



THE UNIVERSITY *of* EDINBURGH

## Edinburgh Research Explorer

### **A method for understanding livestock decision makers' data needs**

**Citation for published version:**

Smyth, K, Wong, JT, Allan, F, Meadu, V & McLeod, A 2023, *A method for understanding livestock decision makers' data needs..* <<https://livestockdata.org/decisions>>

**Link:**

[Link to publication record in Edinburgh Research Explorer](#)

**Document Version:**

Publisher's PDF, also known as Version of record

**General rights**

Copyright for the publications made accessible via the Edinburgh Research Explorer is retained by the author(s) and / or other copyright owners and it is a condition of accessing these publications that users recognise and abide by the legal requirements associated with these rights.

**Take down policy**

The University of Edinburgh has made every reasonable effort to ensure that Edinburgh Research Explorer content complies with UK legislation. If you believe that the public display of this file breaches copyright please contact [openaccess@ed.ac.uk](mailto:openaccess@ed.ac.uk) providing details, and we will remove access to the work immediately and investigate your claim.





**LD4D**  
LIVESTOCK  
DATA FOR  
DECISIONS

September 2023



# A method for understanding livestock decision makers' data needs

By Karen Smyth  
Johanna Wong  
Fiona Allan  
Vanessa Meadu  
Anni McLeod

## Acknowledgement

This work is based on a study conducted in 2022 by the Busara Center for Behavioral Economics (Busara), commissioned by Livestock Data for Decisions (LD4D) and written up by SEBI-Livestock.

## Introduction

Governments and other groups that work on livestock development in low- and middle-income countries need good data. They need data to make key decisions such as where to set up a project, which diseases to tackle, and which interventions to implement. Science-based organisations aspire to generate data that can be used for these kinds of decisions. But producing data is usually not enough to influence change. To close the gap between data and decisions, we must begin by understanding the needs and behaviours of decision makers.

Livestock Data for Decisions (LD4D) is a network of people working with data in livestock development. Its mission is to drive 'better data for better decisions'. To achieve this, we needed a better understanding of *who* the livestock decision makers are within low- and middle-income countries, and *what* their data needs are. This can ultimately inform which challenges the network can address, and ensure we produce useful and impactful data and evidence.

To this end, we conducted a study through the Busara Center for Behavioral Economics. The first goal was to understand the overall landscape of livestock decision makers. The second goal was to explore the way that data and evidence are used in decision making and

to assess decision maker data and evidence needs. This study was unique to the LD4D network, which targets a broad range of problems and potential decision makers.

This guide distils the key lessons learned from this process and aims to help individuals and organisations who are planning to undertake a similar study. Phase 1 is for those who are aiming to identify decision makers, while Phase 2 helps you investigate the behaviours and data needs of those decision makers. For each Phase we present a series of steps, describing the methodological process followed by the outcome. Each step requires detailed thought and knowledge, with many sources of information that cannot all be covered in this brief summary. Finally, while our study may not have addressed issues around social inclusion from the outset, it has been considered retrospectively, and we attempt to highlight it in this summary guide.

## PHASE 1 | Conduct a decision makers landscaping exercise

### STEP 1 · Question your motives

#### General guidance

Why do you need a decision makers' needs study? Consider what you aim to achieve by understanding decision maker groups or behaviours. Are you and your organisation willing and able to adapt your priorities and actions to better meet decision makers' needs? By starting this process, you may raise expectations among decision makers that change

will occur; this can produce positive or negative side effects. Think carefully about what powers you have to support improvements before taking this on. Consider also the factors that may affect the priorities of people in the landscape you are studying. For example, gender, ethnicity or economic status may influence the livestock species or products that are preferred or the decisions made by livestock keepers about the management of their animals, and these factors may need to be taken into account by government decision makers.

### What we did

In our example, the LD4D network is comprised of many stakeholders who generate data aimed at influencing decision makers. We explained to our research participants that the objective of this study was to share its findings with the network so that LD4D members can better target their activities and disseminate their data to relevant decision makers.

## STEP 2 · Define your general scope

### General guidance

What is the general domain or topic in which you wish to study decision makers? Are you interested in particular geographies or scales (national or local), or particular social groups (e.g. small-scale farmers)? This is an important step because it will affect the resources you will need to conduct the study, as well as the types of domain experts you involve in your study team (see Step 3). At this stage you are defining your scope very broadly; you may wish to narrow it, and we cover this in Step 5.

### What we did

The work of the LD4D community is broadly focused on low- and middle-income countries in sub-Saharan Africa and South Asia, as well as on livestock health and productivity. The LD4D Steering Committee wanted a study to explore the behaviour of decision makers who consume and use livestock related data, information and learning materials to make decisions. As the scope of our work was not fixed from the outset, we went through a rigorous prioritisation exercise to select regions and countries – this is detailed in Step 5.

## STEP 3 · Assemble your study team

### General guidance

Set up the team which will carry out the study. For a study on decision making, it is crucial to involve behavioural scientists, as they have an understanding of how to investigate the external factors (e.g., environment and peers) and the cognitive biases (e.g., memory and motivation) that influence decision-making. A researcher with a strong background in qualitative data analysis would also be an integral

team member.

We also recommend setting up an advisory group of technical and professional domain experts who can offer advice, connections, and feedback along the way. Your advisory group may also help identify and reach out to key informants, and act as key informants themselves. The more interdisciplinary the research team, the more comprehensive the study will be. However, bringing together different specialisms and understanding each other's terminology and norms is a challenge, and often takes more time and energy than you expect. So, build in extra time to work through these matters.

### What we did

The LD4D study was carried out by behavioural scientists from the Busara Center for Behavioral Economics, in collaboration with SEBI-Livestock. The LD4D Steering Committee, which requested the study, also acted as advisors. This interdisciplinary group is made up of senior experts based in national, international or academic institutions, and the private sector. During this study, there was a continuing dialogue between domain experts (in the livestock sector) and behavioural science experts, to ensure that we understood each other's view of the world and could frame questions that would make sense to interviewees.

## STEP 4 · Define “decision maker”

### General guidance

Who qualifies as a “decision maker” in your field or scope? What characteristics or responsibilities would they have? Within the study team and advisory group, particularly when working across different disciplines, your definition of “decision maker” may be different, depending on your context. It is important to agree on a definition at the outset, as this shared understanding will underpin your entire study.

### What we did

To arrive at our definition of decision maker, the study team drafted a definition, then presented it to the Steering Committee for discussion and refinement. Through these discussions, we defined a **decision maker** in livestock as an **individual** or an **organisation** that uses livestock-based data to make **implementation-based** decisions.

## STEP 5 · Narrow your scope

### General guidance

Do you wish to study decision maker behaviours or needs in a particular geography, social group, production system or related to a particular problem? What criteria will influence your final choice? Do you need particular characteristics, or are you looking for

examples to cover a broad spectrum? These questions will help you identify participants for the next step.

### What we did

In our study we decided to narrow the geographical scope as we had limited resources. We developed criteria to select countries in which:

- Livestock contributes a substantial share to GDP;
- Pro-livestock production policies existed;
- Data sharing platforms were already established, as this is an important basis for supporting evidence-based decision making.

We also considered:

- Regional balance (Western, Eastern and Southern Africa; South Asia),
- Economic range (low-income, middle-income),
- Countries with significant pastoral populations,
- Countries that are priority investment areas for our funders.

Selecting the countries for Phase 1 of the study was an iterative process. The research team undertook desk research to propose a range of countries within Africa and South Asia where the livestock sector is important and where public databases were somewhat accessible. Countries were then narrowed down based on the rest of the criteria, and the selection validated with the Steering Committee. Our final geographic focus for Phase 1 was Ethiopia, Nigeria, South Africa, and India.

## STEP 6 · Identify key informants

### General guidance

Within the scope of your study, defined in Step 5, work with your advisory group to identify the different sectors, specialist areas, and types of organisations or institutions that may have information about who may be a decision maker. Consider including individuals who are not an obvious choice, for example stakeholders who advise decision makers or are affected by decisions as well as those who make the decisions. From this, investigate the individuals within these areas or organisations who could be interviewed. Not everyone on your list will agree to an interview, so having a longer list will help if you need to go back and identify more candidates.

### What we did

In our study, we undertook a brainstorming exercise with the Steering Committee to identify the groups within in our target countries who could provide us with useful insights into the livestock sector. This process identified that livestock experts from the public sector, private sector, academia and government would be good candidates. We prepared a shortlist of specific people including decision makers and advisors to decision makers.

## STEP 7 · Collect the data

### General guidance

With your study team and with feedback from your advisory group, create a question guide or topic list to help focus your key informant interviews and ensure you collect the necessary data. Ideally you will conduct individual interviews, so that each key informant has time to express themselves and is not affected by professional or group dynamics. Decide how the interviews will be conducted – who will ask the questions? Who will take notes? Will the interview be recorded? Will the interviews be online or in person? Decide how many key informants you can interview depending on your time and resources. Finally, contact your key informants, explain the purpose of your study, obtain relevant permissions (including ethics review where required), and invite them to an interview. As you conduct more interviews, unique information will emerge less frequently. This likely means you have reached data saturation and may have conducted enough interviews to answer your research questions.

### What we did

For the LD4D study, we aimed to identify thematic areas within the country's livestock sector, key stakeholders, data sources and areas for investment. Key Informants were also invited to recommend areas for further study. We conducted individual online interviews with 11 key informants, interviewing at least two people per target country as well as regional and/or global experts.

At this stage in the study, we learned that the focus of our initial research question was too large, leading to interesting, but quite generalised information. Setting a more specific question, hypothesis or scope at the start can help keep the study focused and allow for deeper insights.

## STEP 8 · Analyse the data

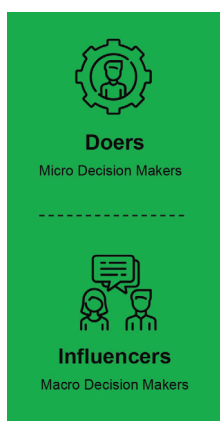
### General guidance

The data that you gather will be primarily qualitative. Analysing and interpreting qualitative data is a specialist area and as this is a summary guide we cannot provide detailed guidance. We strongly recommend that you work with a qualitative data expert to analyse your data, and ideally this person will be part of the team from the study inception. You will be dealing with small numbers of responses, but will have detailed and rich interview transcripts that need to be reviewed, coded, analysed and interpreted. You may choose to use specialist software designed to store and analyse qualitative data. You will want to identify key themes that relate to your original research questions, such as which kinds of decision makers are frequently mentioned,

the hierarchies among decision makers, how decisions are made, and important topics. Also look for other major themes that arise naturally, as some may be unexpected. Highlight common trends, gaps, problems and solutions, then see if there are ways to categorise or summarise the information. Visualisations can be a helpful tool to summarise and communicate your findings to your team, your network and your stakeholders. There is no fixed way to categorise decision makers. It may be useful to identify two or three broad groups, or you may wish to subdivide them further.

### What we did

As we had a relatively small number of responses, the analysis was conducted by two people in the Busara team, who carefully read, highlighted and coded



the responses. We found that decision makers naturally fell into two main categories.

**Doers** are defined as micro decision makers operating at grassroots level who are directly impacted by livestock policies.

**Influencers** are defined as macro decision makers, whose actions influence the decisions of the micro decision makers.

This process helped us to identify the decision makers in

our case study areas and countries and understand who influences whom.

Through these initial conversations, the study team was able to identify a range of topics and themes that are relevant to livestock data use and decision making. A consistent theme that emerged was the importance of Public Sector decisions and decision makers; this was identified as an area for further research. These conversations revealed challenges facing Public Sector decision making, including reasons why decision making is at times not evidence-based.

The final output of the landscaping exercise is a living map of livestock decision maker groupings and the kinds of decisions they make that require data and evidence (Figure 1). This visualisation is a useful starting point for the LD4D network to focus its efforts around decision makers. It will be reviewed and updated to ensure it remains useful for future studies.

In this broad landscaping exercise we focussed on the levels at which decisions are being made and some key institutional groups within each level of decision making. If needed, a landscaping exercise could be designed to provide a more granular analysis, including, for example, information about social groupings within each decision making group.

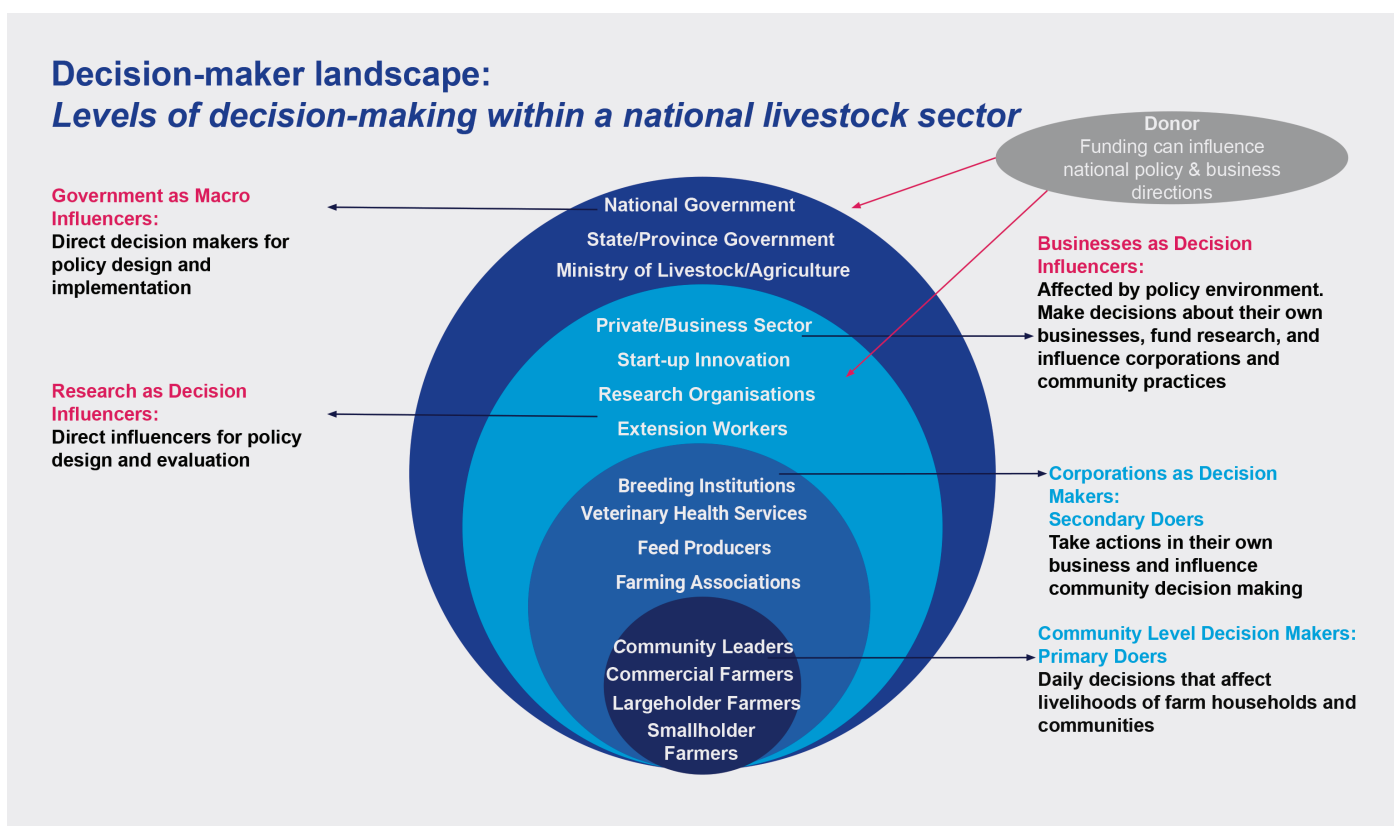


Figure 1. Decision maker landscape: levels of decision within a typical national livestock sector. Source: Decision Makers' Needs Assessment in Livestock Strategy. Presentation by Busara Center for Behavioral Economics to the LD4D Steering Committee, September 2022.

## PHASE 2 | Investigating decision makers' data needs

If you already know who the decision makers are in your area of interest, you will be able to move straight into researching the types of data decision makers use.

### STEP 1 · Define your scope

#### General guidance

What is the specific question you are trying to answer? Are there any specific decisions you are interested in? What are the types of data that may be used in this type of decision making? Remember, the more specific your question, the more in-depth your responses are likely to be.

#### What we did

For our study, we narrowed our scope to exploring the data needs of decision makers within public sector policy and strategy. This had emerged in the Key Informant interviews in Phase 1 as an area where evidence-based decision making remains a challenge and was a strategic choice. Public sector policies and strategies define the context in which other decision makers work. For example, when policies regulate where livestock markets are located and how they are managed, this can affect farmer decisions about when and where to sell. Further, this scope fitted within our time and resource constraints: decision makers connected to public policy and strategy could be interviewed online, and this made it possible to reach quite a wide range of people in four countries.

Since Livestock Master Plans are important policies in all our focus countries, the study team used these as an entry point case study for understanding decision making.

### STEP 2 · Choose your research methods and participants

#### General guidance

Which research method is most appropriate for the type of data you wish to collect? Based on your participants, would written information (e.g., collected via a survey or form) or verbal information sharing be more suitable to the topic? Is the information sensitive, in which case individual interviews may be more appropriate? Individual interviews or small groups including only specific stakeholders can be appropriate for participants with particular information, such as gender experts in livestock master planning. How structured do you want the conversation to be? Is discussion important, and therefore a focus group would be more appropriate? Are face-to-face interviews required, or can this be conducted online?

#### What we did

Based on our insights into the different types of decision makers, namely Macro Decision Makers and Micro Decision Makers (see Phase 1, step 8) the LD4D study team decided to invite these two types of stakeholders to share their insights through focus group discussions. The first group were policy Influencers, defined as macro decision makers whose actions influence the decisions of micro decision makers such as Doers. An example policy influencer would be an official from a country's Ministry of Livestock and Agriculture. The second group were Doers, defined as micro decision makers at the grassroots level, who are directly impacted by livestock policies in their daily practices, operations and decision making. This group could include, for example, a small holder farmer, community leader, or member of a farmers' association. It could also be important to seek information separately from women and men, or from members of different ethnic groups, to understand their priorities and perspectives. We also sought out a key informant on gender and one on finance. Had time and logistics allowed, we would have liked to include more specialist interviewees and more from the community level.

### STEP 3 · Collect data

#### General guidance

Based on your decisions in Step 2, obtain the relevant permissions (including ethics review), reach out to your participants, and invite them to take part in the study. You can pose questions around the role of data in decision making, data sources and gaps, frequency of data use, and data flows.

#### What we did

The LD4D study team invited participants to join a 90-minute online meeting, with maximum four stakeholders drawn from each group. These discussions were grouped by country, to improve the quality of information. These interactive discussions took place on Zoom, and facilitators used a virtual whiteboard tool to visually capture participant feedback, e.g., through rating scales.

On reflection, there are some areas we would improve on from this study. The biggest constraint we faced was identifying a time and date that worked for enough participants to hold a discussion group. With no time or budget constraints, half-day face-to-face sessions planned well in advance would be ideal. This would be a necessity if we planned to interview communities or farmers, as access to online meeting technology may be limited. In terms of technology, there were some constraints with the quality of internet connectivity amongst selected participants, which meant that some focus groups lost participants during the discussions.

It would also help to be more aware of the power

relations and other forms of inequality between participants: in cases where an employee and their boss were both in the discussion group, there may have been limitations on what each participant felt comfortable sharing, or a woman may not feel comfortable speaking up in a meeting dominated by men. We also found that an interpersonal connection between the facilitator and the community or participants yielded better quality information.

## STEP 4 · Analyse data

### General guidance

After you have gathered information from the focus groups, you will be able to analyse your stakeholders' data needs and habits in decision making. The data that you gather will be primarily qualitative. Analysing and interpreting qualitative data is a specialist area and as this is a summary guide we cannot provide detailed guidance. Work with a qualitative data expert and ensure that there is a behavioural scientist in your team.

### What we did

The LD4D study team categorised the focus group participants into policy implementers and policy designers. This was a helpful distinction, which allowed us to better understand the different data and information sources, as well as their decision-making processes.

From these discussions, we learned that decision makers find different data sources valuable depending on the kind of decision being made (Figure 2). For example, stakeholder consultations were seen as the most useful source of timely data for policy design, while newspapers and social media were the least insightful sources of information. Decision makers in our study were involved in developing livestock strategies; we cannot extrapolate to all kinds of data user, but all will be getting data from many different sources.

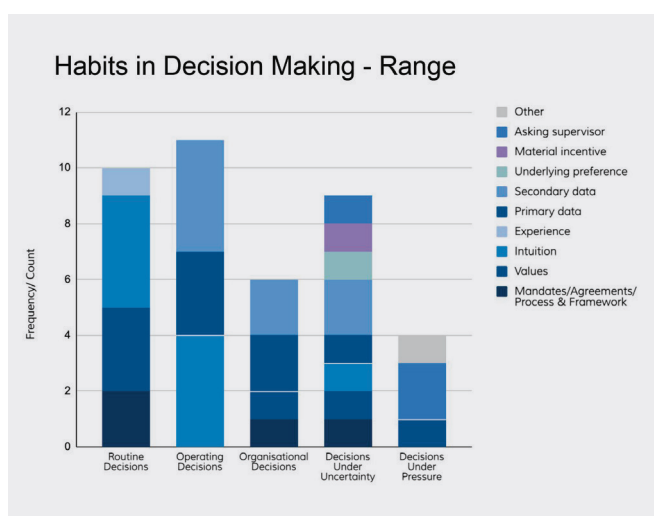


Figure 2. Habits in Decision Making.

Source: Decision Makers' Needs Assessment in Livestock Strategy. Presentation by Busara Center for Behavioral Economics to the LD4D Steering Committee. September 2022.

We also found that some decisions use more data points than others. Decisions made under uncertainty tend to draw upon more data sources than routine decisions.

Finally, we learned that different factors influence data uptake among policy designers and implementers. Policy designers choose data based on convenience, data quality and accessibility, while policy implementers are influenced by budgets, institutional hierarchies, and the need to present a consistent narrative.

## STEP 5 · Reflect on next steps

### General guidance

At this stage in your study, you may have gained sufficient insights to plan follow-up actions. Have you discovered any critical information gaps that you or your organisation may be able to address? Do you see new opportunities to influence or engage with a group of decision makers? Are there other areas for improvement?

### What we learned

The LD4D case study revealed useful insights about who the key decision makers are in our study area, and their data preferences and habits. It reminded us that decisions can be informed by multiple data and information sources, and that decision makers turn to different sources of data depending on the type of decision at hand. This raises questions about which sources of data LD4D can influence and how. The LD4D case study covered a small section of the livestock sector and could be expanded to consider other areas such as emergency planning and implementation, decisions around environmental adaptation and mitigation, or decisions made at local levels. These other areas would require different and probably broader stakeholder groupings in order to gather wider data. With further analysis we may be able to identify areas that can be improved, but it is not yet clear who can or should improve them.

### About SEBI-Livestock

SEBI-Livestock is the Centre for Supporting Evidence Based Interventions in Livestock. SEBI-Livestock mobilises and improves data and evidence to help the livestock community make better investments that improve livelihoods for smallholders in low- and middle-income countries. Hosted by the University of Edinburgh's Royal (Dick) School for Veterinary Studies, SEBI-Livestock convenes the Livestock Data for Decisions (LD4D) network.

[www.sebi-livestock.org](http://www.sebi-livestock.org) [www.livestockdata.org](http://www.livestockdata.org)

### About Busara

As an advisory and research organisation, Busara is dedicated to advancing behavioral science in pursuit of poverty alleviation across Africa, Asia and Latin America. Through its partnerships, Busara creates behaviorally-informed solutions that amplify the impact of products and policies, spanning sectors like finance, education, agriculture, health, and governance.

[www.busaracenter.org](http://www.busaracenter.org).