



Global Strategy
IMPROVING AG-STATISTICS

Improving Agricultural Statistics in Tanzania: Results of USDA and FAO-USDA Assessments

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The Government of Tanzania recognizes the need for good agricultural statistics by supporting regularly scheduled surveys and censuses to collect agricultural data.

Primary sources of agricultural data

- National Sample Census of Agriculture - every 5 years
- National Panel Survey - every 2 years
- Large-scale Farmer Reports - annual
- Agricultural Routine Data System - monthly, quarterly, annual
- Food Security Assessments - twice a year
- Crop & Livestock Market Price Reporting - weekly



Current Agricultural Statistics System in Tanzania

Key concerns

- under-resourced
 - funding
 - staff
 - transportation
 - data collection tools
- potential for stakeholder influence

Key concerns

- survey & questionnaire design
 - requesting too much information
 - takes time to collect, process & analyze
 - some not obtainable
 - heavy emphasis on data for numerous M&E indicators detracts from efforts to obtain reliable basic information
 - potential for data inconsistencies
 - inadequate methodology for obtaining requested data
 - lack of clarity in concepts, definitions, reference dates/periods



Key concerns

- sample designs & sizes
 - designs may not be effective enough to address complexity of agricultural situations
 - sizes may be too small
 - desired degree of precision
 - desired detail
 - desired level of aggregation

Key concerns

- use of dated parameters in crop & livestock projections
- limited statistical and analytical capacity of units responsible for agricultural statistics
- limited public dissemination of agricultural data
- lack of institutional coordination
 - use of vastly different methodologies leads to inconsistent results
 - duplication of effort leads to inefficient use of limited resources

Suggestions for a sustainable system

1. Focus on getting timely, statistically reliable, basic data for the most important crops and animals at least annually.
2. Save data that do not go out-of-date quickly for periodic censuses or surveys.
3. Refocus routine reporting systems to obtain non-statistical or anecdotal agricultural information.

Improving the Agricultural Statistics System in Tanzania

Suggestions for a sustainable system

Agricultural sample survey - at least annually

- area & production for “core” crops
- inventory & production for “core” animals
- national & regional estimates

Agricultural sample census - every 5 years

- national & regional estimates for most crops & animals
- district estimates for major commodities
- other data that does not change quickly

Routine reports from extension officers

- growth stages & condition for major crops
- diseases & insect infestations - crops & animals
- other anecdotal information on current status of crops & animals

Suggestions for a sustainable system

4. Ensure that sample designs consider the complexities of the agricultural sector.
5. Develop an independent corps of enumerators for collecting agricultural data on sample surveys and censuses.
6. Build the statistical and analytical capacity of national and regional statisticians.
 - sample and survey design for agricultural data collection
 - statistical estimation
 - analysis of survey data to find inconsistencies and plausible explanations for unusual results

Suggestions for a sustainable system

7. Post all reports and publications derived from various agricultural data collection efforts on NBS and Ministry websites in a timely fashion.

Proposal for Improving Agricultural Statistics in Tanzania

- Update the **Agricultural Statistics Strategic Plan**.
- Strengthen the **Agricultural Routine Data System**.
- Develop **Sampling Frames & Sample Designs** appropriate for generating agricultural statistics.
- Design & implement an **Annual Agricultural Sample Survey**.
- **Build capacity** to support agricultural statistics.

Agricultural Statistics Strategic Plan

- Mainstream this plan in the TSMP.
- Link this plan to the Global Strategy framework.
- Define appropriate program for fulfilling agricultural data needs with government resources.
 - *frequency*
 - *level of aggregation*
 - *required/desired precision*
- Identify appropriate data collection methods.
- Prioritize activities for implementation.
- Identify capacity building needs of organizations & staff responsible for implementation.
- Identify resources needed for implementation.

Agricultural Routine Data System

- Evaluate current ARDS data collection procedures & quality of data to improve accuracy & timeliness of relevant data.
- Revise content & procedures as needed.
- As the Annual Agricultural Sample Survey becomes operational, refocus ARDS program to obtain primarily qualitative information & other data needed for monitoring agricultural development programs.

Sampling Frames & Sample Designs

- Evaluate possible sampling frames & sample designs for the National Sample Census of Agriculture, the Annual Agricultural Sample Survey, and other special focus agricultural surveys.
 - Jointly analyze existing data to study variability for more efficient sample design & allocation.
 - *2002/03 & 2007/08 NSCA results (ASAP)*
 - *2012 Population & Housing Census agriculture & livestock questions (2013)*
 - Discuss strengths & weaknesses of different types of sampling frames (list, area) & decide best options.
 - Pilot test selected sampling methodologies.

Proposal for Improving Agricultural Statistics in Tanzania

Annual Agricultural Sample Survey

- Design sample to generate national & regional estimates for 8-10 crops & 3-5 livestock species.
- Test new field data collection methods.
 - Measure crops areas with GPS devices.
 - Use crop cutting techniques for crop production estimates.
 - Use portable electronic devices for field data capture & data transfer.
- Investigate ways to link estimates from the annual survey with routine data.
 - Provide forecasts of final harvest during the growing season.
 - Allocate regional estimates to obtain consistent district level numbers.

Proposal for Improving Agricultural Statistics in Tanzania

Build Statistical Capacity

- Recruit at least 2 statisticians (minimum Bachelors level) to be specialized in sample and survey design for generating official agricultural statistics.
- Study effective agricultural statistics systems in other countries to inform the development of the Agricultural Statistics Strategic Plan.
- Participate in training workshops that support the planning and technical components of this proposal.
- Participate in opportunities provided under the training component of the Global Strategy.
 - Global Strategy is supporting curriculum development at regional statistical training centers.
 - Lecturers could take advantage of short courses offered at University of Maryland's Joint Program in Survey Methodology.

Proposal for Improving Agricultural Statistics in Tanzania

In the next 6 months...

- Begin work on the agricultural statistics strategy.
- Hire qualified consultants to evaluate quality of ARDS.
- Begin discussions of appropriate sampling frames and sample designs by analyzing NSCA data jointly with staff from NBS, MAFC and MLFD.
- Begin plans for annual agricultural sample survey.
 - *Test field data collection methods*
 - *Evaluate possible sampling methods*
- Start capacity building by studying effective agricultural statistics systems in other countries.



Proposed timeline for improving agricultural statistics in Tanzania

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024
Agricultural Statistics Strategic Plan		X	X											
Sampling Frames & Sample Designs		X	X											
Agricultural Routine Data System	evaluate current system	X												
	revise	X	X											
	refocus			X										
	operational system				X	X	X	X	X	X	X	X	X	X
Annual Agricultural Sample Survey	evaluate NSCA data	X												
	evaluate PHC data		X											
	test sampling methods	X	X	X										
	test data collection methods	X	X	X										
	operational survey				X	X	X	X	X	X	X	X	X	X
	study linkage of annual survey with routine data		X	X										
National Sample Census of Agriculture				X					X					X
Periodic special focus agricultural surveys		<i>to be determined</i>												
Implementation of other elements of the AS Strategic Plan		<i>to be determined</i>												



Resources Required to Improve Agricultural Statistics in Tanzania

TZ FY 2012/2013

COMPONENTS	Proposed Lead National Agency	Proposed Lead Partner	Indicative cost	Source of funds
1. Preparation of the Sector Strategic Plan for Agriculture & Rural Statistics	NBS with line ministries	FAO & AfDB	\$XXX,000	Global Strategy & others (TBD)
2. Assessment & refocus of ARDS	MAFC with NBS & other line ministries	JICA	XXX,000	JICA
3. Development of sampling frames & sample designs <i>joint analysis of agricultural & population censuses</i>	NBS & line ministries with EASTC	USDA	XXX,000	USAID
4. Development of Annual Agricultural Sample Survey <i>design, pilot testing in 2 regions</i>	NBS with MAFC & MLFD	USDA	XXX,000	USAID & others (TBD)
5. Capacity Development <i>study effective agricultural statistics systems in other countries</i>	NBS & line ministries with EASTC	FAO	XXX,000	Global Strategy & others (TBD)
TOTAL PROPOSAL			\$XXX,000	