



Food and Agriculture Organization
of the United Nations

Guidelines on improving and using administrative data in agricultural statistics



Guidelines on improving and using administrative data in agricultural statistics

February 2018



Contents

Acronyms	v
Acknowledgements	vii
Preface	viii
Executive summary	ix
CHAPTER 1	
DESIGNING AN ADSAS	1
1.1. Definition of administrative data and ADSAS	1
1.2. Identifying agricultural administrative data sources	4
1.3. Design of the ADSAS	8
CHAPTER 2	
QUALITY ASSESSMENT OF THE STRUCTURE AND DATA OF THE ADSAS	11
2.1. Structural diagnosis	12
2.2. Assessment of administrative data quality	13
CHAPTER 3	
IMPROVEMENT OF THE ADMINISTRATIVE AGRICULTURAL DATA QUALITY	17
3.1. Methodological tools to address quality issues	17
3.2. Addressing human and financial resources issues	21
3.3. Standardization of concepts among administrative agricultural data institutions	22
CHAPTER 4	
IMPROVING ADMINISTRATIVE DATA ACCESSIBILITY	25
4.1. Legal framework	25
4.2. Policy frameworks	26
4.3. Addressing issues related to confidentiality and public perception	27
4.4. Agreements between institutions	28
CHAPTER 5	
USES OF ADMINISTRATIVE DATA	31
5.1. Methodological and technical tools for record linkage and data integration	32
5.2. Uses in forming the statistical product (indirect use)	39
5.3. Uses as final product	47
CHAPTER 6	
INTEGRATION OF ADMINISTRATIVE DATA INTO NATIONAL AGRICULTURAL STATISTICS SYSTEMS	51
6.1. Integration of the ADSAS into the SPARS	51
6.2. Long-term perspective on the integration of administrative data into statistical systems	53
REFERENCES	56
ANNEX	65

Tables and figures

TABLES

Table 1.	Sources of administrative data for selected core data items of the Global Strategy.	8
Table 2.	Measures for assessing quality.	13
Table 3.	Results of the assessment of the ARDS of the United Republic of Tanzania.	15
Table 4.	Summary of technical capabilities of record linkage software packages.	36
Table 5.	Summary of the usability of alternative software packages.	37
Table 6.	Primary strengths and weaknesses of record linkage software packages.	38
Table 7.	Estimated variances for the NCA estimators.	44
Table 8.	Administrative uses of ADSAS: uses in constructing statistics.	47
Table 9.	GB and UK cattle population at 1 June as from survey and administrative data: 2003 to 2006.	48
Table 10.	Uses of ADSAS as final statistics.	50

FIGURES

Figure 1.	Representation of ADSAS.	3
Figure 2.	Typical administrative reporting system in Asia.	7
Figure 3.	The two dimensions of administrative data quality assessment.	16
Figure 4.	Visual depiction of Statistics Canada's agricultural statistics framework.	52
Figure 5.	A register-based production system, the register system, and sample surveys.	54

Acronyms

AAS	Annual Agricultural Survey
ADSAS	Administrative Data Systems for Agricultural Statistics
ADB	Asian Development Bank
AfDB	African Development Bank
ANADER	<i>Agence Nationale d'Appui au Développement Rural</i> (Côte d'Ivoire)
ARDS	Agricultural Routine Data System
ARSA	Administrative Reporting Systems for Agriculture
ASDP	Agricultural Sector Development Plan
ASSD	African Symposium for Statistical Development
ASSP	Agricultural Statistics Strategic Plan
CAPE	Crop Acreage and Production Estimation
CAB	Cotton Advisory Board (India)
CAPI	Computer-Assisted Personal Interview
CAS	Centre for Agricultural Statistics (Lao People's Democratic Republic)
CDO	Cotton Development Organisation (Uganda)
COOIT	Central Organisation for Oil Industry and Trade
CPI	Consumer Price Index
CSO	Central Statistics Office
CSSM	Centre for Survey Statistics and Methodology (Iowa State University)
CV	coefficient of variation
CWC	Central Water Commission (India)
DESMOA	Directorate of Economics and Statistics, Ministry of Agriculture (India)
DNSI	<i>Direction Nationale de la Statistique et de l'Informatique</i> (Mali)
DRC	Department of Revenue and Customs (Bhutan)
FAO	Food and Agriculture Organization of the United Nations
FCBL	Food Corporation of Bhutan Limited
FSA	Farm Services Agency (USDA)
FSI	Forest Survey of India
FTP	Field Test Protocol
GCES	General Crop Estimation Surveys (India)
GDP	Gross Domestic Product
GPS	Global Positioning System
GSARS	Global Strategy to improve Agricultural and Rural Statistics
IACS	Integrated Administrative and Control System
ICS	Improvement of Crop Statistics (India)
INS	<i>Institut National de la Statistique</i> (Côte d'Ivoire)
IMDB	Integrated Metadata Base
JICA	Japan International Cooperation Agency
LGA	Local Government Authority
LGMD	Local Government Management Database
LSB	Lao Statistics Bureau
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries (Uganda)
MAF	Ministry of Agriculture and Forestry (Lao People's Democratic Republic)
MAFC	Ministry of Agriculture Food Security and Cooperatives (United Republic of Tanzania)

MALF	Ministry for Agriculture, Livestock, Forestry and Fisheries
MANR	Ministry of Agriculture and Natural Resource (United Republic of Tanzania)
MAWF	Ministry of Agriculture, Water and Forestry (Namibia)
MDA	Ministries, Departments and Agencies
MINADER	Ministry of Agriculture and Rural Development (Côte d'Ivoire)
MIT	Ministry of Industry and Trade (United Republic of Tanzania)
MLF	Ministry of Livestock and Fisheries (United Republic of Tanzania)
MLFD	Ministry of Livestock and Fisheries Development (United Republic of Tanzania)
MMSE	Minimum Mean Squared Error
MoAF	Ministry of Agriculture and Forests (Bhutan)
MoF	Ministry of Finance (Bhutan)
MOU	Memorandum of understanding
NAADS	National Agricultural Advisory Services (Uganda)
NAGRIC	National Animal Genetics Resources Centre (Uganda)
NARO	National Agricultural Research Organization (Uganda)
NASS	National Agricultural Statistics Service (United States of America)
NBS	National Bureau of Statistics
NCA	National Census of Agriculture
NHB	National Horticultural Board (India)
NRCS	National Resources Conservation Service (United States of America)
NRDCL	National Resources Development Corporation Limited (Bhutan)
NRSA	National Remote Sensing Agency (India)
NSA	Namibia Statistics Agency
NSI	National Statistical Institute
NSO	National Statistics Office
NASO	National Agricultural Statistics Office
ONDR	<i>Office National de Développement de la Riziculture</i> (National Office of Rice Development) (Côte d'Ivoire)
OCPV	<i>Office d'aide à la Commercialisation des Produits Vivriers</i> (Côte d'Ivoire)
PDA	Personal Digital Assistant
PHC	Population and Housing Census
PMORALG	Prime Minister's Office for Regional Administration and Local Government Authority (United Republic of Tanzania)
PPQ&S	Directorate of Plant Protection, Quarantine and Storage (India)
PPS	Probability Proportional to Size
RAAD	Routine Administrative Agricultural Data
RNR	Renewable Natural Resources
RS	Remote Sensing
SAP	<i>Système d'Alerte Précoce</i> (Early Warning System)
SASA	State Agricultural Statistics Authority (India)
SSP	School of Statistics and Planning, Makerere University (Uganda)
TAD	Traditional Administrative Data
TRS	Timely Reporting Scheme

Acknowledgments

This document is mainly based on the findings of the ADMIN project of the Global Strategy, implemented by the School of Statistics and Planning/College of Business and Management Sciences of Makerere University (Uganda) and the Centre for Survey Statistics and Methodology of Iowa State University (USA). The list of key experts from the two institutions involved in the project and all other contributors can be found in the final technical report of ADMIN: GSARS (2017).

The Guidelines were prepared by Dramane Bako, International Consultant – Statistician of the Global Strategy to improve Agricultural and Rural Statistics, under the supervision of Flavio Bolliger, Research Coordinator of the Global Strategy. The following experts of the Global Strategy and FAO have reviewed the document and provided valuable inputs: Naman Keita (Senior Consultant in Agricultural Statistics, Global Strategy), Valerie Bizier (Global Strategy Technical Assistance and Training Coordinator), Christophe Duhamel, (Coordinator of the Global Office of the Global Strategy), Carola Fabi (Statistician, FAO Statistics Division) and Gladys Qacha (Agricultural Statistics Expert, Global Strategy).

This publication was prepared with the support of the Trust Fund of the Global Strategy, funded by the UK's Department for International Development (DfID) and the Bill & Melinda Gates Foundation.

It was formatted by Laura Monopoli, under the supervision of Norah DeFalco.

预览已结束，完整报告链接和二维码如下：

https://www.yunbaogao.cn/report/index/report?reportId=5_22484

