Agricultural Monitoring for Food Security

**AgriSense-STARS Project Goals**

- Support improving smallholder farmer livelihoods and food security
- Develop solutions and build capacity to provide timely, relevant and transparent information on agriculture
- Inform policy makers and improve decisions and agricultural policy
- Leverage technical innovations including remote sensing, smart phone and internet technologies

**Outcomes**

**Electronic Field Data Collection and Dashboard - Morogoro and Iringa Pilots**

- GLAM-East Africa Satellite Data Portal
  - User-friendly, automated satellite image portal
  - Maps of crop condition indicator for all of Tanzania and Uganda
  - Graphs showing development over time
  - Highlights critical areas on the map

**Crop Monitor Portal**

- Monthly compilation of agricultural assessments, standardized and efficient
- Central place for data analysis and evaluation of agriculture
- Same tool used internationally by G20 countries
- Developed Crop Monitor customized for Tanzania

**Outcomes**

**National Food Security Bulletin - Monthly Drafts**

- Standardized, monthly report of Ministry of Agriculture on Agriculture and Food Security in Tanzania
- Intended to become number-one public information source for government, public and private institutions
- Seven monthly drafts produced for internal evaluation by NFSD team since December 2015

**New Methods and Data Sets for Satellite and UAV Image Analysis for Agriculture**

- Maize Mapping
  - Overall Accuracy: 0.971; Kappa: 0.862
  - WorldView-2 Satellite Imagery
  - eBee SenseFly UAV Imagery
  - Tanzania Cropland from Landsat satellite imagery

**Way forward**

- Expand near real-time monitoring to national level
- Design and implement more efficient electronic data collection forms for agriculture and food security and standardize procedures
- Continue and expand collaborations with national, regional and international partners including Lutheran World Relief (LWR), University of Dar es Salaam (UDSM), Regional Center for Mapping of Resources for Development (RCMRD)
- Continue support to MALF to establish systematic food security monitoring by NFSD
- Continue support to Office of the Prime Minister and establish links with Ministry of Agriculture Uganda
- Support institutionalizing and operationalizing National Food Security Bulletins
- Complement field data with satellite imagery and crop model estimates
- Continue to support OPM on food security monitoring and use of GLAM system for Disaster Risk Financing
- Capacity building and training