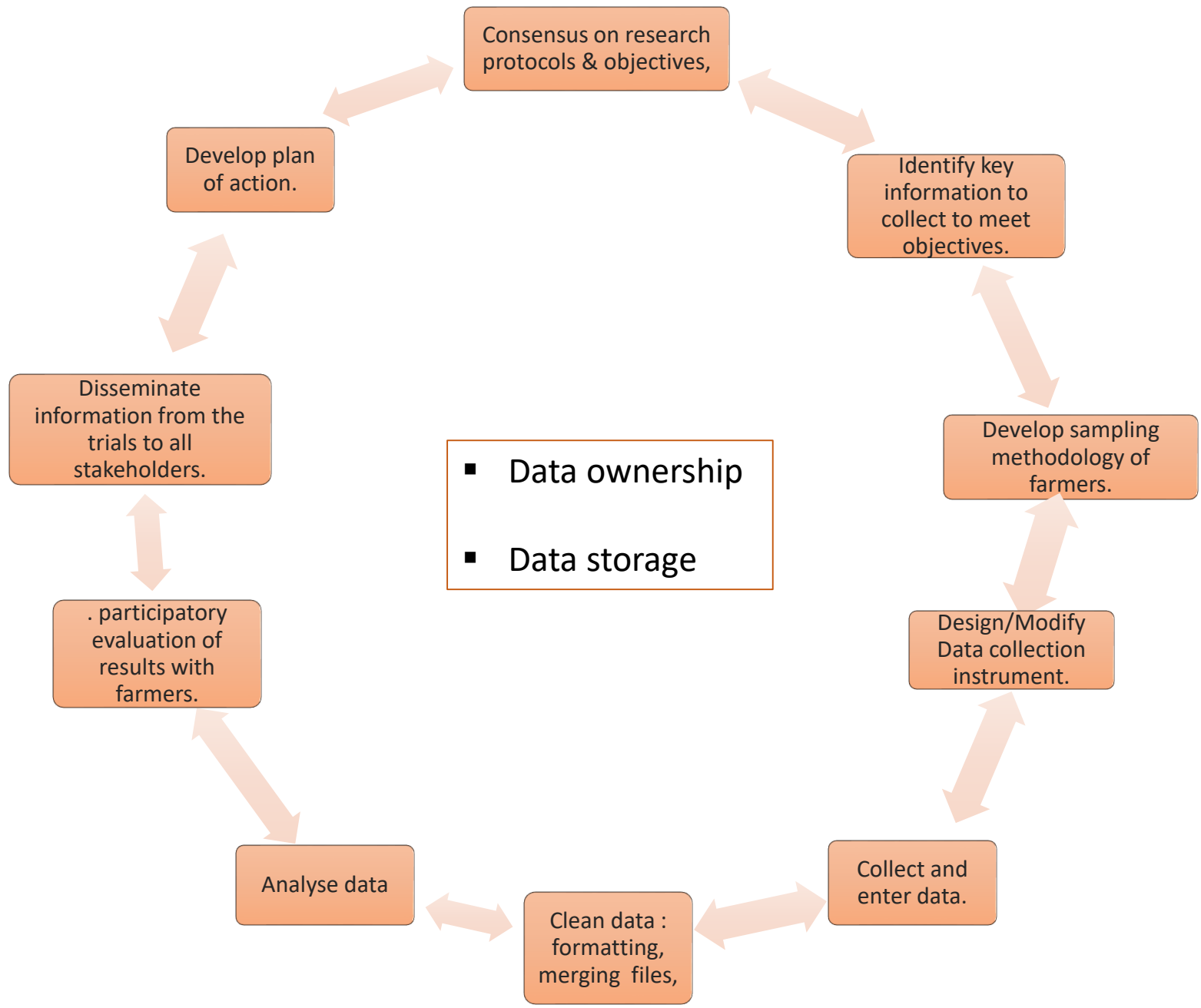


Data management in FRN-NGO, Western Kenya



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Consensus on research protocols & objectives,

Develop plan of action.

Identify key information to collect to meet objectives.

Disseminate information from the trials to all stakeholders.

- Data ownership
- Data storage

Develop sampling methodology of farmers.

. participatory evaluation of results with farmers.

Design/Modify Data collection instrument.

Analyse data

Clean data : formatting, merging files,

Collect and enter data.

The start situation

- No elaborate plan for data management
 - Hurried planning
 - Preparation of data collection tools
 - Storage
 - Analysis
 - feedback
- Struggled with data management at each point of data flow
- Depended on data manager from Multipurpose legume project
- Lessons from first trials prompted us to consider data management much more deeply

Lessons: Planning phase

- Early planning (2-3 months before field trials)
- Involve every participant in planning
- Have protocols in place before start of activities
- Have data collection instruments ready before start of activities
- ensure that the data collectors (farmers and field extension officers) understand what data to be collected and why
- Prepare field officers well through training:
 - Facilitating meetings
 - Data collection (qualitative data)
 - Conducting interviews
 - Use of technology (ODK)

Quality checks

- Duty of everybody (farmers, data collectors, researchers)
- Training on data quality and integrity
- Data manager
 - ✓ Ensure quality is embedded in the data collection instrument
 - ✓ Real time data check and feedback
 - ✓ Field officers raise problems encountered and quick fix is made
 - ✓ Piloting instruments is not only for conducting surveys!

Data collection

- Negotiate who measure what
- Not all data measurements can be captured through ODK
- Other records of qualitative nature are captured by field officers/farmers
- Predesigned data collection instruments for farmers to a large extent hardly work

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Benson Ouma

- Plot stands on sandy loam soil
- Thinning was never done
- Close Spacing
- Seeds were delivered very late and Planting done late
- Field intercropped with beans

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Roselyne Obuya

- Soil type: black cotton
- Right spacing
- Crop health is good and well maintained
- planted late as she was still waiting her co wife to plant first as required by culture
- plot 3 eaten by birds

Analysis

- Everyone should be involved
- Qualitative data analysis is a challenge to statisticians
- Data analysts cannot work on their own
- Applied statisticians are more suitable for FRNs

Data security

- Imagine data collected from over 800+ farmers getting lost!
- There is need for proper data keeping and access
 - Hard disk
 - Drop box
 - Or any cloud media
- Data ownership and access FRN is an area that still need to be discussed with regard open data policy
- there is need to negotiate and agree on data ownership and access
- Written down agreement on data access still required.

Feedback and sharing

- Feedback on results should be based on concrete findings after thorough analysis
- It is not good enough to provide half analysed results to farmers
- Feedback to farmers should be made within the shortest time possible

General data challenges

- 1) Feedback of results: how do we provide feedback to farmers on experiments they participated in and saw the results
- 2) Capturing qualitative data is still a challenge to field officers. Qualitative data analysis is still a challenge to most statisticians
- 3) What form of data should be shared with farmers?
- 4) How do we move towards an open data policy? How should we share data from FRN?
- 5) Data ownership – with regards to partnership with a researcher

Why data manager

1. Having someone to specifically manage the large data that are collected
2. To ensure that the data collected are of high quality
3. For timely preparation of data for analysis
4. To provide trainings to non-technical personnel on data related issues

Possible roles of data managers

- 1) Support research design
- 2) Support the development of data collection instruments
- 3) Supervise field testing of data collection and data entry
- 4) Manage and organize data collected into a form ready for analysis
- 5) Ensure consistent quality control of all data collected and stored
- 6) Work closely with project team in cleaning the collected data in readiness for analysis
- 7) Work closely with the project team in analyzing and interpreting all forms of data collected in the project
- 8) Occasional field visits to monitor, provide support and evaluate ongoing activities
- 9) Work closely with PI in writing detailed reports and presenting results
- 10) Work closely with research methods team in all the mentioned tasks
- 11) Training of data collectors on the use of data collection technologies
- 12) Real time fixing of problems during data collection