

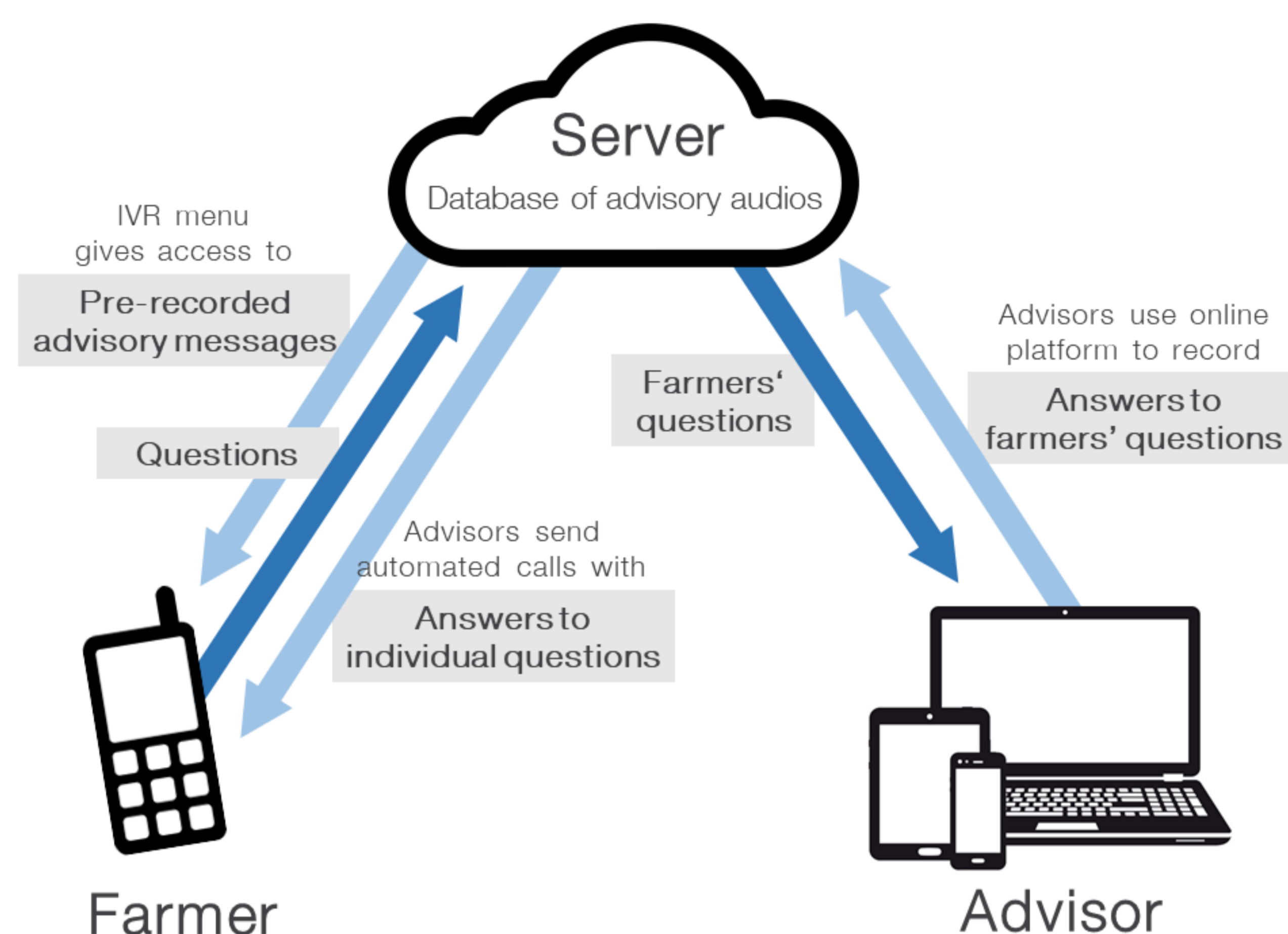
Adaptive SAI advisory through voice messages

“Ushauri” mobile information service

Bioversity International (lead) · ARI-Naliendele (Tanzania) · Lutheran World Relief (Kenya)

Summary

- SAI means farmers need **continuous** access to information that is highly **context-specific**.
- We co-created a **digital information service** for SAI together with extension services and farmers in Tanzania and Kenya.
- An **automated hotline** uses IVR to provide access to a set of **pre-recorded audio messages** about kitchen garden horticulture (**Kenya**) or Aflatoxin control in the groundnut value chain (**Tanzania**).
- Farmers can also record further questions through their phones.
- Farmers' questions appear at an **online dashboard**. There, agricultural advisors listen to them online, record/upload replies and send **replies as automated calls** back to farmers.
- Over time, **the service generates insights into farmers' information needs**. These insights can help to iteratively improve the service.



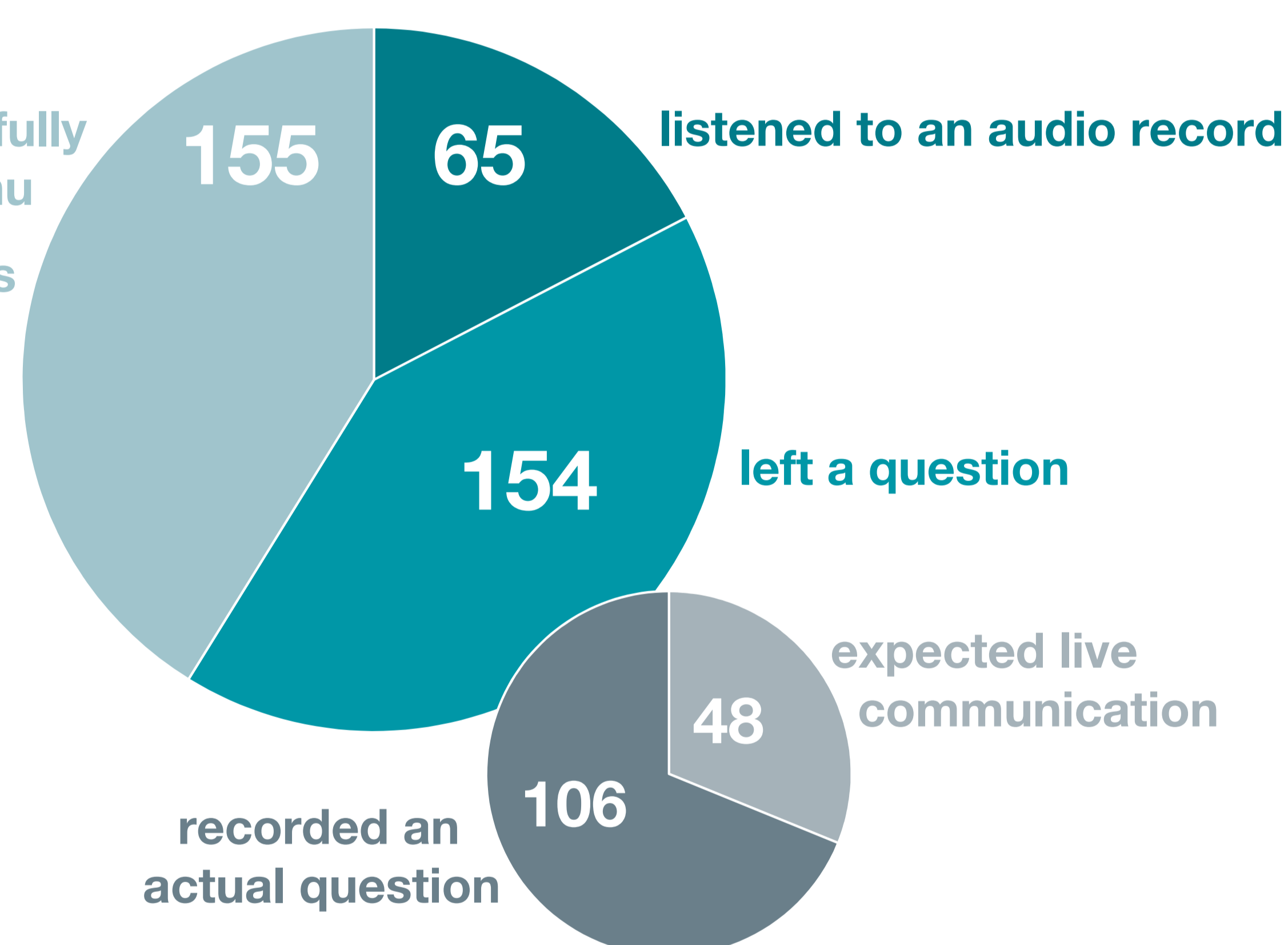
How the “Ushauri” service supports semi-automated communication in agricultural advisory

Piloting experience (Tanzania)

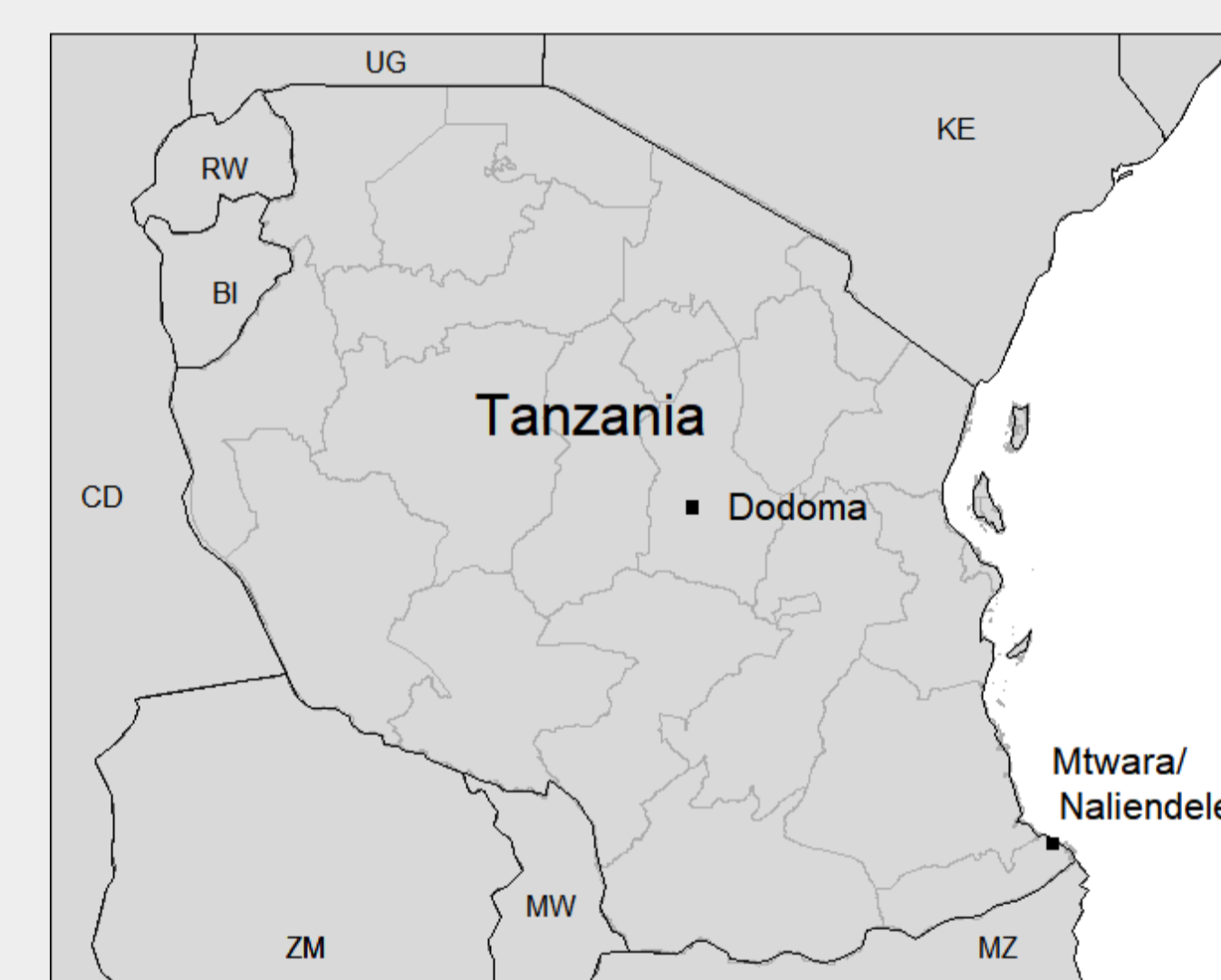
84%
called “Ushauri”
at least once

374 calls
More than 13 calls per day
Each farmer made
4 calls on average

Did not successfully
navigate the IVR menu
But only 2 farmers
never succeeded



- 97 farmers registered (47 women)
- 12 villages in 6 Districts
- 28 days



Keywords assigned to farmers' questions highlight priorities for new messages in “Ushauri” as well as for hands-on trainings by the extension service:

Topic	Frequency	Examples of keywords
Pests and diseases	29	rosette virus, rust
Inputs	9	seeds, fertilizer
Land preparation	34	spacing, soil type
Cultivation	4	weeding
Harvesting	7	when to harvest
Post-harvest	8	drying, storage
Market	3	market access
Consumption	8	effects of aflatoxin
Other	4	

Key insights

- Using an IVR service for providing agro-advisory is feasible. **Farmers quickly learn to navigate** the menu.
- IVR menus can disaggregate advice**, e.g. by asking for the callers's location, and this way deliver more context-specific information.
- Many farmers lost the “Ushauri” hotline number over time. Sending **periodic reminder SMS** would help.
- For farmers, the **possibility to ask questions anytime** was more important than access to pre-recorded advice.
- Advisors appreciate the efficiency gains provided by **asynchronous communication** (handling new questions once a day) and **answering repeated questions with the same answer recorded previously**.
- Opportunities for **self-registration** of new users are needed.
- User attrition due to lack of airtime was strong. **Business models around advertisement** (e.g. agro-vets, seed companies) could make the service toll-free.
- “Ushauri” generates useful **insights about farmers' knowledge and information needs**, which can be used to improve the “Ushauri” service as well as general extension programming.

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