Pilot of Electronic Field Data Collection for Food Security Monitoring

University of Maryland, Department of Geographical Sciences, United States
Sokoine University of Agriculture, Department of Agricultural Engineering & Land Planning
Environmental Surveys, Information, Planning and Policy Systems (ESIPPS)
Ministry of Agriculture, Food Security and Cooperatives, National Food Security Division, Tanzania
Office of the Prime Minister, Uganda
Lutheran World Relief
Gutsinda Development Group

STARS Results Sharing Workshop
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Food Security Monitoring

Information has to be **Timely** and **Accurate**

- Food prices
- Incomes
- Food consumption
- Coping strategies

- Food quality
- Malnutrition
- Disease outbreaks
- Sanitation

**The Four Main Components of Food Security**

1. **Availability**
   - There is a reliable and consistent source of quality food.

2. **Access**
   - People have sufficient resources to produce and/or purchase food.

3. **Utilization**
   - People have the knowledge and basic sanitary conditions to choose, prepare, and distribute food in a way that results in good nutrition.

4. **Stability**
   - People's ability to access and utilize food that remains stable and sustained over time.

- Agricultural production Market supply
- Warehouse
- Import/ export

- Infrastructure e.g roads
- Amount in Storage
Geographical Open Data Kit GeoODK

- Use regular Android tablets/phones
- 60 extension officers in Morogoro for Tanzania-pilot region
- 49 Agents in Iringa including LWR GEAs and Government Agents
- 77 Village Enterprise Agents (VEA) in Masaka, Uganda
Field Data - Tools

**Pre Season**
- Farmer ID
- GPS
- Field Area
- Irrigation type
- Management Methods
- Landcover
- Seed Type
- Crop Damage
- Staple Food Market Price

**In Season**
- Planting Date
- Projected Yield
- Maize height
- drought/flood damage
- pests/ disease with photos
- staple food market price
- Irrigation
- Management Methods
- Farmer Assessment

**End of Season**
- Actual yield
- Cause of damage
- Farmer Assessment
- Yield
- Storage
# Morogoro Pilot

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<tr>
<th>Question</th>
<th>Response</th>
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Pilot Expansion in Partnership with LWR in Tanzania

1. Low Cost of Implementation
2. Fast Uptake of Technology
3. Quick deployment

Monday July 18th
Monday July 25th
GeoODK Partnership with LWR in Uganda

- 77 VEA’s involved across Masaka Region
- Use existing LWR smart phones downloaded with GeoODK data collection application

Outcomes

- Location specific questions developed during training with feedback from VEA’s
- Strong partnership with LWR moving forward into expansion and further development of GeoODK, Uganda
GeoODK Submission Timeline

- Extension Agents across all involved regions submit GeoODK forms 3 days +/- the 15th of each month
- Regional based WhatsApp® group allowing necessary internal questions and information to be communicated between extension agents across a region and the associated GeoODK technical team
### Queryable Data for Advanced Analyses

#### Table: Count of crop_data/cause_of_damage/flood

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<td>97</td>
<td>60</td>
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<td>157</td>
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#### Table: Average of No. of 100 Kg Bags from Field

<table>
<thead>
<tr>
<th>Crop</th>
<th>Total</th>
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<tr>
<td>Maize</td>
<td>14,474,142,105</td>
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<td>other</td>
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<td>Rice</td>
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<td>Sunflower</td>
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<td><strong>Grand Total</strong></td>
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#### Graph: Count of crop_data/seed_type/improved

- **Legend**
  - **Imp:** Improved
  - **Imp:** Improved

- **Axes**
  - X-axis: Seed Type
  - Y-axis: Count of crop_data/seed_type/improved

- **Data Points**
  - Various seed types with corresponding counts for improved and non-improved conditions.
Potential real-time applications of data

<table>
<thead>
<tr>
<th>Data</th>
<th>Use</th>
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<td>Geolocated flood and drought events</td>
<td>Disaster response and management programs</td>
</tr>
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<td>Geolocated pest and disease incidence</td>
<td>Targeted pest control and management programs</td>
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<td>Farmer Storage Facility Access</td>
<td>Targeted warehouse programs</td>
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<tr>
<td>Market information</td>
<td>Food prices affecting accessibility</td>
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**National Food Security Bulletin**

Real time crop condition data from GeoODK to inform and support ministry decisions and support their platform of collecting data for crop condition monitoring.
Way Forward

1. **Expand** and **intensify** current efforts to additional regions
2. Work with partners (MALF, NBS, WFP, FAO) to **streamline data and information**
3. Continue GeoODK Form development with input from extension agent to **improve the facilitation and accuracy of data collection**
4. Further collaboration with partners to complete the feedback loop of **returning timely and useful information to farmers**
5. Collaborate with **statistics bureaus** and support use of electronic data collection
Asante!