1] *Definition of 'data' retrieved from Cambridge Dictionary, 2020.*

1.2. Data points

Increasingly, data about smallholder farmers is being collected to better understand and improve farmer income, to assess and manage agricultural practices, and to reward farmers for their efforts to produce more sustainably. For these different purposes, different data points may be collected from smallholder farmers. Table 1 provides a non-exhaustive overview of data that can be collected.

This data can be collected through different data collection methods. In practice, a combination of methods is needed to arrive at a reliable picture of reality. Chapter 2 dives into these methods. Collecting these data points is often neither easy nor cheap, and many are personal and privacy-sensitive. As a result, there is growing recognition that data has value and that data owners must be properly protected.

"At the start of the project, we collected baseline data on farmer health, costs, and yield. We didn't ask farmers directly about income, as it's a sensitive topic. Instead, we asked exporters what they pay farmers. This data is also sensitive, as it shows profit margins. Exporters were hesitant to share this. Our local colleague helped us understand the cultural sensitivities and resistance. We travelled to Indonesia to discuss it in person. By listening to their concerns, and acknowledging the sensitivity, we agreed on a price estimate. It may not be exact, but it's close to what farmers are paid. Combined with desk research, this gave us a strong baseline."

- Anitra van der Kraan, project coordinator, funded programs at Tradin Organic. Tradin Organic sources premium, certified organic food ingredients for the international food industry

"We are committed to taking responsibility. Together with all stakeholders, we aim to strengthen the entire supply chain. Using a custom app, we mapped out the full chain and gained insights into opportunities for improvement. For example, we advised farmers to grow cover crops such as mung beans. This led to increased income from the additional harvest, higher rice yields due to healthier soil, and lower production costs because the improved soil required less fertiliser. A valuable investment and a lasting improvement to the production chain!"

- Steven IJzerman, quality manager at Ekoplaza, Ekoplaza is a Dutch chain of organic supermarkets.

Table 1 - non-exhaustive list of data types

Data Category	Examples of data collected
Farmer profile	Name, gender, age, education, household size, household composition.
Roles and responsibilities	Roles and responsibilities of the different people in the household, e.g., disaggregated per gender.
Labour use	Household labour, hired labour, labour days, labour costs.
Farm profile	Farm size, location (incl. GPS coordinates), land registration numbers, equipment owned, number of employees
Field information	Location of plots, GPS of plots, size of field, soil conditions, crop history
Crop information	Crops & varieties grown, seeds used, types and amount used, equipment used
Information about livestock	Number of animals, type of animals, use of animals, and sales of animals.
Production information	Date of planting, intercropping, weather data (rainfall, temperature), yields (date of harvest, etc.), pest/disease attacks, and sustainability practices such as Good Agricultural Practices adherence
Climate data	Agrochemical application, fertiliser application, fossil fuel use, and carbon sequestration in the soil.
Financial	Income sources, expenses including schooling fees, access to credit or savings, payments, and financial service providers
Market access	Buyers, prices received, distance to market, agribusiness linkages, cooperative memberships
Technology use	Use of mobile phones, apps, and irrigation systems
Environmental	Soil type, organic matter content in the soil, rainfall, water use, water availability in the region, temperature, climate risks
Insurance	Insurance coverage (fields/livestock), risks covered, provider name, cost, payout details
Qualification/Certifications	Trainings attended, certifications received, compliance monitoring
Business information	Cooperative memberships

1.3. Users of data

As mentioned, companies further down the value chain are increasingly interested in data from suppliers, such as smallholder farmers. Different companies and other stakeholders use data from smallholder farmers for different reasons. The next paragraphs provide examples.

The benefits of implementing responsible procurement practices are:

- **Companies (traders, food companies, retail)**
  - Companies increasingly rely on data from smallholders to meet compliance requirements, engage stakeholders, and shape effective sustainability strategies. For example, traceability in agricultural value chains is becoming essential, not only for transparency but also to comply with regulations such as the EU Deforestation Regulation (EUDR). Under the EUDR, companies must demonstrate that certain commodities are not linked to deforestation and are legally produced. This often requires collecting data from smallholders, including geolocation and production practices.
  - Beyond compliance, companies use smallholder data to inform stakeholders, for instance, by providing real-time insights into where products originate or which farmer produced them. Data also plays a key role in designing and monitoring sustainability initiatives. For example, information from Child Labour Monitoring and Remediation Systems (CLMRS) helps identify and address child labour risks. Similarly, data on farmer income enables companies to set and track targets for achieving living incomes.

- **Farmers**
  - Ideally, farmers themselves use data to inform their farming practices and strengthen their businesses. For many large-scale operations and agribusinesses, this is already common practice. They often have the tools and resources to integrate agricultural and business insights into their daily decision-making.
  - For smallholder farmers, this is often not yet a reality. In some regions, literacy remains a challenge. This highlights the importance of making insights available in accessible formats, such as through voice messages rather than written texts.

- **Extension services**
  - Extension services officers or agronomists, such as those from governments or NGOs, could use data to move away from 'one size fits all' advice towards tailored advice and training customised to farmers' specific needs and local conditions. For example, if an extension officer has insights into data such as the number of seeds planted, fertiliser use, and yields, the extension officer can provide concrete advice to boost yield.

- **Farmer organisations/cooperatives**
  - Farmer organisations and cooperatives may use farmer data to strengthen member services and support collective decision-making. For example, in cocoa-growing regions, cooperatives often collect data on farm size, production volumes, and the use of sustainable practices. This information can help them plan training programs, manage certification processes, or coordinate input distribution more effectively. In some cases, providing farmer data is a requirement for buyers, and cooperatives take the lead in organising data collection. This not only helps meet market demands but can also strengthen the cooperative's position in negotiations, as data is increasingly seen as a valuable asset.

- **NGOs**
  - NGOs use data to design and evaluate development programs and to advocate for farmer rights. For example, NGOs might use farmer income data to advocate for fair prices.

- **Research institutes**
  - Research institutes use data to evaluate practices, develop innovations, and provide recommendations to policymakers, farmers, companies, and other value chain actors. For example, insights into yields in agroforestry systems versus yields in monocropping systems can guide more sustainable and productive farming strategies.

- **Research institutes**
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- **Governments**
  - Governmental organisations also collect data from farmers for various purposes, such as informing agricultural policy, monitoring food security, or supporting rural development programs. These data can, for instance, be collected through national statistics organisations or agricultural departments.

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1.4. Dilemmas and issues around data

Section 1.2 outlined the types of quantitative data that can be collected in agriculture. Not all data points can be easily collected; the farmers might not have all the insights themselves. Other data points can be sensitive; they may include personal information or reveal important details about how a farm is managed. This raises questions about who owns the data and who is responsible for protecting it.

For example, if a farmer's income is visible, might that affect their ability to get a loan or make farmers vulnerable for unfair financial practices? If data from smallholder farms is used to meet compliance requirements or consumer expectations by downstream companies, do farmers themselves benefit from sharing this data? These examples show clear dilemmas around privacy and data governance.

The transdisciplinary research program of Fair & Smart Data (FSD) from Maastricht University identifies different issues concerning smallholder data governance. Data governance refers to the rules, practices, and responsibilities that determine how data is collected, accessed, shared, and used, ensuring that it serves the interests of smallholder farmers and other stakeholders fairly and transparently.

The following issues are identified:

- **Lack of inter-governmental data governance frameworks**
  - When farmers sell to buyers in other countries, there are often no clear rules on how their data should be handled across borders, which creates confusion and risk.

- **Poor implementation of data regulations in the Global South**
  - Even if laws exist to protect farmers' data, they are often not enforced, so data can be collected and used without proper consent.

- **Asymmetry of power in the data ecosystem**
  - Buyers often have more control over farm data than farmers themselves, as it is not shared, which limits farmers' ability to influence how their data is used.

- **Lack of transparency around data ownership, rights, privacy, and security**
  - Farmers are rarely told who owns the data collected from them, how it will be used, or what rights they have to access or protect it.

- **Complex contracts and licensing agreements that limit farmers' negotiating power**
  - Cooperatives may sign service contracts that are hard to understand, making it difficult to negotiate better terms later.

- **Limited access to digital tools and infrastructure**
  - Many farming communities do not have reliable internet or smartphones, which makes it hard to use digital platforms or benefit from data-driven services.

- **Low awareness among farmers about the use and value of data**
  - Farmers are not always informed about how the data they share can contribute to improving farming practices, gaining better market access, or shaping policies that directly impact them. In many smallholder communities, limited access to education, including challenges around literacy, can further complicate the effective use of data. This underscores the importance of clear, accessible communication and inclusive approaches to data sharing and use.

Chapter 4 explores how to ensure that data can be managed fairly.

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"We're witnessing the commodification of data, and that raises concerns. Farmers and farmworkers provide valuable information every day, helping companies meet standards and manage supply chains profitably and sustainably. But what value do they get in return? A fair digital economy must ensure the benefits of data are shared with the very people who make sustainable sourcing possible. At Fairfood, the way we've found to do so is by developing open solutions that bring farmers into the data loop: delivering genuine supply chain transparency, enabling verifiable claims and creating shared value across the chain."

- Sander de Jong, managing director at Fairfood. Fairfood International is an NGO that develops open-source tools and practical models to help businesses improve their practices and accelerate the shift toward a more sustainable and inclusive food system.

Reading tips:

- *USAID published an extensive report on how digital tools and farmer data can improve agricultural services and decision-making for smallholders, while stressing the need for responsible, inclusive, and farmer-centred data management in "Digital Farmer Profiles: Reimagining Smallholder Agriculture"*
- *World Bank blogs presents a critical analysis of how data control shapes power relations in agriculture, highlighting issues of data ownership, privacy, and transparency, and the need for inclusive codes of conduct to empower smallholder farmers in "Does data mean power for smallholder farmers?"*
- *(Not focused on smallholders) OECD presents an analysis of data governance issues in the digital transformation of agriculture, focusing on farmers' perspectives around access, ownership, trust, and regulatory frameworks in data-driven agricultural systems in "Issues around data governance in the digital transformation of agriculture"*

2. Collecting smallholder data

This chapter explores the main methods used to collect data in agricultural value chains. Practical tips and insights are offered to support responsible and effective data collection. The chapter also highlights emerging trends and developments in data collection, such as digital tools and remote sensing approaches.

Note: Depending on your position in the value chain and the complexity of the value chain, it can be easier or more challenging to collect data from the primary producers. A retailer, for instance, is several tiers away from the producer, whereas a trader can be in direct contact with the farmers. Data collection and the use of data, therefore, ask for cooperation in the value chain. Companies further downstream will rely on their suppliers and local experts to gather farmer data.

"Trusted local partners are crucial in data collection. Being physically distant from the farmers in Uganda, we relied on a local NGO with whom we already had a strong relationship to connect us to a data collection partner. This trust ensures reliability. Additionally, local cooperatives play an important role, not only in facilitating data collection but also in engaging farmers. The cooperative leader we work with is also a respected community leader, which helped support participation and community engagement."

- Thijs Hofman, impact manager at We Wonder Company. We Wonder Company sells organic coffee and tea.

"In long supply chains, data is often not collected directly from the source, yet that's exactly where impact needs to happen. At Tony's, we choose to work directly with cooperatives, not just the first supplier to collect data. This allows us to gather accurate, meaningful data and use it to organise targeted interventions."

- Jasper Boerrigter, head of operations at Tony's Open Chain. Tony's Open Chain is an industry initiative launched by Tony's Chocolonely to end exploitation in cocoa.

2.1. Data collection methods

There are various data collection methods available, and all of them become more effective when the following tips are applied.

Tips for effective data collection:

- **Ask for explicit permission**
  - Use a clear consent form in which the details of the research are given, such as the purpose of the research, the ownership of the data, guarantees to maintain the anonymity of the data providers, feedback loops to the data providers, who has access to the data, and how long the data will be stored.
- **Use the local language**
  - In all data collection settings, ensure that questions are asked in the local language and that the respondents can also answer in their local language. This will improve understanding and data quality.
- **Collaborate with trusted, well-trained local partners**
  - Work with local government, NGOs, research institutes, or cooperatives to ensure farmers receive clear guidance and support during data collection.
- **Reward farmers for the time invested.**
  - Make sure to compensate the farmers for the time invested, for example, by providing a token of appreciation, providing lunch, and ensuring that the results are shared with farmers.
- **Avoid busy farming periods**
  - Whenever possible, schedule surveys outside of the harvesting season to reduce the burden on farmers.
- **Respect cultural and gender norms**
  - Be aware that cultural and gender roles may affect who can participate in data collection and when; for example, plan interviews at times when women are available, and consider that in some communities, women may not be allowed to speak to men without a third person present.
- **Be critical about what you really need to know**
  - Before designing your survey or interview guide, critically assess what information truly needs to come from the farmer and what can be used from publicly available data.

"Begin collecting data well before the season starts. In cocoa, for example, data is often incomplete and requires multiple rounds to finalize. Starting early gives cooperatives time to fill gaps and avoid delays. Also, keep in mind that incomplete data isn't a failure. We always engage with cooperatives to understand the reasons and explore how we can support them to complete the data set. It is important not to judge too quickly and keep an open dialogue to improve data quality."

- Jasper Boerrigter, head of operations at Tony's Open Chain. Tony's Open Chain is an industry initiative launched by Tony's Chocolonely to end exploitation in cocoa.

"Preparation is everything. Think critically in advance about which data points you truly need. Ask only what's essential. Don't ask too much, but not too little either, to avoid missing key insights that would force you to revisit farmers. That's why field-level testing is so important: it allows you to test, learn, and continuously improve your approach. Without this, you risk the classic 'garbage in, garbage out', which makes you end up asking farmers again for answers you should have gotten right the first time."

- Anne van der Veen, head of sustainable coffee at ETG. Export Trading Group (ETG) is a leading agri-business originating in Africa and dealing with agri-inputs and commodities such as coffee, cocoa, and cashew.

The following sections highlight the most commonly used methods to collect data from smallholder farmers.

2.1.1. Interviews

Conducting live, face-to-face interviews helps gather not only the required data but also valuable context and personal insights from farmers. When interviews are led by experienced facilitators, the quality of data improves.

Tips for collecting data through interviews:

- **Make sure to have explicit consent**
  - Ensure the respondent is informed about what the interview is about. Share the objective, how the information will be used, and how long the interview will take.
  - Underline that participation is voluntary and that the respondent can choose to withdraw at any time.

- **Create a safe and open atmosphere**
  - The presence and behaviour of the interviewer can significantly influence responses, especially in face-to-face interviews. Be mindful when discussing sensitive topics, for example, having a woman interviewer speak with woman participants may lead to more open and honest answers.

- **Choose a comfortable setting**
  - Conduct interviews in a location where participants feel at ease and where no other people can overhear answers provided. Familiar and informal settings often help respondents feel more relaxed and willing to share their views.

2.1.2. Focus group discussions

Focus groups are an effective method for collecting data while also encouraging group discussion. They allow farmers to engage with one another, which can lead to richer, more contextual insights.

Tips for collecting data through focus groups:

- **Ask for explicit consent**
  - Make sure that all participants are informed about what the focus group is about, its objective, how the information will be used, and how long it will take.
  - Underline that participation is voluntary and that the respondent can choose to withdraw at any time.

- **Choose a strategic location**
  - Select a meeting place that is central and accessible to all participants, such as a cooperative building. If this is not possible, because farmers live on large distances from each other, arrange free transportation to help farmers reach the location.

- **Select appropriate timing**
  - Schedule the focus group at a time that suits your target group. Consider the different roles and responsibilities of men and women, which may affect their availability.

- **Create a safe and respectful environment**
  - Ensure participants feel comfortable sharing their views. Be sensitive to cultural norms, for example, in some communities, men and women may not feel comfortable or be permitted to participate in the same group. Smaller group settings can help create a safer space for open discussion.

- **Look for balanced participation**
  - Make sure all people present in the focus group discussion feel free to share their input.
  - Ask questions to the participants who have been less vocal to make sure every voice is heard.

2.1.3. Written surveys

Surveys are an efficient way to collect standardised data from farmers. Surveys are often used in living income studies to understand farmers' earnings. These surveys can be complex and very detailed. For example, asking about both on-farm and off-farm income, as well as household expenses like food and education.

It is also important to consider gender dynamics. Women farmers might be unable to provide many insights into the income generated by other (farmer) activities in the household, since this is sometimes considered the responsibility of men. Because of this complexity and as (financial) literacy levels among smallholders can vary, it is common for a local NGO or cooperative to support farmers in completing the survey. While time-intensive, these surveys provide valuable insights into farmers' livelihoods.

Tips for collecting data through surveys

- **Test your survey tools locally**
  - Pilot the survey with local partners to confirm that all questions are culturally appropriate and easy to understand.
  - Involve a diverse sample to test the questions, in order to test how questions are interpreted by different people (e.g. men/women, people from different districts/regions, etc.).

- **Train the data collection team**
  - Make sure to reserve enough time to train the data collection team.
  - Also, make sure there is a debrief with the team to learn for next occasions.

- **Safety first**
  - Make sure the data collection teams work in pairs to ensure their safety.
  - Ensure that the data collection teams have safe and accurate means of transportation.

"We do observe survey fatigue. Different actors come to the same farmer to collect data. Especially around the new European Union Deforestation Regulation (EUDR), this really happened. We really have to make sure to avoid this in the future."

- Anne van der Veen, head of sustainable coffee at ETG. Export Trading Group (ETG) is a leading agri-business originating in Africa and dealing with agri-inputs and commodities such as coffee, cocoa, and cashew.

2.1.4. Mobile apps

Mobile apps make it possible to collect a wide range of data from farmers in a standardised and efficient way. Apps support frequent data collection and help store information to build detailed farmer profiles. Unlike surveys or interviews, where farmers rely on others to share results, apps can provide farmers with direct feedback through live dashboards. This allows them to view their own data at any moment they want.

Tips for collecting data through apps

- **Choose a safe app**
  - Apps can be developed very easily these days; make sure to know who is behind the app and how the data is protected. Farmers rely on you as a company, NGO, or supportive organisation to make the safe choice!

- **Check mobile phone access**
  - Before planning mobile-based surveys, research whether farmers in your target area have access to mobile phones. Keeping in mind that not all farmers may own one, and women in particular may face barriers to access.

- **Test the app with farmers first**
  - Pilot the app with a small group to ensure it is user-friendly and fit for purpose before scaling up.

- **Ensure offline functionality**
  - Use tools that allow data entry without an internet connection, so data can be uploaded once connectivity is restored.

- **Engage youth**
  - Involve younger family members in data entry as they are commonly more comfortable with digital tools than elderly farmers.

"We've found that bringing different stakeholders into focus group discussions adds real value. For example, during a recent session where we shared income baseline results, local government representatives pointed out that there were already existing programmes aligned with our proposed interventions. This allowed us to build on what was already there, rather than duplicating efforts. It's a good reminder that collaboration often leads to more sustainable outcomes."

- Pratap Thapa, co-founder and CEO of aQysta. aQysta is a company that connects brands with smallholder farmers by ethically sourcing organic, traceable ingredients.

2.2. Challenges to collect data

In some cases, collecting data directly may be too challenging due to difficulties in finding the right partners, limited budget, or low engagement from smallholder farmers. When this happens, consider alternative approaches that can still provide valuable insights.

Tips to overcome challenging data collection

- **Understand the context**
  - First and foremost, you need to understand the context. If farmer engagement is low, explore the underlying reasons. Is the timing of your request appropriate? Is the relationship with the cooperative strong enough? Is your offering, such as training or support, relevant and useful to farmers? If not, your action plan may need to be refined to better meet their needs.

- **Invest in data collectors**
  - Data collectors play a key role in ensuring accurate and useful data; take time to align on the purpose and meaning of each question, perhaps even through live discussions, so misunderstandings do not compromise the quality of your results.

- **Use available benchmark studies**
  - Check if there is a benchmark or reference value available for the area in which you work. If you want to use it for a different area, you must critically reflect on whether the context is truly comparable.
  - If you use a benchmark, make sure to seek expert input from someone familiar with the local context, such as an NGO or field expert.

- **Use proxy data where possible**
  - Proxy data is representative data used to give insight into something that cannot be measured directly. Proxy data can reduce the need for extensive new data collection. For example, in living income studies, using proxy data for food expenses can significantly shorten surveys, which may improve farmers' willingness to participate.

"It is not always needed to start doing in-depth assessments yourself. Sometimes, there is already publicly available data out there. Existing benchmarks, for instance, on living income, can be a valuable starting point for a company that is just starting with this topic. But the value of such studies lies in how well they reflect the reality of the production region, the supply chain and the broader context you are working in. Only when such benchmarks are grounded in real-world conditions you can use the data to set goals that are both clear and meaningful."

- Willem Oomens, business developer & co-founder at Sommalife. Sommalife is a social enterprise that uses modern technology to create sustainable income and impact in rural communities.

"When establishing an income baseline, surveys are a commonly used method. However, they can be sensitive. Asking farmers detailed questions about their income and livelihoods can feel intrusive. It's important to remember that these are personal topics, and discussing them isn't always comfortable. We also noticed that detailed questions can raise expectations, some farmers may assume that support will follow immediately. That's why we always take time to clearly explain what we will and will not do, and what kind of support they can realistically expect. Setting expectations early is crucial."

- Pratap Thapa, co-founder and CEO of aQysta. aQysta is a company that connects brands with smallholder farmers by ethically sourcing organic, traceable ingredients.

2.3 Trends in data collection

While many data collection methods remain traditional, digital tools are increasingly shaping how data is gathered and analysed. For example, Artificial Intelligence (AI) is rapidly developing and provides the opportunity to give early warnings to farmers, detect crop diseases, and provide climate-smart farming advice. It is also used to analyse large sets of data. In many of these new methods, the time farmers spend on providing these insights is significantly reduced. Companies are now exploring how they can reduce the data points asked from farmers and obtain these insights via alternative methods. It must be noted that many digital tools are designed for large commercial farms, while smallholders often face poor internet access and limited digital skills.

Key trends include:

- **Mobile-based applications**
  - Mobile apps have evolved from basic survey tools to advanced platforms offering dashboards that allow farmers to view and manage their own data. Many apps now include live, conversational features, such as chatbots that ask questions in a dialogue format, making it easier for farmers to respond without having to fill out long, text-heavy surveys.

- **Interactive voice response surveys**
  - Interactive voice response surveys support the collection of data in settings where the respondents are not or less able to read or write. In these kinds of surveys, pre-recorded questions are played to respondents, who respond by sending an audio reply.

- **Satellite monitoring**
  - Satellite monitoring and the use of drones are now commonly used in agriculture, for example, to measure storage of carbon in soils and soil health to assess the impact of regenerative practices. Satellite monitoring has also advanced, especially with the implementation of the EU Deforestation Regulation (EUDR), where satellite data is crucial to verify that agricultural fields are deforestation-free.

- **Use of AI for data analysis**
  - Artificial Intelligence (AI) can combine various data sources, such as public indexes and company-collected data, to generate deeper insights. This helps companies better understand patterns, risks, and opportunities across their supply chains.

"Our app, amongst others, helps women farmers in West Africa by digitising their farming activities, connecting them directly to international buyers. When new farmers join our network, we begin with a group meeting where we explain the software using presentations and lots of visuals. This ensures everyone is well-informed from the start. Afterwards, local agents collect the data directly from the farmers. Clear communication builds trust and sets the foundation for strong collaboration."

- Willem Oomens, business developer & co-founder at Sommalife. Sommalife is a social enterprise that uses modern technology to create sustainable income and impact in rural communities.

"We recently started working with a voice messages service that allows us to create a two-way conversation with farmers. We ask them questions in their own language, and they can also ask something back, for instance, agronomic questions. In this way, we try to move beyond only data extraction by offering a helpdesk function that is locally relevant. By using messaging services in local languages like Luganda, we ensure accessibility. In general, we believe that reciprocity is very important for all data collection efforts. We aim to make the moment between data collection and the intervention that truly benefits the farmer as small as possible."

- Anne van der Veen, head of sustainable coffee at ETG. Export Trading Group (ETG) is a leading agri-business originating in Africa and dealing with agri-inputs and commodities such as coffee, cocoa, and cashew.

"Data collection is still very traditionally oriented, with a baseline and an endline study. A paradigm shift is needed to think and innovate beyond these traditional methods, as they are rather resource-intensive and yet only manage to provide us with a snapshot of the ground realities at a given point in time. This would require a mindset shift for us to see farmers running farming enterprises/businesses rather than as beneficiaries. This changes the way we look at data; it makes the data collection process dynamic, which can facilitate mutually beneficial business decisions. Introducing data collection apps that farmers can actively engage and use could be a clear example of how to make the data collection process less static."

- Vaibhav Panpaliya, senior innovation manager on better income at IDH. IDH is a global organisation that brings together public and private stakeholders to make agricultural markets more sustainable and more inclusive.

Use these questions to help choose the most suitable method for your context:

- **Do I need standardised data (e.g. yield), contextual insights (e.g. perceptions on income), or both?**
  - If context matters, use interviews or focus groups. These methods help you interpret the data accurately.
- **How many farmers do I need to reach?**
  - If you need a statistically reliable sample, for example, in living income baselines, you will need to reach out to many people. In that case, surveys are a useful instrument. They help gather insights more efficiently than interviews. Also consider digital tools.
- **Are farmers comfortable with technology?**
  - If yes, consider using mobile apps. If not, make sure there is local support to assist with digital tools.
- **Do I have local partners to support data collection?**
  - If not, seek connections. For example, RVO or similar organisations may help identify suitable partners.
- **Is the area remote or difficult to reach?**
  - In such cases, local support is crucial. Face-to-face data collection, or telephone surveys, will likely work best.
- **Will the survey take more than 45 minutes?**
  - If yes, consider downsizing by using existing data. For example, the ALIGN Tool resource library provides insights into living wages and incomes. You can complement this with targeted questions to reduce the burden on farmers.
- **How will the data benefit the farmer?**
  - If you cannot answer this clearly, reconsider whether data collection is necessary. See Chapter 3 for guidance on making data fair and supportive for farmers.

2.4. Collaboration for data collection

Many companies may want to use data to guide decisions and better understand their supply chains. However, this can be difficult when there is a lot of distance in the supply chain. In global supply chains like those for cocoa, coffee, or cotton, brands and retailers often do not have direct contact with (smallholder) farmers. That is why working together with supply chain partners is important to help collect useful data.

If your company wants to collect insights about the supply base but is a couple of tiers away from the smallholder farmers, there are still several steps you can take.

Tips for data collaboration when there is no direct contact with the farmers

- **Engage with your supplier.**
  - If your supplier works directly with cooperatives or smallholders, they can help identify the regions to focus on, especially if you do not already know where your products are sourced.
  - The supplier may also have highly relevant connections to set up data collection.

- **Make it a joint effort**
  - Emphasise why the insights from the smallholders are also interesting for your supplier, and make the collection and assessment of data a joint effort.

- **Leverage existing NGO partnerships.**
  - If you are already working with an NGO, they may be able to connect you with a local partner who can support data collection.

- **Reach out to your network.**
  - Industry peers may be active in similar regions and can point you to credible local partners.

"Working with a trusted local NGO has made a real difference in how farmers engage with us. Farmers have told us directly that they feel more confident participating because they know the NGO is there to represent their interests. It creates a sense of safety and accountability. In our experience, this kind of partnership helps build trust and strengthens relationships on the ground."

- Pratap Thapa, co-founder and CEO of aQysta. aQysta is a company that connects brands with smallholder farmers by ethically sourcing organic, traceable ingredients.

"From our experience, external parties can offer valuable expertise in data collection. However, if you're already well connected to farmers and the value chain, it's important to remain actively engaged. Your local relationships and contextual knowledge are key to ensuring that the data collected is relevant, accurate, and truly reflects the realities on the ground."

- Willem Oomens, business developer & co-founder at Sommalife. Sommalife is a social enterprise that uses modern technology to create sustainable income and impact in rural communities.

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"It's important to stay in active dialogue with cooperatives about data collection and explore how you can help make the process easier. For example, we've seen that cooperatives with dedicated data analysts are able to provide complete and reliable data with much more ease. As more companies begin requesting detailed data, especially in light of EUDR, hiring a data analyst becomes increasingly valuable. That's why we're always open to co-investing in these roles. Supporting internal capacity not only improves data quality but also strengthens collaboration and long-term impact."

- Jasper Boerrigter, head of operations at Tony's Open Chain. Tony's Open Chain is an industry initiative launched by Tony's Chocolonely to end exploitation in cocoa.

"In the U CLAP initiative, we collect potentially sensitive data. Therefore, we asked 60 Decibels to help with the data collection. This organisation has deep sustainability knowledge and has developed innovative methods to collect data. In the first phase, we will work with one-on-one interviews at the field level. In a later phase, we also aim to pilot working with telephonic interviews. For this kind of data collec-tion, the more context knowledge, the better. It is very important to make use of local experts who speak the local language, who know the culture, and who really understand the local setting and the sector."

- Koen Sneyers, lead consultant of Impact Lines - Sourcing Insight. Impact Lines is a Kampala-based consulting firm dedicated to supporting sustainable coffee & cocoa chains.

Reading tips:

- *The Cocoa Household Income Study (CHIS) Programme is a sector-wide effort to create a harmonised methodology for measuring living income in the cocoa sector. Read it at the KIT Institute.*
- *The Living Income Community of Practices provides guidelines on how to select methods that suit your situation in "Looking to measure incomes and the income gap?"*
- *IDH has developed the Income Measurement Guidance, a survey that supports data collection on income. Download it at: "Income Measurement Guidance".*
- *The Global Forum on Agricultural Research and Innovation (GFAR) and partners highlight opportunities and challenges of data-driven agriculture for smallholders, especially regarding access to, use of, and control over four types of agricultural data in "Digital and Data-Driven Agriculture: Harnessing the Power of Data for Smallholders".*
- *The paper "Aligned Inclusive Living Income Narrative and Indicators" by the Living Income Community of Practice (LICOP) is a guide aimed at improving how organisations measure and report progress toward achieving living incomes for smallholder farmers. It also includes key indicators for actual income measurement.*
- *The paper "How AI can benefit smallholder farmers in Africa: Opportunities for EU-Africa cooperation" explores growing role of AI in African agriculture, strategic entry points to accelerate its impact and highlights opportunities for EU–Africa cooperation.*

3. Adding value with smallholder data

Even if the original reason for collecting the data was not to help farmers directly, it is important to find ways to use that data to support them. This chapter explores how data can be turned into useful insights or services that benefit farmers, making sure they are not just data providers but also data users.

3.1. Engaging farmers from the start

To create real value with data, farmers need to be involved from the beginning. It is important to clearly explain why data is being collected, what kind of data is needed, and how it can benefit both your work and the farmers themselves. Early engagement also allows farmers to share feedback, suggest what data matters to them, and how they would like to use it.

Before starting data collection, do the following:

- **Explore willingness to participate**
  - Work with cooperatives or NGOs to understand whether farmers are willing and interested in sharing data.

- **Engage with local leadership**
  - Speak with village leaders, such as elders, traditional authorities, lead farmers, and cooperatives, to build trust and ensure community support for data collection activities.

- **Identify farmers' needs for data**
  - Talk to farmers about what kind of data could support their work or decision-making.

- **Organise introduction sessions**
  - Explain the goals and methods of data collection to all farmers involved. Invite lead farmers or cooperatives to share their views.

- **Request written consent**
  - Always ask for clear, written permission before collecting any data. Working together with local partners is crucial to make sure that farmer understand to what they give consent.

- **Recognise the farmer's time and contributions.**
  - Consider offering in-kind or financial compensation, and make sure transport and meals are arranged during data collection activities.

"Collecting insights directly from farmers is essential when designing projects that truly meet their needs. Digital tools, like surveys or mobile platforms, can help gather this input efficiently and respectfully. Before launching any initiative, we always ask farmers whether they are willing to join, and if so, what form it should take. In one agroforestry project, for example, farmers chose which tree species were most valuable to them. When farmers help shape the design, the impact becomes real and lasting."

- Willem Oomens, business developer & co-founder at Sommalife. Sommalife is a social enterprise that uses modern technology to create sustainable income and impact in rural communities.

"A clear value proposition for the farmers from whom the organisation harvests data could be achieved by sharing valuable insights and information back with these farmers. If organisations really want to share value back with farmers, then designing processes that help place an accurate monetary value for the costs, resources and effort for their data would be the most reliable way to attach a value to this data. It would be great to see more of such approaches and innovations making their way to the mainstream."

- Vaibhav Panpaliya, senior innovation manager on better income at IDH. IDH is a global organisation that brings together public and private stakeholders to make agricultural markets more sustainable and more inclusive.

"We have clear contracts with farmers outlining how their data will be used. These agreements are reviewed together with local agents, so farmers fully understand what happens with their information. We never share data, such as personal data, farming data or financial data, with external partners."

- Willem Oomens, business developer & co-founder at Sommalife. Sommalife is a social enterprise that uses modern technology to create sustainable income and impact in rural communities.

3.2. Sharing the value of data

Data, together with insights from cooperatives/farmers, informs activities on the ground. It can show similarities between farms, which helps group (segment) them into types with similar characteristics. This makes it easier to design interventions that fit the specific needs of each type of farm. Making real impact.

It is important that the data collected translates back to farmers in a way that supports their work, even beyond the interventions planned. Show how the data is used and explain whether it informs decisions or interventions, and if so, what kind. Help farmers understand how they or their cooperatives can use the data themselves, for example, to improve farming practices or strengthen their position in negotiations.

Because the data collected from farmers can be very different depending on the purpose, it is important to think about how each type of data can also be useful to the cooperatives/farmers themselves. For example:

- If you collect geolocation data or legal compliance documents for the EU Deforestation Regulation (EUDR), make sure farmers/ cooperatives can reuse that same data to supply other buyers, this helps improve their market access.
- If you gather data on living income, share the results with farmers. Show how the prices of certain crops affect their income and present it in a format that helps them make household decisions.
- If you collect data on yields from farming interventions, share those results not just with the farmers involved, but also with the wider community, so everyone can learn and benefit.

Thus, the feedback loop of data is very important. Consider the following:

- **Organise feedback sessions**
  - Bring together all participants to share the results. If many farmers are involved, plan multiple sessions to ensure everyone is included.

- **Develop clear communication materials**
  - Prepare short hand-outs using simple language and clear visuals. Icons, diagrams, and pictures can help make the results more accessible.

- **Use the local language and allow questions**
  - Present findings in the local language and create space for open discussion.

- **Test and explain conclusions**
  - Clearly show how the data has been interpreted and whether it has informed any interventions. If decisions are based on the data, explain what kind and why.
- **Support farmers' use of data**
  - Help farmers and cooperatives understand how they can use the data themselves, for example, to improve practices or strengthen their negotiation position.

Taking time to explain how data informs decision-making builds trust and helps farmers see the value of their contributions.

"In the U CLAP initiative, we give all respondents a small 'token of appreciation' for the time that they have spent. It is only a small amount, but it makes them under-stand that they are appreciated for their time."

- Koen Sneyers, lead consultant of Impact Lines - Sourcing Insight. Impact Lines is a Kampala-based consulting firm dedicated to supporting sustainable coffee & cocoa chains.

"In our project, we train farmers in regenerative practices. Our local partner helps to collect data to study the effectiveness of these practices. The lessons learned are then integrated into new trainings. In this way, farmers will learn and benefit from their own information. This feedback loop is very important."

- Thijs Hofman, impact manager at We Wonder Company. We Wonder Company sells organic coffee and tea.

"In our baseline study on income, we also looked at yield per hectare and saw it was much lower than regional averages. That insight pointed us toward a clear need for intervention. It's a good example of how data from farmers can lead directly to meaningful action."

- Pratap Thapa, co-founder and CEO of aQysta. aQysta is a company that connects brands with smallholder farmers by ethically sourcing organic, traceable ingredients.

"At Tradin, we trade in coconut sugar, among other products. In Indonesia, we saw that farmers face tough conditions. The trees are very tall, which makes tapping hard and risky. Women also spend around four hours per day in smoky kitchens to make the sugar, which affects their health. Fewer young people want to do this work, which puts pressure on production. To support farmers, we asked questions in a survey about health, costs, and yield. Based on their input, we introduced two practical interventions: planting dwarf trees for safer harvesting and using better stoves to reduce smoke. Since every kitchen is different, we sometimes improve the kitchen setup itself to make the biggest impact. We collect data not just to study, but to give back in ways that matter to the farmers."

- Anitra van der Kraan, project coordinator, funded programs at Tradin Organic. Tradin Organic sources premium, certified organic food ingredients for the international food industry.

3.3. Paying farmers for their data

The previous section explored ways to ensure that the value created in the supply chain also reaches smallholder farmers. This can be done in various ways, such as optimising farmer training using the insights from the data collection. A more direct approach to make farmers benefit from providing data is by paying them for this data or for the time spent providing the data. Via so-called 'data premiums', farmers can be compensated for their time and their data. This can happen directly to the farmers or via the cooperative.

The use of data premiums is not yet a mainstream solution. One could also argue that some data may be expected to be shared as part of a professional business agreement. However, there is a growing awareness that farmers spend a lot of time providing personal data and that this time should be compensated. Introducing data premiums could be a fair and practical way to recognise their contributions.

"We pay a price premium for certified products, but we want to be sure that this premium actually reaches the farmers. Since we don't buy directly from farmers, but through cooperatives or farmer support groups, we ask them to share transaction data. We understand this is an extra task, and we compensate them with a data premium. This way, we can trace the flow of payments and confirm that farmers are receiving what they're entitled to. It also allows us to reward suppliers who help us maintain transparency."

- Pratap Thapa, co-founder and CEO of aQysta. aQysta is a company that connects brands with smallholder farmers by ethically sourcing organic, traceable ingredients.

3.4. Collaboration for impact

To create real impact through data, it is essential to involve the right people who can act on the insights. For example, if regenerative practices lead to the introduction of new crops, there must be a market for those crops. This requires alignment between supply and demand, ideally involving the entire value chain. Only then can sustainable impact be achieved.

To support this, consider the following tips:

- **Align supply chain partners on the purpose and goals of data collection.**
  - Everyone involved should understand why data is being collected and what it aims to achieve.

- **Strengthen existing tools from governments or multistakeholder organisations**
  - Investigate whether regulations, data systems, or platforms exist in the country that can be used, supported, or strengthened.

- **Involve (local) governments**
  - (Local) governments may have sector-specific programs in place that can help support the implementation of interventions or improve access to markets.

- **Keep all partners informed and engaged.**
  - Regular updates and involvement help maintain commitment and ensure smooth collaboration.

- **Develop a long-term vision.**
  - Data collection should be part of a broader strategy, including follow-up actions and a clear exit plan.

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"It's good to understand the ground reality that a farmer's income is a household affair. It often goes beyond the one focus crop they might be growing for a buyer. Understanding this holistic picture could be the key to unlocking more effective strategies. However, this would often be beyond the scope of one actor. Hence, more openness and intention for collaboration are needed to effectively use data-driven action to maximise intended impact. This would require companies to participate and engage in data-sharing efforts and consider integrating data beyond their own value chains. For example, if a company sources coffee from certain farmers, and those farmers also grow and sell peppers, it could be more resource-efficient to collaborate with the buyer of peppers to fund a joint data study."

- Vaibhav Panpaliya, senior innovation manager on better income at IDH. IDH is a global organisation that brings together public and private stakeholders to make agricultural markets more sustainable and more inclusive.

"With EUDR, more companies are mapping geocoordinates, often using their own systems. This leads to duplicate requests and extra work for cooperatives. As more companies begin collecting similar data, it's worth asking: does every company still need to build its own system? A shared approach would reduce the burden, improve consistency, and support collaboration across the sector."

- Jasper Boerrigter, head of operations at Tony's Open Chain. Tony's Open Chain is an industry initiative launched by Tony's Chocolonely to end exploitation in cocoa.

Reading tips:

- *The Cocoa Income Inventory is an open-access platform developed by IDH, Wageningen University and Voice cacao network that provides anonymized, harmonized data on cocoa farming household incomes to support evidence-based decision-making and improve living income strategies across the cocoa sector.*
- *Check out this workshop for coffee farmers in Honduras on living income: Back to the Source: Our first in-country Living Income Lab in Honduras - Living Wage & Income Lab.*

4. Safeguarding fair data

In many parts of the world, there is limited or insufficient legislation in place to protect data privacy and to guide ethical data collection. This puts extra responsibility on companies and organisations to lead by example and prioritise responsible data practices. As more data is collected from smallholder farmers, important questions emerge: How can we ensure that data is collected fairly, managed responsibly, and ultimately used to benefit the farmers themselves? This section explores how to approach smallholder data in a way that is fair, inclusive, and respectful of farmers' rights.

4.1. Legal framework for data governance

In the European Union (EU), data governance is regulated through the European General Data Protection Regulation (GDPR). This is a comprehensive legal framework that governs how personal data is collected, processed, and stored within the EU. It focuses on transparency, accountability, and individual rights, such as the right to access, correct, delete, and transfer personal data. GDPR applies to any organisation handling personal data of EU citizens, including those in agriculture, and sets strict rules for consent, data security, and lawful processing.

The GDPR is reinforced by the EU Code of Conduct on Agricultural Data Sharing by Contractual Agreement, which complements the GDPR by focusing on the specific context of farm data. It acknowledges that if agricultural data can be linked to an identifiable person, through contracts, land records, or GPS coordinates, it is considered personal data and must comply with GDPR.

Together with the US Farm Bureau's Privacy Principles and the New Zealand Farm Data Code, these frameworks aim to protect farmers' data rights and support trust in data sharing. However, they primarily target agribusinesses and tech companies, not farmers themselves.

Reading tips:

- *Read more about the legal obligations concerning data governance in the European General Data Protection Regulation (GDPR)*
- *Read more on the voluntary framework guiding fair and transparent data sharing in agriculture through contractual agreements in the EU Code of Conduct on Agricultural Data Sharing by Contractual Agreement.*

4.2. Fair governance principles

While there is a legal basis to protect farmer data, this does not mean that farmer data also actually benefits the farmer. Therefore, various organisations have defined principles and guidelines for fair data collection. For example, the transdisciplinary research group Fair & Smart Data outlines five key principles for fair and sustainable benefit sharing from smallholders' data. These principles are intentionally broad and should guide, not dictate, data governance policies. Stakeholders can use them to design smallholder-focused data strategies. You can find the insights from the Fair and Smart Data working group in the 'Read More' section.

To put the five principles outlined in their research into practice, view the following tips:

- **Be responsible and accountable**
  - Only collect and store data that is really needed.
  - Be clear about why you are collecting it and how it will be used.
  - Think about the farmers' situation, make sure your approach fits their reality.
  - Assign someone in your team to keep an eye on ethical data use.

- **Share benefits fairly**
  - Make sure farmers get something back from sharing their data, such as advice, better prices, data premiums, or access to services.
  - Set up simple ways to give farmers feedback, like SMS updates or local meetings.
  - Track how data sharing helps farmers and share those results.

- **Respect privacy and keep data safe**
  - Use clear, simple language to explain what data you are collecting.
  - Ask for consent. Use clear, simple language to explain what data you are collecting and why. Make sure farmers understand how their data will be used and who will have access to it.
  - Store data anonymously by removing personally identifiable information such as names or GPS coordinates. If needed, keep a separate, secure file with the key for re-identification. Always present data in aggregated form, never at the individual farmer level.

- **Provide support**
  - Help farmers get access to phones, internet, or charging stations.
  - Offer training on how to use digital tools and understand data.
  - Make sure support is ongoing, not just a one-time workshop.

- **Be transparent and fair in decisions**
  - Involve farmers in decisions about how their data is used.
  - Set up a way for farmers to raise concerns or complaints.
  - Keep decision-making open and easy to understand.

"Farmers and workers are individual actors with agency, not just extensions of a supply chain. At Fairfood, we advocate for data ownership, but we recognise it is meaningless if farmers cannot access, understand, or actually use their data. Ensuring inclusivity means placing farmers at the centre of innovation and equipping the first mile - farmers, co-ops, unions, local buyers, and collectors - to process and validate data. Often, these actors already hold a wealth of information but may not know what is valuable. Working together to identify the right data points has helped us build traceability and reporting systems where farmers and co-ops see real value in contributing quality data. This, in turn, supports better decision-making, clearer interventions, and contracts and claims everyone can trust. With the right principles in place, data not only drives corporate ESG progress but also enables farmers' businesses to thrive."

- Derek Hardwick, digital solutions manager at Fairfood. Fairfood International is an NGO that develops open-source tools and practical models to help businesses improve their practices and accelerate the shift toward a more sustainable and inclusive food system.

"When external parties collect data or handle transactions, it's essential that farmers are actively involved and able to verify the process. For example, we use software that requires a voice memo from the farmer to confirm a transaction. This kind of verification keeps farmers in control and ensures the integrity of the data."

- Willem Oomens, business developer & co-founder at Sommalife. Sommalife is a social enterprise that uses modern technology to create sustainable income and impact in rural communities.

"Our local partner helps us make sure that all data is collected in an ethical way, especially data on sensitive topics. They ensure informed consent is obtained. This includes, for instance, the consent to use photos in communication campaigns. If people don't want to be visible, we blur them out or use a different photo".

- Thijs Hofman, impact manager at We Wonder Company. We Wonder Company sells organic coffee and tea.

"We collect a range of data, including name, gender, age, household size, farm size, crops grown, and income from both farming and non-farming sources. We take data privacy seriously. All data is analysed anonymously using farmer identification numbers, and we do not share personal information with third parties."

- Pratap Thapa, co-founder and CEO of aQysta. aQysta is a company that connects brands with smallholder farmers by ethically sourcing organic, traceable ingredients.

Reading tips:

- *Fairfood lists five principles to create value for all supply chain actors in "Who owns farmer data? Fairfood's principles on data governance"*
- *USAID published a report that advocates for a new approach to agricultural data governance that puts farmers at the centre in "Farmer-centric data governance: towards a new paradigm".*
- *Fair and Smart data working group (Maastricht University) published a report that presents five smallholder-oriented data governance principles that aim to ensure data is collected, shared, and used in ways that are ethical, inclusive, fair and beneficial to small-scale farmers in "Smallholder-oriented Data Governance Principles"*
- *Frontiers in Sustainable Food Systems provides recommendations and considerations regarding the privacy and confidentiality of smallholder farmers' data, aiming to safeguard sensitive information, build trust, and support ethical participation in digital agricultural systems in "Protecting farmers' data privacy and confidentiality: Recommendations and considerations"*
- *Leiden University explores how the datafication of African agriculture reshapes agrarian power relations and calls for a shift towards participatory governance frameworks that prioritise smallholder farmers' rights, collective agency, and equitable benefit-sharing in "Datafying African Agriculture: From Data Governance to Farmers' Rights"*
- *PRISM presents a data governance approach for smallholder farmer empowerment in AI-driven agriculture, focusing on transparency, data ownership, privacy, and equitable benefits to ensure fair participation in digital agricultural ecosystems in "Data governance for Smallholder Farmer Empowerment in AI Agriculture"*

Checklist for fair and ethical smallholder data collection

Define purpose and scope

- ☐ Clearly define the purpose of data collection
- ☐ Identify only the data points you truly need
- ☐ Check existing datasets before designing new surveys
- ☐ Explore possibilities to work together to pool data across multiple actors

Design a representative and inclusive approach

- ☐ Ensure your sample is representative (e.g., gender, region, farm size)
- ☐ Account for regional, cultural, and socio-economic differences
- ☐ Assess and mitigate the potential risks of your data collection approach (e.g. regulatory limitations, gender considerations, timing)

Prepare for local relevance

- ☐ Use tools and methods that work in the local context
- ☐ Test (pilot) your data collection method locally before scaling
- ☐ Work with trusted local partners to support the process

Collect data respectfully

- ☐ Explain clearly what data you are collecting and why
- ☐ Use the local language during communication and data collection
- ☐ Obtain informed consent from smallholders
- ☐ Minimise the time and effort required from farmers
- ☐ Engage in dialogue when data seems flawed, learn together to improve

Recognise and reward participation

- ☐ Ensure smallholders benefit from the data (e.g., better services, insights)
- ☐ Avoid keeping all the value for your business
- ☐ Consider fair compensation or other forms of recognition for farmers' time and data

Use data responsibly

- ☐ Be transparent about how data will be used
- ☐ Share insights back with smallholders
- ☐ Avoid collecting or storing excessive or irrelevant data

Govern and protect data

- ☐ Protect personal and sensitive data
- ☐ Use secure systems and comply with privacy laws
- ☐ Establish clear data governance policies (ownership, access, accountability)
- ☐ Set up a clear way to handle questions or complaints

Monitor progress over time

- ☐ Identify the key elements you want to monitor, stick with them consistently
- ☐ Revisit the same farmers to track changes and impact over time
- ☐ Consult experts to estimate values (e.g., price changes) instead of re-asking
- ☐ Avoid unnecessary repetition in surveys, streamline where possible

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This is a publication of
Netherlands Enterprise Agency
Prinses Beatrixlaan 2 | 2595 AL The Hague
PO Box 93144 | 2509 AC The Hague
T +31 (0) 88 042 42 42
E: SPVO@rvo.nl
www.rvo.nl/SPVO

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