Field campaign

Preparation

and

Execution

Field campaign

- Preparation
  - Sample digitization
  - Set-up KoboToolbox
  - Form design
  - MBTile creation

- Execution
  - Form publication
  - ODK Collect use
  - Information collection
  - Information storage and QC

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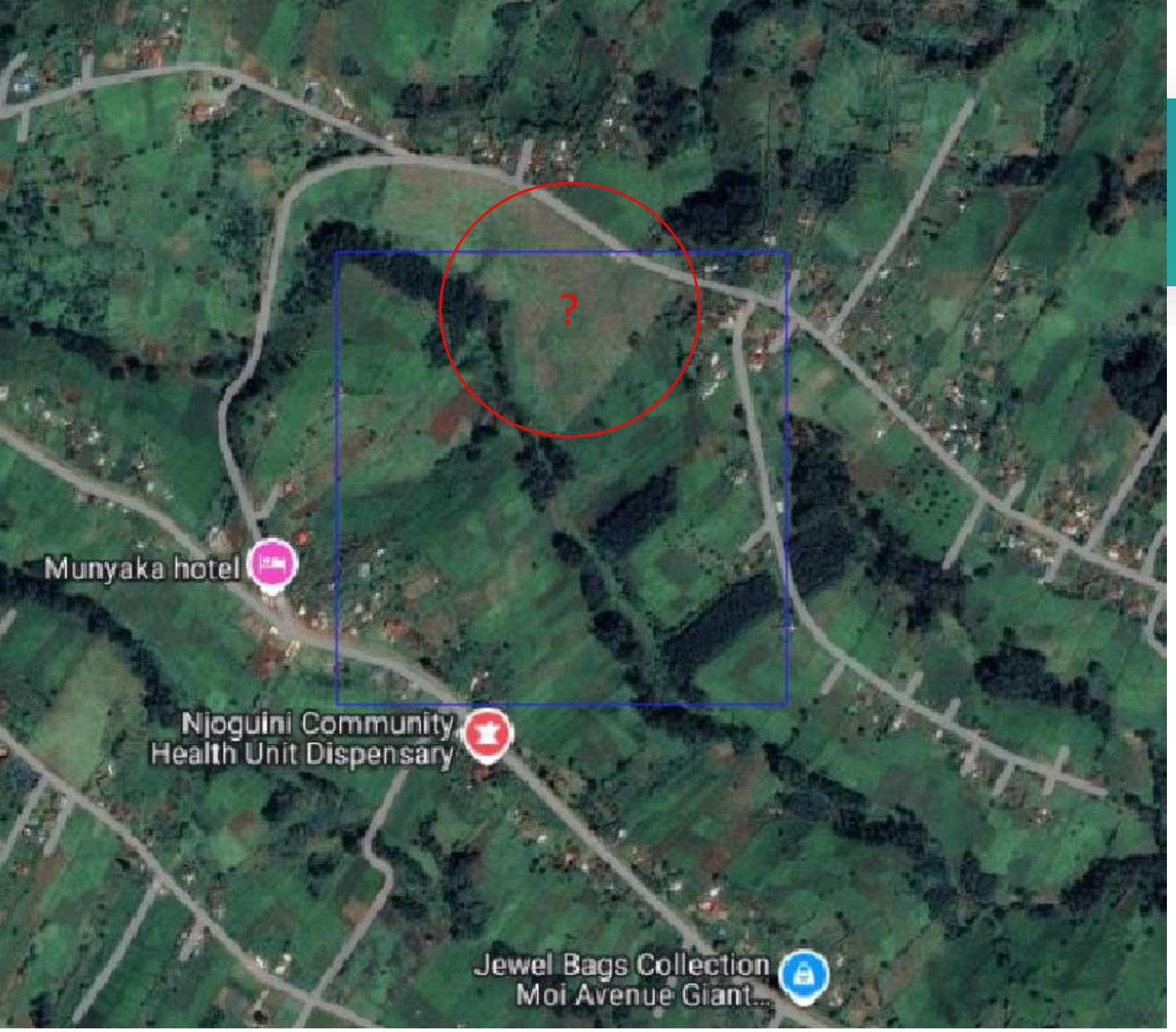
Sample digitization

- Switching between many sources
  - Different VHR basemaps
  - Satellite imagery (Senintel-2 timeseries, VHR imagery)
  - If available aerial imagery, DEM
- Considerations
  - Delineation is time consuming!
  - Requires expertise on LU/LC and imagery
  - Temporal coverages
  - Timeserie analysis for crop parcel delineations



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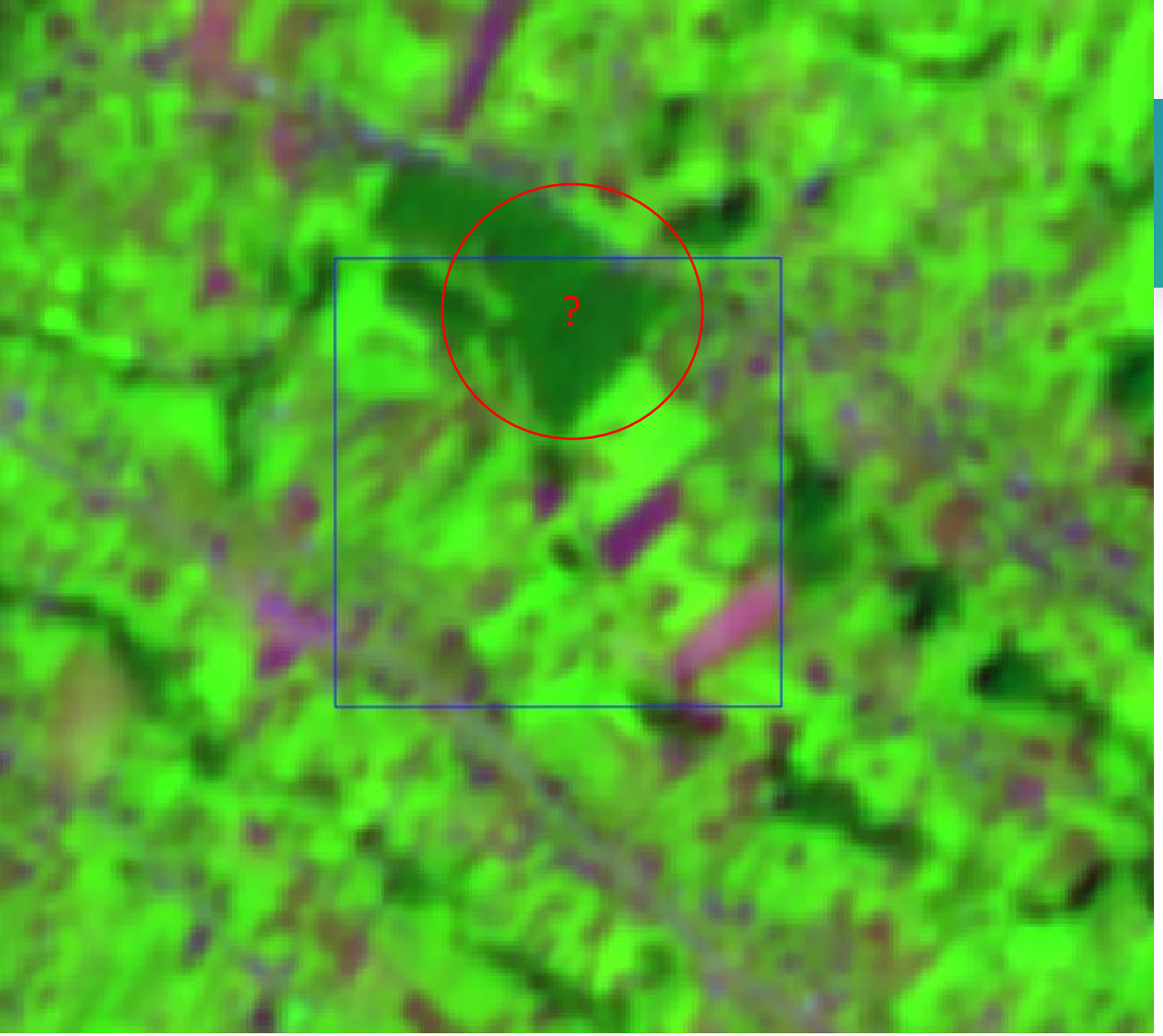

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- Non-overlapping
- Continuous
- LU/LC label
- Unique identifier
- Cropland
  - Separated per parcel
- Other LU/LC
  - Separated per clear boundary

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Kobo Toolbox set-up

- Rationale
  - Focused on offline fieldwork in challenging environments
  - Integration with ODK Collect
  - Provides many services like form design, hosting and data aggregation
  - Large community, open source, active development team

- Deployment
  - Own Dockerized/Native KoboToolbox server
  - Use the service of Kobo Toolbox to arrange for a private server

Option	Pros	Cons
• Set-up own Dockerized/native KoboToolbox server	• Reduced costs • Storage can be scaled to needs • Set-up can be modified • Better integration with existing IT-solutions	• Needs high IT skills (specifically dev ops and system and server administration skill) • Set-up is time consuming
• Use service of Kobo toolbox	• Easy set-up	• Costs increase related to storage

Kobo Toolbox deployment

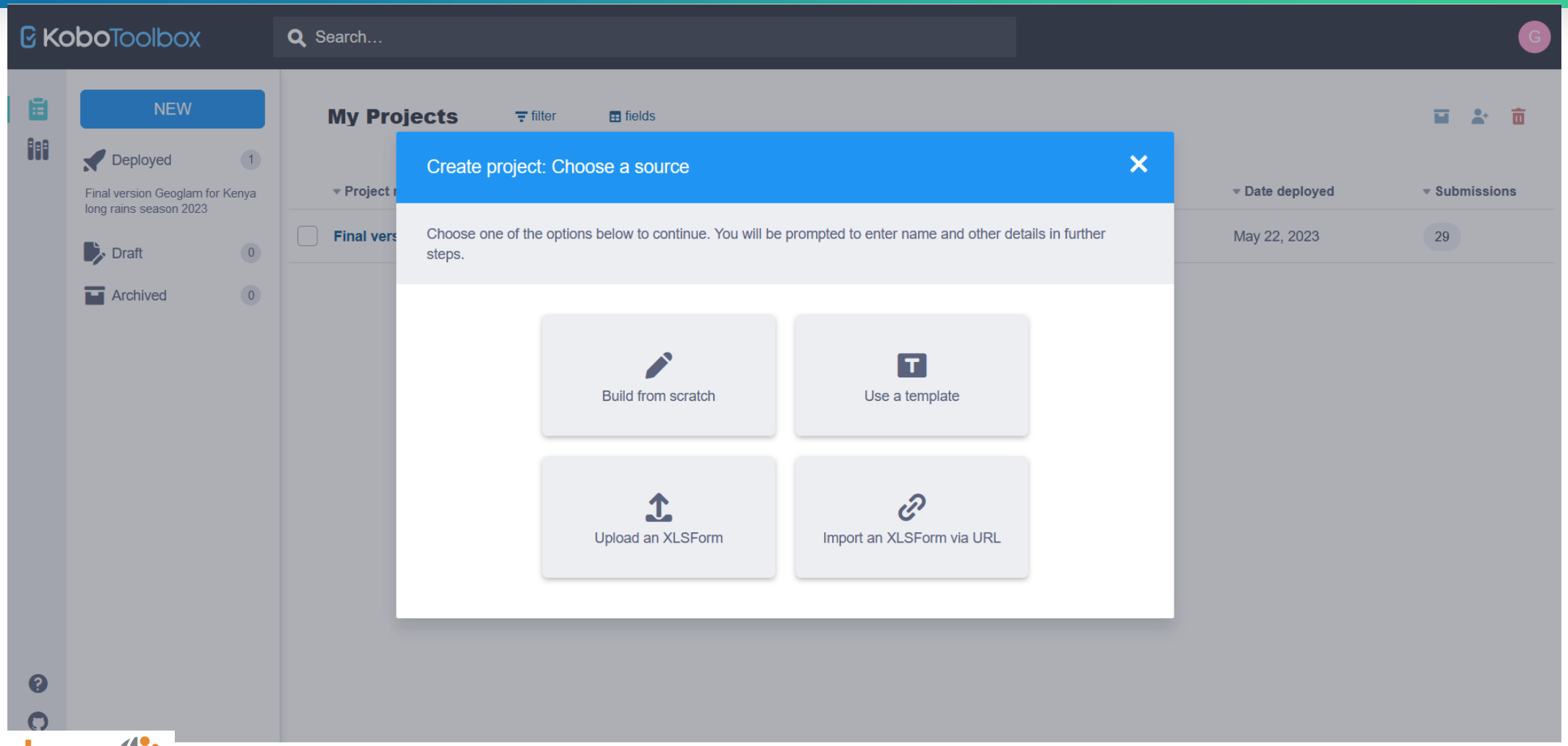
- Prerequisite for
  - Form hosting
  - Data collection / aggregation
- Useful for
  - Form Design
  - Storage
  - Quality control

- Deployment of Kobo Toolbox
  - Excellent tutorials and documentations

1) https://support.kobotoolbox.org/kobo_your_servers.html

2) https://www.kobotoolbox.org/services/

Form design



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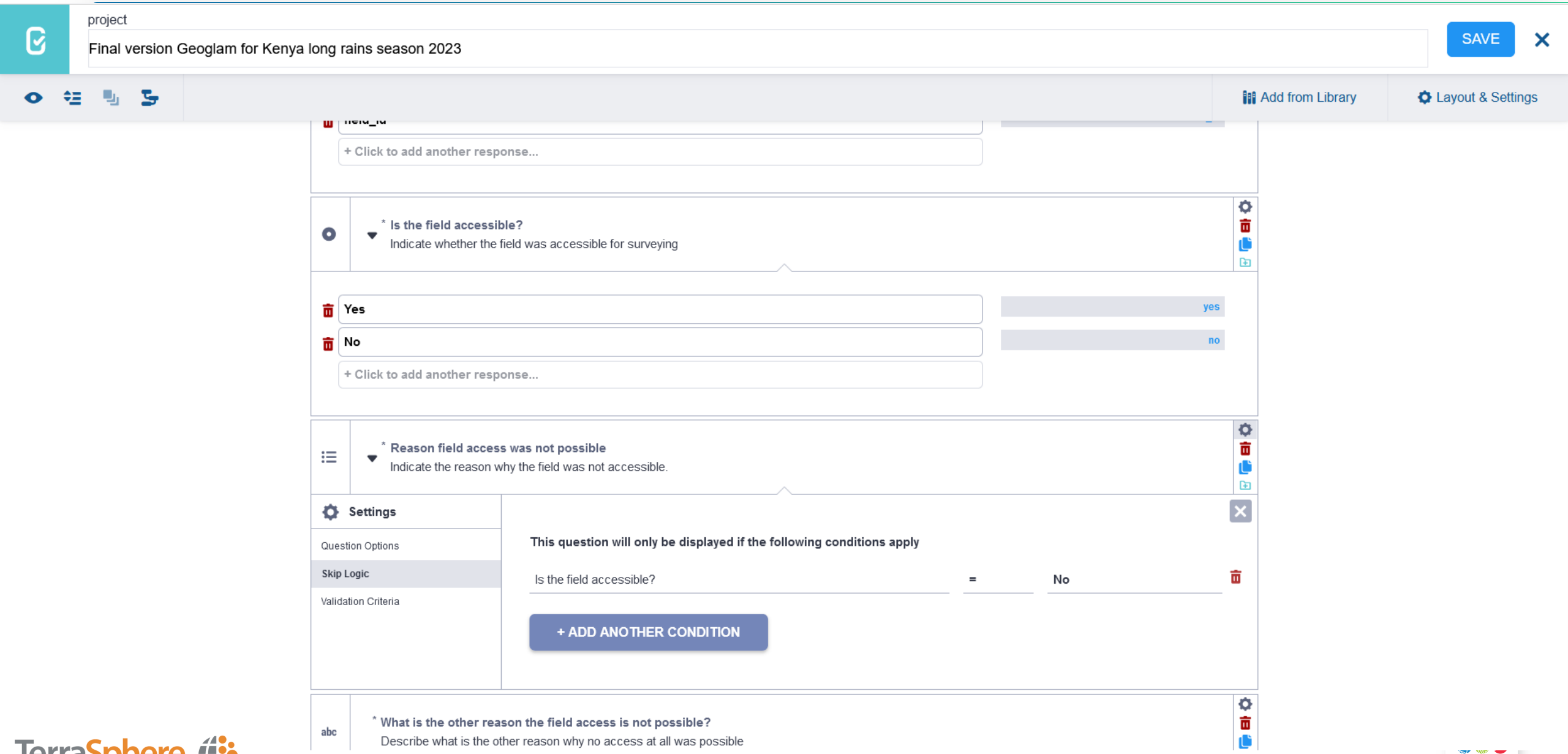

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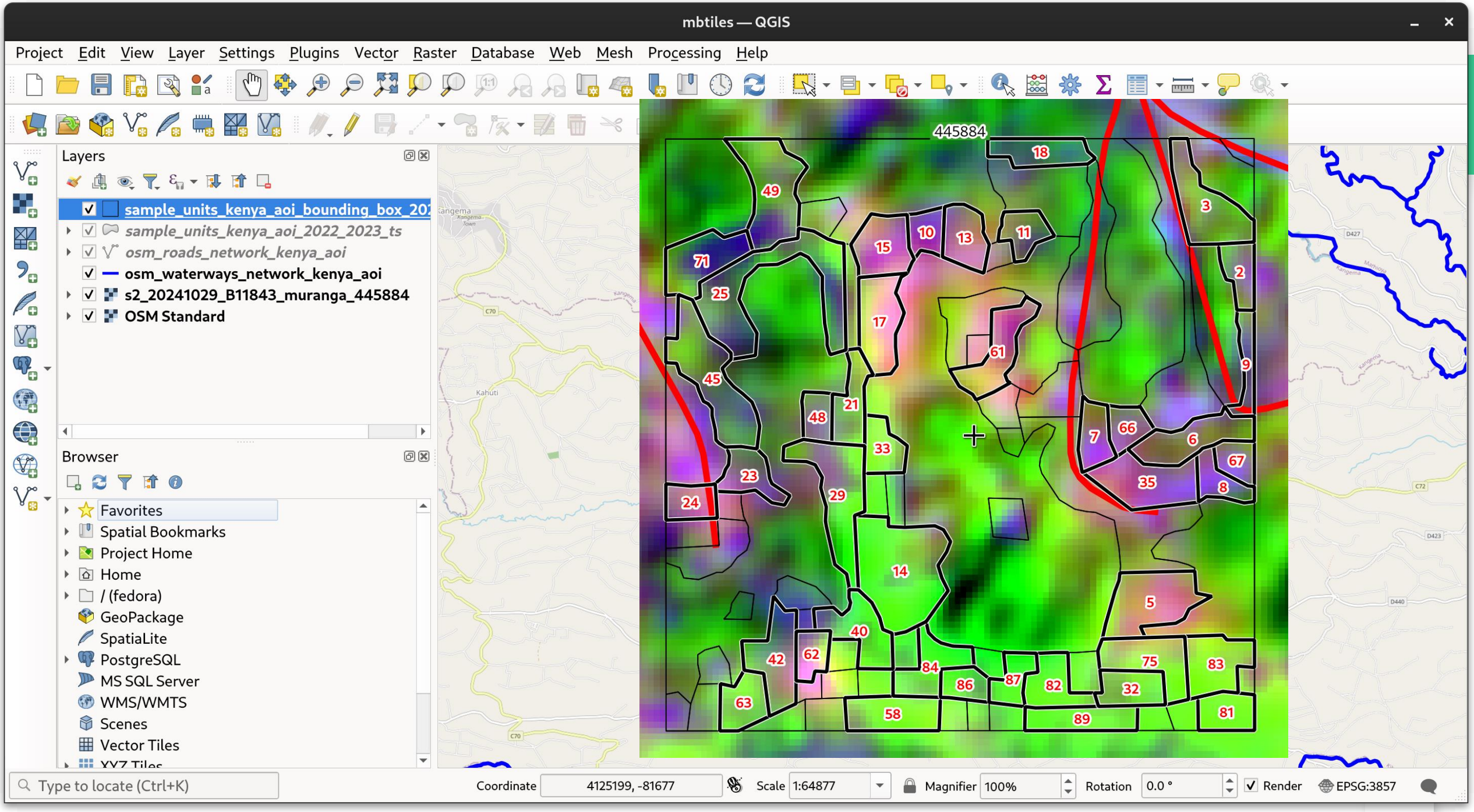
Form design key learnings

- Testing very importing
- Provide abundant explanations and examples
- Provide documentation
- Reduce text fields as much as possible
  - Speed
  - Typos, local names are very hard in post-processing
  - Provide cascading options based on likelihood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SpatiaLite
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MS SQL Server
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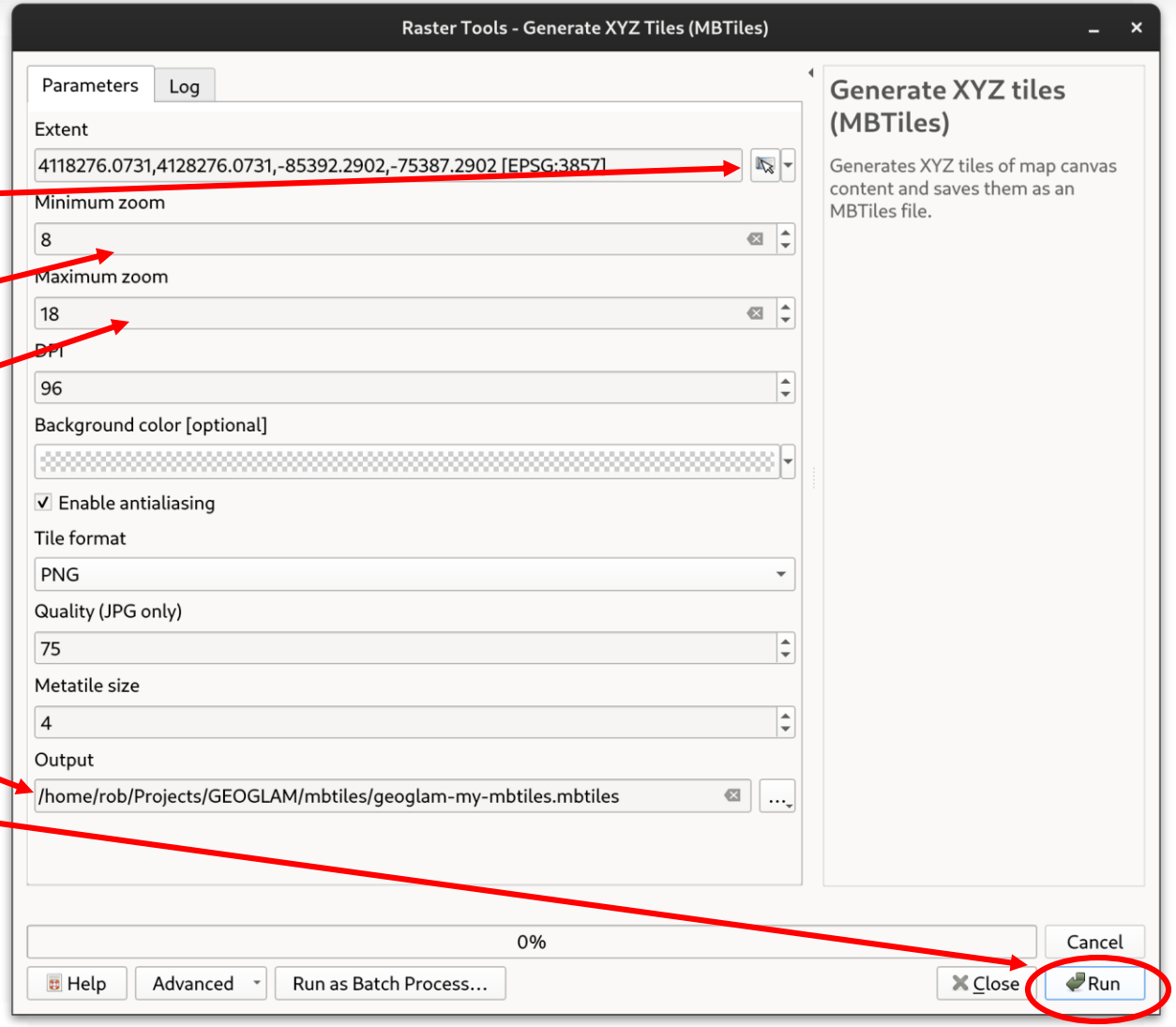
MBTiles QGIS

- ‘Processing’ > ‘Toolbox’ > ‘Generate XYZ tiles (MBTiles) ‘
- Geographic extent (S2-layer)
- Minimum zoom level 8
- Maximum zoom level 18
- Output filename
- Run



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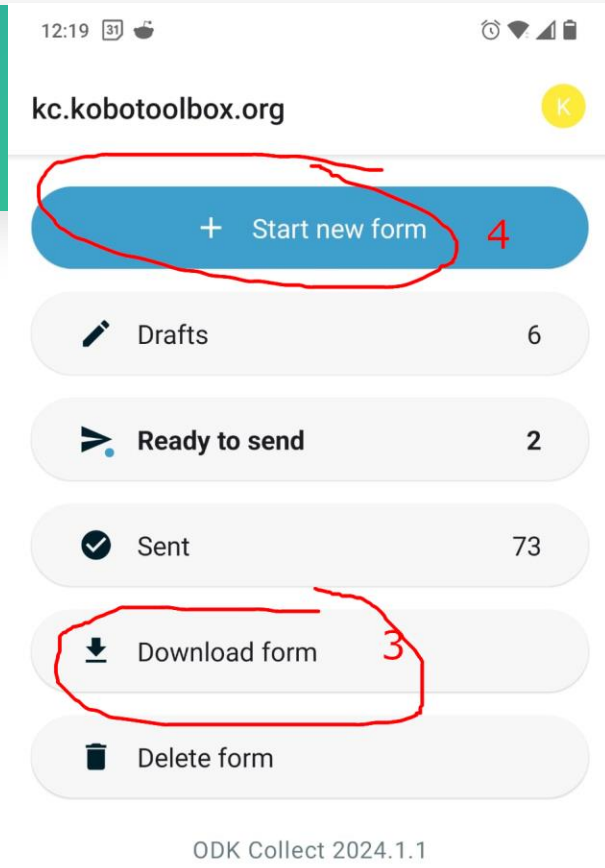
Field campaign execution

- Form publication
  - Pre-requisite is a KoboToolbox server
  - Deploy project with associated form in KoboToolbox
  - Connection with digital devices
    - Manual with serverURL, username and password
    - Generated QR-code

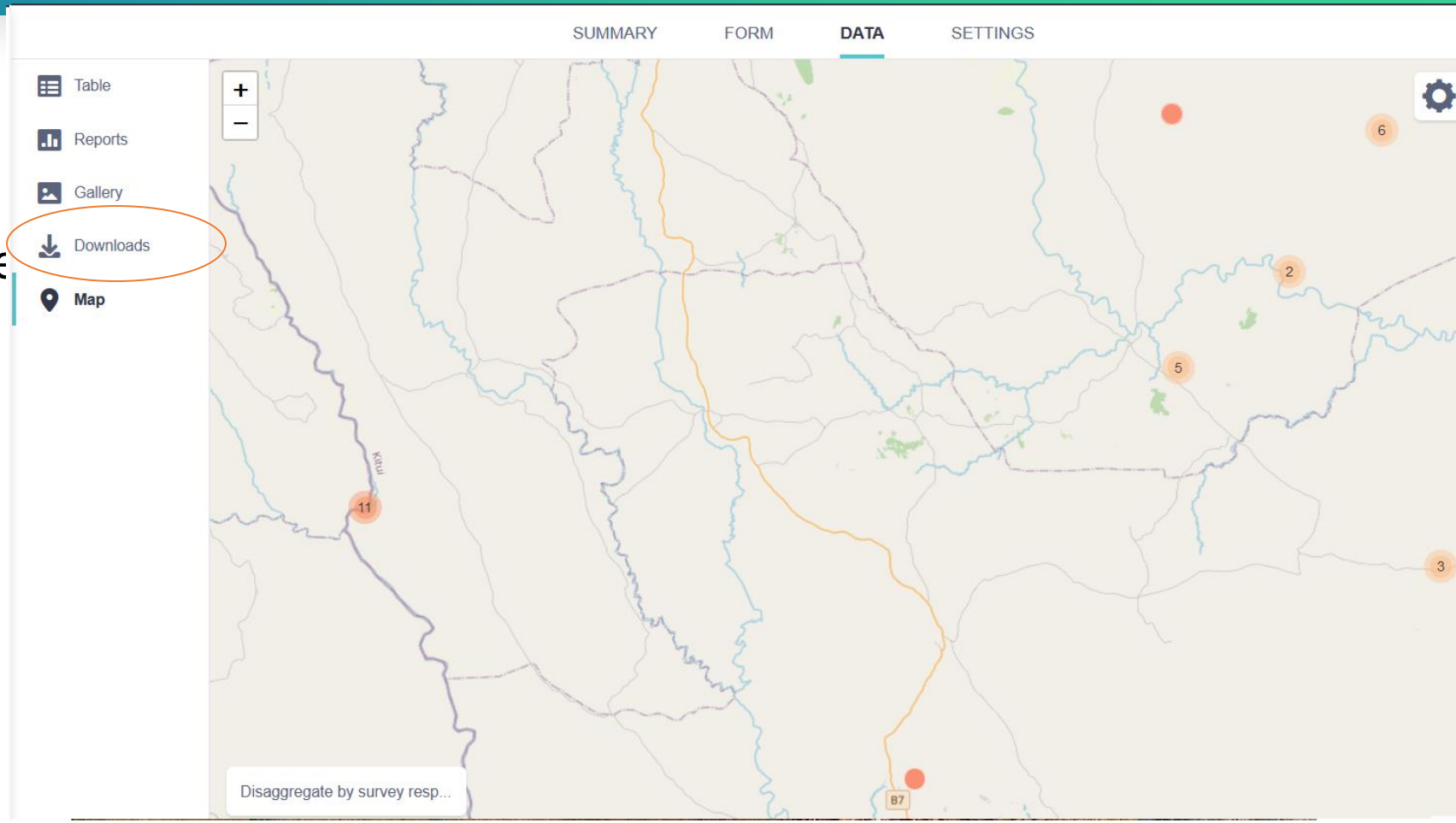
Use ODK Collect

- Download application (Android PlayStore)
- Add project (manual settings or QR-code)
- Add offline layers
  - MBTiles
- Start new form
- Select proper form
- Fill in form
- Submit



Information collection

- Kobo Toolbox
  - Online monitoring
  - Basic tabular overvie
  - Reporting
  - Map capabilities
- Data export
  - Direct file export
  - Dedicated script
  - REST API service
  - Synchronous export



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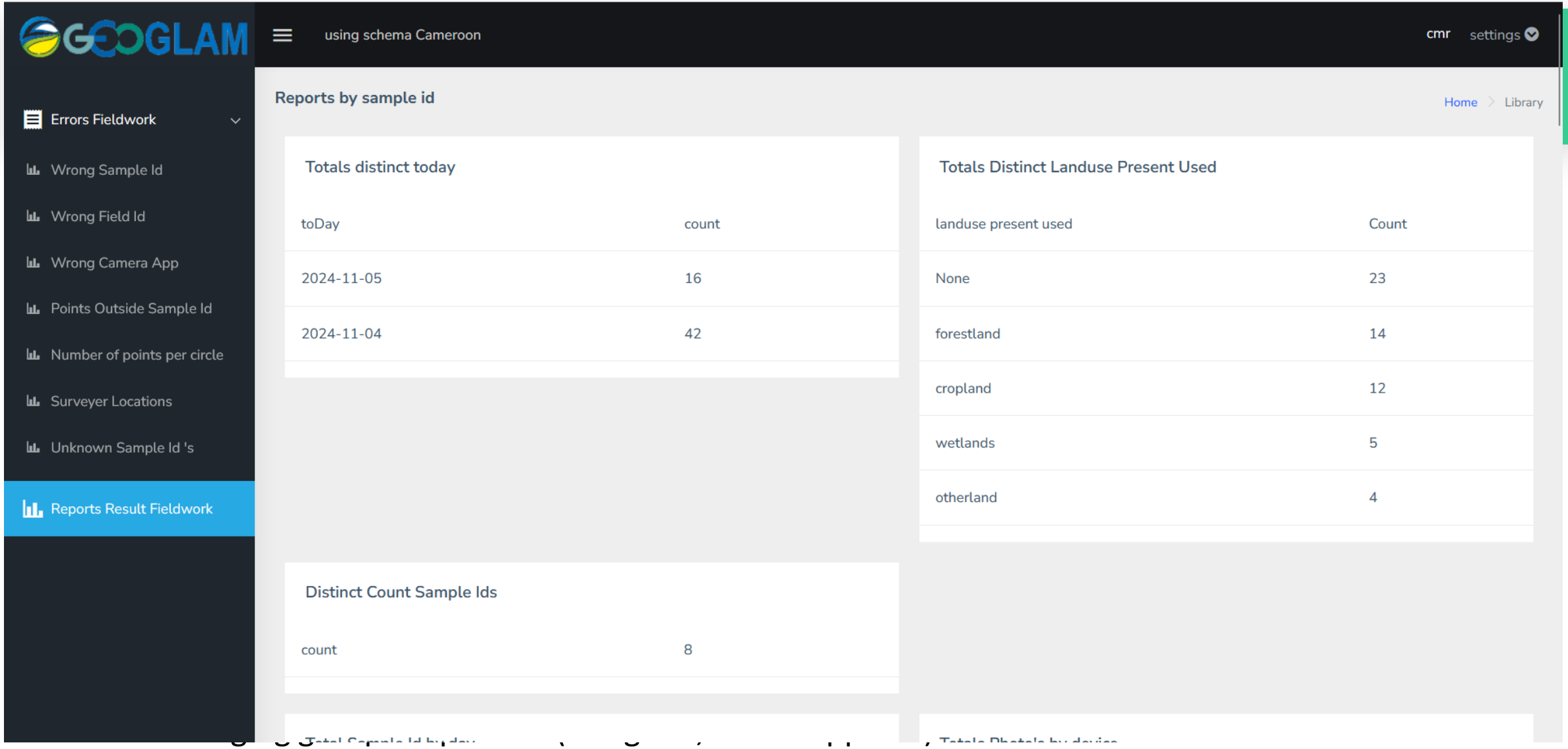
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wetlands
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8


CLS
COLLECTE LOCALISATION SATELLITES
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Thank you for your attention !

Upcoming

- Break-out sessions
  - Dedicated Q&A
    - Form design / KoboToolbox set-up etc.

- Webinar
  - EO-data processing
  - IOTA-2 model
  - Result post-processing