ReSAKSS SA Southern Africa

Regional Strategic Analysis and Knowledge Support System

ReSAKSS-SA WORKING PAPER No.5

April, 2008

Methodological Guidelines for Tracking Public Spending on Agriculture with Illustrations from Zambia

J. Govereh, E. Malawo, T.S. Jayne and P. Chilonda

Regional Strategic Analysis and Knowledge Support System for Southern Africa (ReSAKSS-SA)

ReSAKSS-SA Working Paper No.5

April, 2008

Methodological Guidelines for Tracking Public Spending on Agriculture with Illustrations from Zambia

J. Govereh, E. Malawo, T.S. Jayne and P. Chilonda

About ReSAKSS

The Regional Strategic Analysis and Knowledge Support System (ReSAKSS) is an Africa-wide network involving three regional nodes. Each node has been established by three of the leading regional economic communities (RECs) in sub-Saharan Africa—the Common Market of Eastern and Southern Africa (COMESA), the Economic Community of West African States (ECOWAS), and the Southern African Development Community (SADC)—in collaboration with the International Food Policy Research Institute (IFPRI) and Africa-based centers of the Consultative Group on International Agricultural Research (CGIAR) as part of the AU/NEPAD's Comprehensive Africa Agriculture Development Programme (CAADP) implementation process.

The ReSAKSS nodes facilitate access by the RECs and their member states to policy-relevant analyses of the highest quality in order to improve policy making, track progress, document success, and derive lessons that can feed into the review and learning processes associated with the implementation of the CAADP agenda. ReSAKSS is jointly funded by the United States Agency for International Development (USAID), UK Department for International Development (DFID), and the Swedish International Development Cooperation Agency (SIDA). The Southern Africa ReSAKSS node (ReSAKSS-SA) is jointly implemented by the International Crops Research Institute for the Semiarid Tropics (ICRISAT) and the International Water Management Institute (IWMI), in collaboration with regional and national partners.

About the Working Paper series

The goal of the ReSAKSS Working Paper series is to provide timely access to preliminary research and data analysis results that relate directly to strengthening ongoing discussions and critical commentaries on the future direction of African agriculture and rural development. The series undergoes a standard peer-review process involving one reviewer either from within the ReSAKSS network of partners or from an external organization. It is expected that most of the Working Papers will eventually be published in some other form and that their content may be revised further.

For more information, contact:
Subregional Coordinator
Regional Strategic Analysis and Knowledge Support System in southern Africa (ReSAKSS-SA)
International Water Management Institute (IWMI)
Private Bag X813
Silverton 0127
Pretoria, South Africa
Telephone: +27 (0)12 845 9100
Facsimile: +27 (0)12 845 9110
E-mail: resakss-sa@cgiar.org
Website: www.sa.resakss.org

The authors

J. Govereh and T.S. Jayne are members of the Food Security Research Project, a collaboration between the Ministry of Agriculture and Cooperatives, the Agricultural Consultative Forum, the Market Access and Trade Enabling Project (MATEP) and Michigan State University, based in Lusaka, Zambia. E. Malawo is the Deputy Director, Policy and Planning Department, Ministry of Agriculture and Cooperatives. P. Chilonda is the Regional SAKSS Coordinator for southern Africa, based in Pretoria, South Africa.

Acknowledgements

The support from ReSAKSS-SA helped prepare this guide. The authors would like to express special gratitude to participants who attended the *Methodology for Budget Tracking and Spatial Analysis* technical meeting in Lusaka in May 2007 for the constructive discussions and advice on this guide. The authors would also like to thank numerous counterparts they interacted with for the time spent with them in open and friendly discussions. This guide draws from lessons and experiences learnt from related work on developing National Health Accounts for developing countries. The principles followed in guiding development of accounts of expenditure on health are relevant for tracking public spending on agriculture. Finally, the authors would like to thank USAID and SIDA for their continued support to Food Security Research Project II that began this work several years ago.

Govereh, J.; E. Malawo; T.S. Jayne; P. Chilonda. 2007. *Methodological guidelines for tracking public spending on agriculture with illustrations from Zambia*. Re-SAKK-SA Working Paper 5. International Crops Research Institute for the Semiarid Tropics (ICRISAT), International Food policy Research Institute (IFPRI) and International Water Management Institute (IWMI).

/conceptualizing/defining/classifying/recording/public agricultural spending/

Except where otherwise noted, this work is licensed under a Creative Commons Attribution 3.0 License.

CONTENTS

Tables iv
Abbreviations and Acronyms vii
Abstract viii
Background to Measuring Public Spending on Agriculture 1
Overview 1
Purpose 2
Identifying and Classifying Public Spending on Agriculture 3
Definitions 3
Concept of Public Spending on Agriculture 4
Spending Boundaries 7
Expenditure Type Boundaries 7
Space Boundaries 8
Time Boundaries 8
Classification of Public Expenditure on Agriculture 8
Economic Classification 8
Functional Classification of Public Spending on Agriculture 11
Data and Public Expenditure Accounts 15
Data Plan 15
Sources of Data for Public Expenditure on Agriculture 15
Type of Data 16
Comprehensiveness of Data Assembly 18
Composition of the Tracking Team 18
Closing Remarks 19
Glossary 20
Annex 23
Literature Cited 27

TABLES

Table 2.1. Flow of funds between sources, agents and service providers 4

Table 2.2. Identifying and mapping the public agricultural financial profile: Financial sources, financing agents and services in Zambia 6

Table 2.3. Examples from Zambia of activities to include or exclude from public expenditure on agriculture 7

Table 2.4. Economic classification of public expenditure in the Ministry of Agriculture and Cooperatives, Zambia, 2006 10

Table 2.5. Division and group classification of expense by function of government 12

Table 2.6. Example of functional public expenditure profile for the Ministry of Agriculture and Cooperatives, Zambia, 2006 14

Table 3.1. Variation in amounts requested by the Ministry of Agriculture and Cooperatives and amounts approved and released by the Ministry of Finance and National Planning, 1992-1999, Zambia (2006 prices) 16

ABBREVIATIONS AND ACRONYMS

AfDB	African Development Bank
ART	Anti-Retroviral Therapy
AU	Africa Union
CAADP	Comprehensive Africa Agriculture Development Program
CGIAR	Consultative Group on International Agricultural Research
COFOG	Classification of Functions of Government
DFID	Department for International Development
EU	European Union
FAO	Food and Agricultural Organization of the United Nations
FNDP	Fifth National Development Plan
GFSM	Government Finance Statistics Manual
GRZ	Government of the Republic of Zambia
IFPRI	International Food Policy Research Institute
IMF	International Monetary Fund
MACO	Ministry of Agriculture and Cooperatives
MPSAs	Ministry Provinces and Spending Agencies
MTEF	Medium-Term Expenditure Framework
n.c.e.	Not classified elsewhere
NEPAD	New Economic Partnership for African Development
NHA	National Health Accounts
OECD	Organization for Economic Cooperation and Development
PE	Personnel Emoluments
RDCs	Recurrent Departmental Charges
ReSAKSS-SA	Regional Strategic Analysis of Knowledge Support Systems for Southern Africa
SADC	Southern Africa Development Community
SIDA	Swedish International Development Cooperation Agency
USAID	United States Agency for International Development

ABSTRACT

Public spending on agriculture needs to be traced to learn how much is being spent, where it is being spent, what it is being spent on and for whom, and how it has changed over time. Spending on agriculture includes all spending on activities whose primary purpose is to restore, improve and maintain agriculture for the nation and for individuals in a given time period regardless of the institution or entity providing for the activity. This guide provides a framework for tracking public spending on agriculture. Measuring public spending on agriculture will make it possible to debate the size and quality of allocation and subsequently improve public resource use efficiency. Achieving agricultural development targets requires good public resource management which can only be done with good reliable spending accounts.

What clearly are the boundaries of public spending on agriculture? The primary purpose of any given spending helps distinguish between spending to be included or excluded. Care should be taken not to include spending on nonagricultural activities even though they are provided for by an entity whose primary mandate is to provide agricultural services. Spending includes that of foreign governments but excludes expenditures to other countries. The guide is clear that the decision to accept or reject any expenditure is arbitrary but what is important is to detect true trends in expenditure to save temporal consistency. Documentation of the decisions and choices will help analysts employing similar measurements conduct comparisons over time and across boundaries.

While it is good to track the size of total expenditure, the quality of the sharing is equally important. It is possible to make much progress on agricultural growth by simply reallocating the existing size of total expenditures. Classifying public expenditures helps understand public-budget allocation. There are two main classification systems: the functional and economic classifications. The functional classification uses the classification of functions of government (COFOG) developed by the Organization for Economic Cooperation and Development (OECD). Current efforts by the Africa Union (AU) to track the public budget on agriculture include the use of the COFOG system. The functional classification provides information on the purposes of the expense, for example, research and extension. Economic classification groups expenses into different economic uses, for example, capital, recurrent expenditures, etc.

The agricultural system in any given country has a wide array of players at different levels. This guide aids in tracking expenditures for part of the total national agricultural system, that is, the public subsystem. Knowledge of the public agricultural system or profile is an essential first step in tracking expenditures. Working within this public agricultural system, the guide is able to identify actors, functions of actors and relationships between actors. The guide illustrates this public system with a case from Zambia.

As an initial step, the guide uses the *New Harvard NHA Model*, to come up with an expenditure profile or flow of funds among four principal dimensions, namely, 1) the financial sources, 2) the financial agents, 3) the end users or providers, and 4) the end uses or functions. The public agricultural system has funds which originally flowed from the treasury (central and local) and donors. These funds are channeled through two groups of agents: ministries or agencies performing purely agricultural functions and those who perform agriculture-related functions during the course of implementing their mandated functions. These ministries act as agents or conduits for transferring

resources from source to the actual service provider and ultimately the beneficiaries. The financing profile provides not only the relationship between financing and service functions but also direction to sources of information and to data repositories. The framework shows that data on expenditure can be captured at different levels, for example, among sources of funds or service providers.

With a good understanding of the system of public expense on agriculture, boundaries and classification, the next step is to provide guidelines on assembling data on expenditure. The actors in the spending profile are the sources of information. Ideally, efforts are needed to sensitize actors and enlist their cooperation and participation in such an exercise. Forming a steering committee with representatives from these public actors is necessary to guide and facilitate the activities of the working team. This team needs the right combination of government staff and any other parties. Furthermore, the working team needs a balanced combination of both agricultural specialists and accountants.

Data on expenditure can be obtained at various levels of the flow of funds. The most efficient level to collect data is the treasury or the various original sources of funds. Discrepancies between the level of expenditures approved, released and what is actually spent are common. This guide recommends collection of actual audited spending. Audited accounts become available two years after the year of expenditure. Analysts should use non-audited expenditures for only the most recent years.

The clients for this work include government officials, civil society, private sector, trade unions, parliament, regional bodies and cooperating partners. Although these institutions have varied needs, this guide will assist in reviewing and tracking public expenditure on agriculture.

Tracking spending using economic classification of expenditure adds value to what the AU is already doing. Extra work should extend coverage of tracking beyond the public arena. Private actors and nongovernment organizations contribute greatly to the agricultural system.

Tracking expenditure is as much an art as a science. There are principles to observe and subjective judgment to use when applying these principles. Documentation of all procedures and decisions made will set the stage for sharing ideas and experiences, which eventually improve the standards of measuring public expenditure on agriculture.

METHODOLOGICAL GUIDELINES FOR TRACKING PUBLIC SPENDING ON AGRICULTURE WITH ILLUSTRATIONS FROM ZAMBIA

J. Govereh, E. Malawo, T.S. Jayne and P. Chilonda

BACKGROUND TO MEASURING PUBLIC SPENDING ON AGRICULTURE

Measuring public spending on agriculture needs a framework or system to provide a context to the exercise. This chapter provides this context by identifying a suitable framework for measuring expenditure flows.

Overview

The wish by African leaders to achieve significant levels of growth in the agriculture sector calls for a more efficient use of resources and, in many cases, more resources. In many countries in the southern Africa region, the agriculture sector comprises a complex and shifting combination of public- and private-sector entities. In such an environment, reliable information on the sources and uses of funds in agriculture is needed to prioritize public spending on agriculture. Tracking expenditure on agriculture is essential in setting agricultural performance objectives and benchmarks. Measurement of spending on agriculture is an essential ingredient of monitoring and evaluation of the sector. When constructed, accounts of the national expenditure on agriculture help provide that information needed to improve public resource use efficiency.

The New Economic Partnership for African Development (NEPAD) through the Comprehensive Africa Agriculture Development Program (CAADP) is seeking better ways to make agriculture grow, and assessing levels of public investment in the agriculture sector is an important component of that endeavor. Spending on agriculture needs to be traced to know how much is being spent, where it is being spent, what it is being spent on and for whom, how it has changed over time, and how these dimensions compare across countries in the region. This guide will form the basis for a generic approach for tracking progress on achieving the national budget allocation target of 10 percent to agriculture under the CAADP agreement of NEPAD. This tracking will make it possible to debate the size of allocation and how well the amount allocated is being spent. Good public agricultural resource management is of great importance to agricultural development.

Nongovernment entities take on a major role in national spending on agriculture but this guide will focus only on public spending on agriculture. Public spending influences the level and composition of private spending on agriculture. Analysis of public spending on agriculture is, therefore, a sub-analysis of the total accounts of national agriculture. The government spending covered in this guide is that which is reflected in annual budgets including budget support from donors.

In the following sections of this guide, the definition and concepts of public spending on agriculture will be analyzed. The guide uses an accounting model to trace public resource flows and then discusses alternative approaches to classify these spendings. Illustrations from Zambia are used as examples in the guide. The final section (Closing Remarks) of the guide provides directions on how to set up a team and a plan for data collection, analysis and outreach.

This guide allows countries in the region to take advantage of existing common experiences in tracking expenditure and through organizations, such as ReSAKSS-SA, initiate technical dialogue that can lead to regional standards in measuring public spending on agriculture. This guide represents the first step in a long journey. The right way to account for specific expenditures in different countries will differ. However, there is a need to ensure that data collected from existing statistical sources be compiled in a consistent way and be presented on a regular basis in order to indicate trends in total resource allocation to the sector. This guide represents work in progress and only sets the stage for regional sharing of ideas and experiences of what needs to be included or dropped and how it will be measured. Institutional differences between countries suggest that international comparisons of assessments of expenditure should be made cautiously (IMF and World Bank, 2005).

Purpose

The purpose of this guide is to provide a concept as well as practical information to track national public expenditure on agriculture in order to monitor: (i) progress of the Maputo Declaration and (ii) allocation to various subsectors, various functions, various regions and administrative boundaries. 'Tracking' is defined as the identification and reporting of budgeted and actual outlays (IMF and World Bank, 2005). To track the implementation of the Maputo Declaration, it is important to know first and foremost what qualifies to be *Public Spending on Agriculture.* This guide draws heavily from the International Monetary Fund (IMF) Government Financial Statistics Manual (GFSM), other literature and the lessons from Zambia to identify the different types and classes of public expenses on agriculture.

The Regional Strategic Analysis and Knowledge Support System for Southern Africa (ReSAKSS-SA) and Michigan State University/Food Security Research Project (MSU/FSRP), through support from the United States Aid for International Development/Swedish International Development Cooperation Agency (USAID/SIDA) and other partners, joined forces to provide the basis for developing a common tool to guide analysts and planners in countries in the Southern Africa Development Community (SADC) region to measure public spending on agriculture. ReSAKSS-SA has commissioned case studies of public expenditure on agriculture in Malawi and Mozambique where this guide could be a useful practical resource. Lessons learned in conducting these case studies will help update and improve this guide. Sharing and pooling of knowledge and energy will settle and refine the body of expertise in tracking public spending on agriculture in the region.

The intended audience of this work includes government officials, civil society, private sector, trade unions, parliament, regional bodies and donors. The World Bank working jointly with IMF is at the frontier of developments in public expenditure management. While the World Bank shifted focus from expenditure allocations and fiscal sustainability to institutional capacity, the earlier focus remains relevant to this guide. The Bank's public expenditure reviews continue to address issues of expenditure allocation and links to national poverty reduction. This guide focuses only on agriculture and disaggregates expenditures by function and economic classification. Therefore, the guide is a relevant sub-analysis of what the Bank's Economic Management Network does.

In general, spending review has become a common useful tool to tell and guide overall donor engagement given the trend toward overall budget support (Rajaram and Krishnamurthy, 2001). USAID, Department for International Development (DFID), European Union (EU) and other international donors form part of the audience for this work. The Consultative Group on International

Agricultural Research (CGIAR) centers led by International Food and Policy Research Institute (IFPRI) are developing analytical frameworks to measure impacts of government expenditures on economic growth (Fan et al., 2003). The Statistics Division of the Food and Agricultural Organization of the United Nations (FAO) took up the Africa Union (AU) task to offer technical support to help AU countries track public expenditure on agriculture. The result was a technical guidance note developed in 2005. This paper complements the AU work by giving a conceptual framework of total expenditure on agriculture, alternative classes of public spending and an elaborate explanation of data issues and challenges. The clients for this work are wide-ranging, and client-tailored versions of this guide will meet the special needs of each of these clients.

IDENTIFYING AND CLASSIFYING PUBLIC SPENDING ON AGRICULTURE

This section will define agriculture and the boundaries of spending on agriculture. It will also describe alternative ways to classify public spending.

Definitions

Agriculture as defined by CAADP includes:

- Crops and livestock with activities ranging from administration; construction of irrigation facilities; operation or support programs or schemes; production and dissemination of information; compensation, grants and loans; research activities; grants, loans or subsidies to support applied research.
- Fisheries with activities ranging from administration of fishing affairs and services; operations or support of fishing activities; production and dissemination of information; grants, loans and subsidies; administration and operations of government agencies; grants, loans or subsidies to support research in fisheries.
- Forestry with activities ranging from administration and services; operations or support of forestry; production and dissemination of information; grants, loans or subsidies; administration and operation of government agencies engaged in forestry research; grants, loans or subsidies to support applied research and experiments.

The production and management of fauna have traditionally not been considered an agricultural activity. When defined broadly, agriculture encompasses collection of fauna, safari hunting, capture of wild fish and harvest of indigenous forests outside national parks and nature reserves. For the purpose of this study, the broader definition of agriculture is adopted.

The principal sectors or frontline ministries include ministries responsible for Agriculture, Livestock, Natural Resources, Forestry and Fisheries. In addition, there are expenses on agriculture that may not appear in the accounts of the principal or other related ministries. In Zambia, expenses for maize imports or a revolving fund for irrigation, etc., are sometimes approved under the Ministry of Finance and National Planning vote.

Concept of Public Spending on Agriculture

An overall picture of what a public agricultural system looks like is important to guide efforts in classification and measurement of the resource flows in the system. An early task in the development of an accounts framework on national public expenditure is to decide what types of spending to include and what types to exclude. This guide sets rules for making these decisions in order to allow for greater cross-country comparability of estimates on public expenditure on agriculture as well as for greater comparability over time within a country's estimates. National public expenditure on agriculture encompasses all spending for activities whose primary purpose is to *restore, improve* and *maintain* agriculture for the nation and for individuals during a defined period of time. All such expenditure regardless of the public institution or entity providing for the agricultural activity should be counted.

This guide has taken advantage of extensive work done to develop international standards and best practices for measuring national public health accounts. In 2003, the World Health Organization (WHO), the World Bank, USAID and other partners produced the *Guide to Producing National Health Accounts,* to help countries measure total spending on health. The public health system and its resource flows described in the 'Producers' Guide' resemble the public agricultural system.

National Health Accounts (NHA) is an internationally recognized framework that provides a comprehensive guide to the estimation of national health expenses (De et al., 2004). The model of accounts, the *New Harvard NHA Model,* explains the flow of funds among four principal dimensions, namely 1) the financial sources, 2) the financial agents, 3) the end users or providers, and 4) the end uses or functions. Table 2.1 shows the expenditure flows from originators of funds to recipients or funded agents and then to service providers. Funds come from various sources and paid out to more than one funding agent. This is typical of how public funding for the agriculture sector flows. Spending on agriculture originates from various sources and several ministries receive these funds

Table 2.1. Flow of funds between sources, agents and service providers.

	Primary/Original funding sources				
Funded agents or recipients or line ministry	S1	S2	S3	S4	
1	A	B			A+B
2	C				C
3		D	E		D+E
4				F	F
Total	A+C	B+D	E	F	G
	Funded agents				
Service providers or cost centers	1	2	3	4	
I	V		W		V+W
II		X			X
III			Y		Y
IV				Z	Z
Total	V=A+B	X=C	W+Y = D+E	Z =F	G

Source Adapted from De et al., 2004.

which support delivery of public agricultural services. In table 2.1, the total resources from each primary funding source are at the bottom of the column, for example, funds from *Source S1* total *A+C*. The total amount of resources provided to each recipient is the row total, for example, *Funded Agent 1* or line ministry had a total funding of *A+B*.

The bottom part of table 2.1 displays line ministries or recipients as column headings and bottom rows represent the various departments receiving funds from each funding agent. Line ministry 1 or *Funded Agent 1* gives out *V* resources to *Provider I*. The total amount of resources paid out by *Funded Agent 1* equals the total amount released to the Funded Agent, i.e., *V= A+B*. Eventually, the total amount of funds released by the original sources equals the amount paid out by funding agents to providers, that is, *G*. Measurement of total public spending on agriculture is possible at each dimension, but the total amount tracked is the same regardless. This is true in principle but may not be nearly achievable.

An alternative model, the *OECD – System of Health Accounts* has all the dimensions of the Harvard model except for 'financial agents.' According to Salem (2004), the former model is more dominating than the latter in low- and middle-income countries because it adapts well to pluralistic structures of financing common in these countries. The NHA are available in more than 60 low- and middle-income countries to influence policy through use by policy makers. This tool is also used to capture data on national expenditure on interventions for a specific area of disease such as human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). Accounts on agriculture can rely dependably on the design of accounts on health expenses when identifying various dimensions of expenditure. The NHA framework enables international and inter-sectoral comparability while providing country/sector flexibility to tailor public spending to national policy priorities. Table 2.2 shows the profile of a public agricultural subsystem in Zambia.

The sketch in table 2.2 shows the principal financing sources; MPSAs; and the types of services and benefits provided. The list of spending agents may differ from one country to another.

The funding sources include general tax revenue collected by state or local authority, co-payments for services, donor support and loans from international banks. If local authorities have significant own resources (from taxation, borrowing and not state transfers) and they are responsible for a significant share of total spending on agriculture in eligible fields, such expenditure is eligible.

In the profile of the public financing on agriculture in Zambia, several ministries incur expenses on agriculture. These ministries are in two groups. 'Take all' ministries and agencies are those performing purely agricultural roles, while 'partial budget' ministries have mandates not purely agricultural, but perform agricultural activities indirectly as they implement their mandated functions. The Ministry of Agriculture and Cooperatives is the only ministry in Zambia in the 'take all' group. Other ministries including Finance and National Planning, Energy and Water Development, Works and Supply, Community Development and Social Services, Lands, Environment, Tourism and Natural Resources and Defense form the 'partial budget' group. When tracking expenses, special attention is given to the 'partial budget' group to allow separation of expenditure on agriculture from that on nonagricultural activities. The section on Closing Remarks discusses this issue.

The sketch in table 2.2 also shows the major use of each of the funds in the agricultural system. Often, state or central budgets cover operations of administrative departments under the management of the various ministries. Local government budgets cover construction and maintenance of local infrastructure (roads, warehouses, etc.) at lower-level administrative and territorial units. Bilateral and multilateral donors provide funds for public investment in capital or other assets and market development.

Table 2.2. Identifying and mapping the public agricultural financial profile: Financial sources, financing agents and services in Zambia.

Ministries, provinces and spending agents (MPSAs)	Primary funding sources					Service provided
	Ministry of Finance and National Planning	Donors	Local governments	Co-payments	International loans	
Ministry of Agriculture[1]	X			X	X	Research, extension, training
Ministry of Environment and Tourism	X				X	Research, extension, training
Ministry of Education	X			X		Training agricultural scientists
Ministry of Community Development	X					Agriculture welfare agencies
Ministry of Finance and National Planning	X	X				Agricultural development projects
Ministry of Works and Supply	X				X	Roads on farming blocks
Ministry of Water and Energy	X				X	Dams and electricity
Ministry of Lands	X					Land surveys in farm blocks
Office of the Vice-President	X	X				Agriculture disaster management
Provincial Government	X	X				Agriculture development projects
Local Government	X	X	X			Agriculture development projects
Major use of each funding source	Operations	Capital assets	Infrastructure	Inputs	Infrastructure	

[1] Agriculture covers crops, livestock and fisheries.
Source Adapted from Salem, 2004.

The allocations to the Ministry of Agriculture and Cooperatives in Zambia pay for personnel emoluments, research, extension, training and other services, such as controlling diseases of national economic importance. Allocations to the sector spent by other ministries pay for agricultural welfare services and infrastructural developments such as electrification, construction of roads, dams, and land development in farm blocks.

The financing profile provides not only the relationship between financing and service delivery roles but also direction to sources of information, to data repositories, and to the main actors in the agricultural profile. This is discussed in the final section of this guide.

The concept of a public agricultural system developed in this guide is preliminary and will be refined by subsequent assessments. As analysts undertake their work, they should keep an open mind about the number, relative position, and activities of the actors in the public agricultural system.

Spending Boundaries

Expenditure Type Boundaries

For some expenditure, there is no clear line between agricultural and nonagricultural activities. Expenditure in health and education affects agriculture in some way. The primary purpose of any given expenditure can help distinguish between that which should be included as agriculture-related expenditures and that which should be excluded. If the primary purpose or intent of the program is agricultural improvement, the spending should be included. However, when the primary purpose of a program is to support general health, for example, provision of Anti-Retroviral Therapy (ART) by the Ministry of Agriculture, the program should not be included in the measurement of public expenditure on agriculture.

Direct public agricultural activities are considered the core of an analysis of public expenditure on agriculture. When tracking, an attempt should be made to at least capture this spending. Agriculture-related activities, such as road construction, drought-mitigation activities, etc., contribute to growth in agriculture but intersect with other sectors, such as tourism or community welfare. Such agriculture-related expenditures will be included in the total public expenditure on agriculture. But care should be exercised not to include spending on nonagricultural activities even though the Ministry of Agriculture pays. Nonagricultural activities will dilute the findings of an exercise in public expenditure on agriculture. Table 2.3 shows examples of expenditures which are agriculture-related and those unlikely to be agriculture-related irrespective of which agency pays for the expenditures.

Once a judgment regarding treatment of a particular expenditure is made, the treatment shall be applied from one year to the next in order to retain temporal consistency. This is important in order to discern true trends in public spending on agriculture. It is not enough to rely on the nature of the service provider to determine whether or not the expenditure belongs inside the boundary of expenditure on agriculture. Certain activities provided by the Ministry of Agriculture do not have agriculture as its primary intent and should be excluded from the expenditure on agriculture. Table 2.3 provides examples of such expenditures. Conversely, other activities performed by nonagricultural ministries have agriculture as the primary purpose and should be included in the expenditure on agriculture. Decisions

Table 2.3. Examples from Zambia of activities to include or exclude from public expenditure on agriculture.

Agency paying for activity	Likely to be agriculture-related	Unlikely to be agriculture-related
Ministry of Lands – Surveying of properties	Survey and demarcation of land for farm block development	Survey and demarcation of land for commercial, industrial and other purposes
Agriculture Department – Commemorations	World Food Day	International Women's Day
Office of the President – Central Province (Headquarters) Women enterprise development	Procurement of cattle and goats for women in Chibombo	Procurement of hammer mills for women in Chibombo

Source Republic of Zambia, 2007.

to accept or not to accept agriculture-related expenditures as expenditures on agriculture are arbitrary. The goal is to be consistent over time rather than chase after theoretical purity.

Space Boundaries

Apart from boundaries stated in terms of types of activities, boundaries can be stated in terms of space. Spending on agriculture includes spending of external agents such as bilateral and multilateral agencies. Agricultural programs by donors and food aid import expenditures are included. Government expenditures to other nations, which technically constitute the 'export' of agriculture are excluded. Spending by foreign governments toward a nation's agriculture is to be included but the nation's spending to other countries is excluded.

Time Boundaries

Government expenditures are made in a given period. The analyst must choose which period to attach these expenses to. The period is either a calendar year or a fiscal year. Occasionally, the calendar year coincides with the fiscal year. Where more than one time period exist, use one.

Another element of the time boundary involves the choice between accrual accounting and cash accounting. Ideally, public expenditure on agriculture should use the accrual method where expenditures reflect the time period when economic value is made rather than when the payment for the transaction took place. When dealing with data sources using both accounting practices, the analyst should convert everything to a cash basis. The AU/FAO team uses the cash accounting system because it is common in African governments. The accrual system brings unnecessary complications. For this guide, the cash accounting system will do.

Classification of Public Expenditure on Agriculture

Governments have two broad economic responsibilities: to assume responsibility for providing selected goods and services to the communities and to redistribute income and wealth by transfer payments. Governments fulfill these responsibilities through expenditures classified functionally and economically.

Economic classification identifies expenses incurred when government produces, buys and transfers cash to households to buy goods and services. Government, through parliament, approves different types of agricultural expenses or appropriation types. Each appropriation relates to a specified expense, and different types of expenses are not in the same appropriation. Economic classification provides information on expenditure by different but approved uses. The functional classification focuses on the roles, or socioeconomic objectives that government aims to achieve through various outlays. Functional classification provides information on the activity or type of service taking up the spending.

Economic Classification

The appropriation types of government spending relevant for this guide include: compensation of employees of general government units also known as personnel emoluments (PE); use of goods and services also known as recurrent departmental charges (RDCs) or output expenses; subsidies; consumption of fixed capital or capital expenditure; interest or borrowing expenses; grants; social benefits and other expenses.

Personnel emoluments. Personnel emoluments cover wages and salaries and social contributions during the accounting period. Wages and salary include payment in cash or in kind. Cash salaries and wages include extra payment for overtime, cost of living allowances, bonuses, transport and housing allowances. In-kind salaries and wages include meals and drinks, housing services, services of durables such as vehicles provided for the personal use of employees, net costs to government from the provision of goods and services to employees.

Social contributions include payments made by government to social insurance schemes for gaining social benefits, for example, pension and retirement benefits for public service employees.

Recurrent departmental charges. Goods and services used or RDCs consist of goods and services used in producing public goods and services. This includes purchase and rental expenses by government on tools, equipment, materials, supplies and other items used as inputs by employees to carry out their work within the accounting year. This includes goods and services used in periodic maintenance and repair of public agricultural assets. This is different from major improvements to fixed assets to increase capacity or to extend service lives which are gains of capital assets. Spending on goods and services for routine research, training and other activities, which brings benefits beyond the accounting period, is treated not as RDCs or as acquisitions of capital assets. Spending on goods and services used by employees outside active duty and enjoyed by households to which employees belong is excluded but entered as compensation of employees. Goods and services transferred to other governments as emergency aid or to conduct relief are excluded because of the space boundary issue but the Government Finance Statistics Manual (GFSM) (IMF, 2006) includes them.

According to the GFSM, RDCs also include amounts payable to contractors and others who are not employees of government and refunds for travel and related expenses incurred when government employees report to workstations. Expenses incurred in the purchase and distribution of goods and services by government to households are classified as social benefits rather than RDCs and should take away all nominal payments made by households.

Consumption of fixed capital. Government buys capital assets for use in several institutions under the Ministry of Agriculture. During the accounting period, the value of these assets reduces because of physical weakening, normal obsolescence or damage. Consumption is similar but not the same as depreciation. Consumption spending is for assets such as infrastructure and major improvements to land. Using government storage decreases the present value of the remaining future rentals. The value of these capital assets declines as demand declines due to expected technological progress and presence of good substitutes. Excluded is the loss of value because of exceptional events such as war and natural disasters.

Interest and other financing expenses. Government borrows funds from multilateral institutions such as the World Bank and private development banks such as the African Development Bank (AfDB) for use by public entities in the agriculture sector. Apart from loans, government may have other liabilities such as accounts payable which attract interest payments. Interest is an expense that government will incur for the use of the principal outstanding by public agricultural institutions. The interest expenses are decreases of government liabilities.

In Zambia, interest payments on agricultural loans are paid indirectly by the institution receiving the loan. The treasury manages all interest payments for government. Nevertheless, interest costs on loans to agriculture are expenses for the sector.

Subsidies, grants and social benefits. These expenses represent transfers to individuals for their benefit. Government receives nothing directly in return for making this payment. For this class of

expenses, there is a distinction between subsidies and social benefits. Agricultural subsidies are a government expense to farmers and public agencies made, based on levels or value of production and to influence production or the prices of farm outputs. Subsidies are to private or public producers only. Any transfer payments to consumers are part of social benefits category of expenses. Farmers receive subsidies when they produce and sell an output in the domestic or external market or when they buy or import inputs. When government gives out food below market prices, this is a transfer of social benefits to consumers rather than a 'subsidy' payment. According to GFSM, subsidies also include transfers to public agencies to compensate for losses they incur when they charge prices lower than their average cost of production. In general, subsidy payments exist whether the recipient is a private or public producer or the producer is a financial or nonfinancial enterprise.

Government grants form an expenditure classified first by the recipient and then by whether the grant is current or capital. The GFSM recognizes three recipients: foreign governments, international organizations and general government units. Current grants cover current expenses while capital grants compel the recipient to buy assets.

Social benefits are only current transfers of cash or in-kind to protect parts of the population against social risks. Government gives out input packs to vulnerable but viable households to help them secure food supplies. Such transfers are in-kind agricultural relief benefits.

Other expenses. These are residual expenses not covered by any of the previous appropriation or expense types. These expenses are not assigned to a particular department. The scope of these expenses is specific enough to act as a constraint against nonauthorized activity, but not to inappropriately constrain intended activities approved by the appropriation (Government of New Zealand, 2005).

Table 2.4 shows the economic classification of public expenditure in the Ministry of Agriculture and Cooperatives in Zambia. A noticeable exclusion is interest expenses. The public agriculture sector borrows but the Ministry of Finance and National Planning repays. Subsidies and social welfare expenses appear under the Poverty Reduction Programs (PRPs) and consumption of fixed capital is in capital expenditure (table 2.4). Other payments are for membership fees in international organizations, for example, International Seed Testing Association, International Organization for Epizootic. Provincial and district program expenses are not by economic class. Disaggregating such expenditures keeps them consistent with presenting all other expenditures (table 2.4).

Table 2.4. Economic classification of public expenditure in the Ministry of Agriculture and Cooperatives, Zambia, 2006.

Category	2006 (billion kwacha)
Personnel emoluments	84
RDCs	39
Grants and other payments	5
Poverty reduction programs/Highly Indebted Poor Country[a]	270
Capital spending	1
Provincial and districts programs	7
Total allocation to the Ministry of Agriculture and Cooperatives	406

[a] These programs also include the Fertilizer Support Program and Food Reserve Agency.
Source Govereh et al., 2006.

Functional Classification of Public Spending on Agriculture

The ongoing tracking exercise of the African Union public budget on agriculture is based on the COFOG developed by the Organization for Economic Cooperation and Development (OECD). The NHA and the System of Health Accounts also developed by OECD use a functional approach to define health spending (De et al., 2004). The COFOG has a three-level scheme. There are ten top-level/two-digit categories referred to as divisions, such as economic affairs 'Division 04' and health 'Division 07.' Within each division, there are several groups (3-digit categories), for example, agriculture, forestry, fishing and hunting 'group 042.' Finally, within each group there are one or more classes or 4-digit categories, for example, agriculture 'class 0421' and forestry 'class 0422' (IMF, 2006). The general classification scheme given in table 2.5 shows the ten divisions and the various groups under each division.

The COFOG provides a detailed description of the classes. Given this guide's focus on agriculture, it reproduces the classification details for code '042.'

Under agriculture (first item in 042 of table 2.5) the functions of government include the following:

- Administration of agricultural affairs and services; conservation, reclamation or expansion of arable land; agrarian reform and land settlement; supervision and regulation of the agricultural industry.
- Construction or operation of flood control, irrigation and drainage systems including grants, loans or subsidies for such works.
- Operation or support of programs or schemes to stabilize or improve farm prices and farm incomes; operation or support of extension services or veterinary services to farmers, pest control services, crop inspection services and crop grading services.
- Production and dissemination of general information, technical documentation and statistics on agricultural affairs and services.
- Compensation, grants, loans or subsidies to farmers with agricultural activities including payments for restricting or encouraging output of a particular crop or for allowing land to remain uncultivated.

This description of public agricultural functions excludes multipurpose development projects in which agriculture features at a secondary level.

Under forestry (second item in 042 of table 2.5), the functions are the following:

- Administration of forestry affairs and services; conservation, extension and rationalized exploitation of forest reserves; supervision and regulation of forest operations and issuance of tree-felling licenses.
- Operation or support of reforestation work, pest and disease control, forest firefighting and fire prevention services and extension services to forestry operators.
- Production and dissemination of general information, technical documentation and statistics on forestry affairs and services.
- Grants, loans or subsidies to support commercial forest activities.

Table 2.5. Division and group classification of expense by function of government.

	Total outlays
01	*General public services*
011	Executive and legislative organs, financial and fiscal affairs, external affairs
012	Foreign economic aid
013	General services
014	Basic research
015	R&D[1] general public services
016	General public services n.c.e.[2]
017	Public debt transactions
018	Transfer of a general character between different levels of government
02	*Defense*
021	Military
022	Civil defense
023	Foreign military aid
024	R&D defense
025	Defense n.c.e.
03	*Public order and safety*
031	Police services
032	Fire protection services
033	Law courts
034	Prisons
035	R&D public order and safety
036	Public order and safety n.c.e.
04	*Economic affairs*
041	General economic, commercial and labor affairs
042	Agriculture, forestry, fishing and hunting
043	Fuel and energy
044	Mining, manufacturing and processing
045	Transport
046	Communication
047	Other industries
048	R&D economic affairs
049	Economic affairs n.c.e.
05	*Environmental protection*
051	Waste management
052	Wastewater management
053	Pollution abatement
054	Protection of biodiversity and landscape
055	R&D environmental protection
056	Environment protection n.c.e.
06	*Housing and community amenities*
061	Housing development
062	Community development
063	Water supply
064	Street lighting
064	R&D housing and community amenities
065	Housing and community amenities n.c.e.
07	*Health*
071	Medical products, appliances and equipment
072	Outpatient services
073	Hospital services
074	Public health services
075	R&D health
076	Health n.c.e.
08	*Recreation, culture and religion*
081	Recreational and sporting services
082	Cultural services
083	Broadcasting and publishing services
084	Religious and other community services
085	R&D recreation, culture and services
086	Recreation, culture and religion n.c.e.
09	*Education*
091	Preprimary and primary education
092	Secondary education
093	Post-secondary non-tertiary education
094	Tertiary education
095	Education not definable by level
096	Subsidiary services to education
097	R&D education
098	Education n.c.e.
10	*Social protection*
101	Sickness and disability
102	Old age
103	Survivors
104	Family and children
105	Unemployment
106	Housing
107	Social exclusion n.c.e.
108	R&D social protection
109	Social protection n.c.e.

[1] R&D = Research and Development [2] n.c.e. = Not classified elsewhere.
Source IMF, 2006.

Fishing and hunting (the last two items in 042 of table 2.5) functions are the following:

- This class covers fishing and hunting for both commercial and sports activities. The fishing and hunting affairs and services listed below refer to activities that take place outside natural parks and reserves.
- Administration of fishing and hunting affairs and services; protection, propagation and rationalized exploitation of fish and wildlife stocks; supervision and regulation of freshwater fishing, coastal fishing, fish farming, wildlife hunting and issuance of fishing and hunting licenses.
- Operation or support of fish hatcheries, extension services, stocking or culling activities, etc.
- Production and dissemination of general information, technical documentation and statistics on fishing and hunting affairs and services.
- Grants, loans or subsidies to support commercial fishing and hunting activities, including the construction or operation of fish hatcheries.

The NEPAD has also reproduced these in the Annex of its report on tracking expenditure on agriculture (NEPAD, 2005). When compared with the original COFOG descriptions, NEPAD's list has modifications. Unlike the COFOG listing, the functions listed by NEPAD exclude hunting from fishing activities. This study recommends the use of the original COFOG classification which includes hunting but keeping the expenditures disaggregated to allow grouping in various combinations. Furthermore, NEPAD's list has two additional functions each for agriculture, forestry and fishing. These functions are the following:

- Administration and operation of government agencies engaged in applied research and experimental development related to agriculture.
- Grants, loans or subsidies to support applied research and experimental development related to agriculture by research institutes and universities.

Agricultural R&D constitute an important public function. As will be seen in the Zambia example, R&D are strategic functions of government. The COFOG system groups agricultural R&D together with other economic affairs sectors (item 048 in table 2.5) rather than independently. This guide cannot explain why COFOG adopts such an approach. For the purposes of this work, R&D expenditures for agriculture are identified independently of R&D expenses for other sectors.

Functions of controlling offshore and ocean fishing go to the police rather than to the agricultural service. Further, administration, operation or support of natural parks and reserves are included under environmental protection functions.

This functional classification is extended to identify the purpose of the service. The service can either be individual or collective in nature. The function of providing grants, loans and subsidies to farmers is individual in nature as individuals consume the goods and services provided by government. The remaining services are collective in nature. Producing and disseminating general information are a collective service with characteristics of high exclusion cost.

In Zambia, estimates of expenditure are for 'Heads' which can be a ministry, public commission and special offices including those of the President, the Auditor General and the Cabinet. These main 'Head' categories are from 1 to 99. 'Head 1' is the Office of the President – State House.

Ministry of Agriculture and Cooperatives is 'Head 89.' There are subcategories under each 'Head.' These subcategories represent departments or institutes. Numbers '01' to 'n' represent the departments. Table 2.6 gives an illustration.

Spending of the Government of the Republic of Zambia (GRZ) for the agriculture sector is through several departments belonging to several ministries. In the Ministry of Agriculture and Cooperatives, the departments are the subcategories (01 to n) listed in table 2.6. The functional composition of the budget of the Ministry of Agriculture and Cooperatives (MACO) reveals the types and amounts of services the ministry gives.

Table 2.6 gives the departmental structure of the Ministry of Agriculture in Zambia. Each department is a cost center. Listing these departments does not match the COFOG listing of agricultural functions performed by government. For example, subcategories 07 and 12 (agricultural training and agricultural information service) will contribute to the function of producing and disseminating of general information. The AU/FAO team is collecting data on expenditure by broad classes of agriculture, forestry and fisheries. Further, the data are in two types of economic uses, namely RDCs and capital spending. This guide recommends collection of disaggregated data by all agricultural functions as well as by all economic uses.

Reviewing the functional compositions can help show the basis of the allocations. The review can show links and the degree of alignment with regional policy agendas such as NEPAD's CAADP or the vision, mission and priorities of the Fifth National Development Plan (FNDP) or Medium-Term Expenditure Framework (MTEF) ceilings or the ministry's strategic plan/budget proposals.

Table 2.6. Example of functional public expenditure profile for the Ministry of Agriculture and Cooperatives, Zambia, 2006.

Functions under "Head 89" Ministry of Agriculture and Cooperatives		Allocation (million kwacha)
01	Headquarters	5,024
02	Human Resources and Administration	2,440
03	Policy and Planning Department	214,904
04	Agriculture Department	16,460
05	Zambia Agricultural Research Institute	7,903
06	Veterinary and Livestock Development Department	7,440
07	Agricultural Training Institutions	9,336
08	Fisheries Department	3,236
09	Agribusiness and Marketing Department	250,117
10	Cooperatives Department	1,309
11	Seed Control and Certification Institute	1,985
12	National Agricultural Information Service	2,617
13	Agricultural Research Stations	938
14	Fisheries Research Stations	900
15	Veterinary and Livestock Research Stations	660
16 – 32 (even numbers)	Provinces	63,740
17 – 33 (odd numbers)	Districts	22,098
Total		611,107

Source Republic of Zambia, 2007.

DATA AND PUBLIC EXPENDITURE ACCOUNTS

Table 2.1 gave a framework of a public agricultural system, and the section on Identifying and Classifying Public Spending on Agriculture described the different classifications of public spending on agriculture. The dimensions of classification and the level of disaggregating data on public spending require a clear understanding. The goal is to accurately capture the flow of resources that occur in the public agricultural subsystem. The next task is to assemble data to estimate elements of that framework.

Data Plan

A profile of a public agricultural subsystem is the foundation of a data plan. A good understanding of the actors (source of funds, financing agents, service providers and users of services) helps identify the most likely sources of information. The plan should point out which data sources to contact for what data.

Part of data-gathering may involve an outreach and educational campaign to sell agricultural accounts and enlist participation and cooperation from respondents. A workshop organized for the public sector to discuss the need for expenditure on agriculture can raise awareness of sharing accurate data and highlight potential problems in the public management information system.

As a rule, setting up and preserving a good working relationship with relevant agencies is an early priority. Co-opting agency staff on the assignment will help ensure access to copies of documents and electronic records that are available. Resolving incentive issues for agency staff who will join in is important. Because this work involves institutions rather than individuals, the cooperation is with institutions. Compensation should be available for any work done outside normal work schedules but this is not a salary supplement.

A data plan should reflect the resources available, staff experience and the time frame for completing the task. If resources are available and time allows, data collected at various levels are triangulated and confirmed. Obviously, extra plans will evolve as the work gets underway but the data plan should lay the groundwork for filling any missing data and producing corroborating estimates.

Sources of Data for Public Expenditure on Agriculture

Data on public expenditure on agriculture are available from government budgetary records. Government data on expenditure are complex and the analysts will face risks of double counting or undercounting expenditure on agriculture (or both). While data on government expenditure are ‘on-shelf’ and appear in public documents such as the ‘Yellow Book,’ detailed government budgetary records exist in the Ministry of Finance and National Planning and other auditing bodies. Since the Ministry of Finance and National Planning is a major source of agricultural resources channeled through funding agents, accessing records at the Ministry of Finance and National Planning will be more efficient than getting records from each agent. The Ministry of Finance and National Planning produces up-to-date monthly and yearly releases of funds for both capital and recurrent activities. Further, necessary details for programs and projects including any information on specific activities are available at the budget office. This system can therefore be a primary source of data. Collecting data from the line ministries, service providers (departments) and service users (farmers) is important in assessing the quality and consistency of data at each stage. While it is important to have the preliminary expenditures from the Ministry of Finance and National Planning in place,

the assembly of data from other levels is a continuing exercise. This is necessary to track the uses of the funds released by the Ministry of Finance and National Planning.

Type of Data

Data on public expenditure need to capture information on where government ministries and relevant departments get their money and to whom they give the money or provide the service. The data should also capture information on the goods or services for which the expenses were made. Donors can be a source of finance, a financing agent or an agricultural service provider. Just like for government, it is important to learn the sources of funds channeled to donors, the recipient(s) of the funds and the goods and services purchased by the funds. While capital items are in the expenditure categories, the capital stock of the agricultural system is not covered in this guide.

Actual versus approved appropriations. When working with government expenditure records, analysts should clearly distinguish between approved spending, released spending and audited spending (table 3.1). Expenditure plans of the Ministry of Agriculture and Cooperatives may not be released by the Ministry of Finance and National Planning. As shown in table 3.1, funds released by government were fewer than what had been approved in all these years. The variation between planned and approved funding is that planned programs will not get funded. Although estimates of approved spending or appropriations for some units may be subject to overruns and others to underruns, total approved spending will often remain less than the amount approved.

Table 3.1. Variation in amounts requested by the Ministry of Agriculture and Cooperatives and amounts approved and released by the Ministry of Finance and National Planning, 1992 – 1999, Zambia (2006 prices).

Year	Requested	Approved	Approved (%)	Released	Released (%)
1992	257,516	76,751	30	67,178	88
1993	193,700	134,060	69	95,301	71
1994	483,317	441,358	91	168,398	38
1995	207,416	132,388	64	143,183	108
1996	230,633	192,058	83	129,088	67
1997	349,519	296,530	85	164,793	56
1998	246,803	175,183	71	128,155	73
1999	224,859	143,752	64	119,991	83

Sources Republic of Zambia, 1997, 2002.

Approved spending needs to be adjusted to reflect the amount of funding that is actually released. When funds are released, further reallocations are sometimes made within each line ministry or institution to facilitate financing for unforeseen events, such as the hosting of the SADC Conference of Ministers of Agriculture by Zambia. Funds to finance this activity had to be deducted from all activities under the Ministry of Agriculture and Cooperatives. Eventually, audited accounts of actual spending are the most reliable and preferred measure of expenditure unlike approved and released spending. However, though cumbersome, information on actual spending in a given year is available from the accounts section of each cost center. Information on monthly expenditure for allowances, purchase of capital equipment, and purchase of goods and services is available from the accounts

section. While recognizing variation between appropriations and audited accounts, efforts should explore the source of the variation.

The downside of relying on audited accounts is the period of two or more years it takes to have the accounts available after actual spending. The delay depends on the capacity of the Auditor General's office. An adequately staffed and funded auditing agency should be able to issue audited accounts after one year of actual spending. The most practical approach is for the analyst to use approved expenditures and, where possible, information from the accounts section for the current year and most recent years.

Resources allowing, tracking surveys on public expenditure can verify if indeed the expenses claimed did happen on the ground. Surveys conducted in Uganda to track public spending in health and education revealed gaps between approved resources and the services which reached the ground (Ablo and Reinikka, undated). Surveys on expenditure can help track expenditures and assess the outcomes of such expenditures.

The Treasury releases funds to agencies every month as profiled by the receiving ministry each quarter. The timing of releases should respond to the activity schedule for each program. The deviation between what is asked for and monthly releases over the year will reveal whether the releases are as expected or are piecemeal, unpredictable and come late in the year. While such an exercise may not be a major preoccupation of tracking expenditure, the timing of release does affect program implementation and, ultimately, the outcomes.

Federal and subnational government spending. Countries operating a federal government system run budgets at several levels. Public investments on agriculture that generate spillover effects across state boundaries, for example, irrigation, are good candidates for federal funding. Generally, in countries that have decentralized systems of governance, effort is needed to collect data at all levels including state, province, district and municipality.

Data-gathering from subnational authorities can be daunting. Subnational government expenditures are not consolidated like those of the central government. Data should be available for each state, district council or municipality. The large numbers of states or councils may make it difficult to collect data from all of them. The alternative for the analyst is to carry out a sample survey of expenditure. The use of different classifications across subnational governments will also make it difficult to aggregate the spending.

Donor spending. As discussed in the section on Identifying and Classifying Public Spending on Agriculture, donor funds are part of public spending. Cooperating partners have a choice to either channel their development support through the government budget or to run their development programs independent of government programs. Multilateral donors such as the World Bank, IMF and ADB/ADF and bilateral development agencies give program loans, project loans and project grants to government. In Zambia, the Ministry of Finance and National Planning handles these funds as part of grants and financing. The Ministry of Finance and National Planning channels the funds for the agriculture sector to the Ministry of Agriculture through the budget. Analysts should avoid mixing funds with different time horizons or spans. Some projects run for five years and others for only two. These accounts should reflect the annual spending only and not the total funds for the duration of the project.

Part of the funds from development agencies is not through government's sector support. Such funds are difficult to track. Donors do not have a coordinated mechanism to consolidate records of all their individual activities. For Zambia, there are a few integrated projects but consultants run most

of these projects without the involvement of any government leadership. The alternative to getting records on expenditure directly from individual donors is to ask for the information from recipients of donor projects.

Comprehensiveness of Data Assembly

Government budgets have variable details. What should be collected is disaggregated data. These data will allow analysts to aggregate them into various forms or elements of spending. The total expenditure may not be enough when disaggregating by function and spending agent. When conducting a spatial expenditure analysis, total spending is not so useful. What is useful is the distribution of such spending for centrally and locally delivered services.

Estimates of public expenditure or appropriations are by department or agency, by program or project, and by budget items. From these budgets, analysts need to identify which expenses are for agriculture and which are not. Agriculture-related spending should be included in expenditures on agriculture. The analyst should also include payments made to agriculture by nonagricultural institutions. Documenting all these decisions and steps serves two purposes. First, documentation will help repeat the exercise in future. Second, documentation will help explain variation in total figures on expenditure. Simply using functional allocations creates risks of omission of spending on agriculture by other ministries and inclusion of spending on nonagricultural activities by the Ministry of Agriculture. Analysts need to work closely with people with a thorough knowledge of the agricultural policy in the country and who can identify items of expenditure which are eligible or not.

There are instances where analysts will face resistance from protected ministries or agencies whose figures on expenditure are sensitive or classified. These entities receive a single appropriation for all their expenses. Efforts should include all agriculture-related expenses as these represent a part of the nation's expenditure on agriculture. Comprehensiveness should not jeopardize other important interests. In Zambia, there was no experience of an encounter with sensitive data. Seemingly, all data on public expenditure on agriculture are not sensitive and, therefore, not classified.

Composition of the Tracking Team

While the outcome of tracking expenditure is of immediate importance, the process of carrying out the assessment equally matters. Following the experience of the World Bank in conducting reviews on public expenditure, there are three types of approaches to set up a working team: wholly in-house; externally led, participatory; and joint- or client-led (Bevan, 2003). Internal assessments by staff should address specific concerns such as building internal consensus or checking implementation of development plans. The participatory approach entails consulting other sector stakeholders apart from funding sources, agents, service providers and users. The joint approach entails having members from both development partners and government counterparts in the assessment team. This guide recommends the third approach because of the close complementarities it offers between expenditure analysis done by the team and capacity building or future institutionalization of tracking expenditure.

A steering committee of high-level representatives from relevant organizations is essential for several reasons. Assembling accounts on expenditure needs support from different institutions. Having representatives on the committee from these institutions will ensure cooperation in producing data and confirmation of estimates. Besides, a committee will be the conduit for communicating findings to stakeholders.

CLOSING REMARKS

Countries in the region have a challenge to determine accurately and finance appropriately the agriculture sector to achieve the target growth of 6 percent per annum. This places significant demands on having comprehensive information about national public spending on agriculture. Accounts of expenditure on agriculture are, therefore, an important tool for an analysis of public expenditure.

The guide intends to expose practitioners to principles of developing public accounts on agriculture. These accounts not only reveal flows of resources but also project these flows and analyze their importance in supporting agricultural development goals. Tracking of flows should be done using expenditure classes that describe the dimensions of the public agricultural system. Accounts on agriculture allow the decision maker to view flows from original sources to entities that provide and receive agricultural services.

This guide has presented tools for tracking expenditure. One of these is the profile of public agriculture. Before embarking on any efforts to collect data, develop a profile of the agricultural system. Another tool is a set of classifications of expenditures on agriculture that enable grouping of different expenditures into policy-relevant dimensions. These tools enable practitioners to orderly navigate their way through the complex maze of public expenses.

The key steps to follow when assessing public expenditure on agriculture in a given country should include the following:

- Form a steering committee with agricultural stakeholders.
- Form a technical team with subject matter and accounting or auditing specialists.
- Describe the agriculture sector and identify its structure and all relevant public entities.
- Organize and hold a training workshop to elicit cooperation from identified entities of the public agricultural system.
- Develop matrices identifying the relationship between original funding sources, funding recipients and users/service providers in the public agricultural system.
- Set up an inventory of existing primary and secondary data.
- Define and carry out for each entity the data-collection process.
- Certify, enter and analyze data on expenditure.
- Present preliminary results during a second workshop of stakeholders and use feedback to develop final recommendations.

This guide offers illustrations from Zambia. Efforts to track public expenditure on agriculture in Zambia are already underway. As shown in these illustrations, tracking is as much an art as a science. There are accounting principles to observe and subjective judgments to make when applying these principles.

GLOSSARY

Account	An account is a tool which records, for a given aspect of economic life (a) the uses and resources or (b) the changes in assets and the changes in liabilities and/or (c) the stock of assets and liabilities existing at a given time.
Accrual accounting	Accrual accounting records flows at the time economic value is created, transformed, exchanged, transferred or extinguished; services are recorded when provided, output is entered at the time products are created.
Agriculture	Agriculture is an activity involving the production and management of domestic and wild crops, livestock, fisheries and forestry.
Agriculture-related expenditures	Agriculture-related expenditures do not have agriculture as the primary intent (multi-sectoral) but they contribute to growth in agriculture.
Appropriation	An appropriation is a parliamentary authorization for the allocation of a fixed amount of funds to a spending agent for a specific purpose.
Approved spending	Approved spending is the funds parliament authorizes/approves for spending.
Audited spending	Audited spending means the funds that the Auditor General has verified to have been spent by a particular cost center.
Capital stock	Capital stock is the value of all fixed assets still in use.
Cash accounting	Cash accounting records only cash payments/receipts and records them at the time these payments/receipts occur.
Consumption of fixed capital	Consumption of fixed capital is the decrease in present value of the remaining future worth/benefits of an asset.
Co-payments	Co-payments are payments or contributions made by individual beneficiaries toward accessing goods and services from government.
Economic classification	Economic classification provides information on expenditure by different but authorized uses.
Expenditure	Spending means the values of the amounts that buyers pay or agree to pay to sellers in exchange for goods and services that sellers provide to them or to other institutional units designated by the buyers.
Financial sources/holders	Financial sources are entities that provide funds for public expenditures on agriculture.
Fixed capital	Fixed capital is a tangible or intangible asset used repeatedly and continuously in a production process for more than one year.
Functional classification	Functional classification provides information on the activity for which an expense is incurred.

Funding agents/ intermediary	Funding agents/ Funding agents receive funds from original sources and channel the funds to pay providers and purchase services.
Personnel emoluments	Personnel emoluments are compensations to employees covering their wages, salaries and social contributions.
Planned spending	Planned spending is the funding the spending agent plans to spend to carry out its planned programs.
Public expenditure on agriculture	Public expenditure on agriculture is government expenditure for activities whose primary purpose is to restore, improve and maintain agriculture for the nation and for individuals during a defined period of time.
Recurrent departmental charges	Recurrent departmental charges are payments for goods and services used in the production of goods and services that are provided by government.
Released spending	Released spending means the funds the treasury provides to a spending agent or cost center.
Reviews of expenditure	Reviews of expenditure focus on analysis of budget preparation, execution and reporting processes.
Service providers	Service providers are the end users of funds for agriculture; they deliver the agricultural services.
Service users	Service users are the beneficiaries of agricultural services.
Social benefits	Social benefits are current transfer payments of assistance in cash or in kind to protect segments of the population against social risks.
Subsidies	These are payments only to public or private producers made on the basis of the levels or value of production and/or to influence production or the prices of outputs.
Tax expenditure	The value to government of the tax relief that private individuals or firms enjoy (as an incentive) or the foregone tax that government does not collect from individuals or firms that are exempted.
Tax revenue	Tax revenue means funds raised compulsorily from institutional units and paid to government for use in providing goods and services to individuals or to the community.
Transfer payment	A transfer payment is a payment by one institutional unit to another unit without receiving from the latter any goods or services in return as counterpart.

ANNEX

Guidelines for Tracking the Public Budget for Agriculture: Pathways, Variables and Information Sources to Consider

This summary provides a step-wise approach to understanding public financial systems and setting up structures to begin tracking public expenditures on agriculture in any country. The right way to account for specific expenditures in different countries will differ. This guide represents work in progress and only sets the stage for regional sharing of ideas and experiences of what needs to be considered and measured.

Defining Agriculture

The purpose of this guide is to provide an idea on, as well as practical, information to track, national public expenditure on agriculture. Expenditures on agriculture need to be traced to learn how much is being spent, where it is being spent, what it is being spent on and for whom, how it has changed over time, and how these dimensions compare across countries in the region. To do this, it is important to learn first and foremost which activities qualify to be considered under agriculture. Agriculture includes the production of crops, livestock, fisheries and forestry and the management and capture/hunting of fauna outside national parks and nature reserves. From this definition, it is clear that the agriculture sector comprises a complex combination of public and private entities.

Sketching the Financial Profile

At the outset, it is important to sketch the financial profile of the agricultural system. This system depicts the actors and the flow of resources in the agricultural system. There are principally four dimensions involved in the flow of resources, namely 1) the financial sources, 2) the financial agents, 3) the end users or providers, and 4) the end uses or functions. It is from understanding the total flows that the space which the public entities occupy in the system can be identified. Public spending on agriculture originates from various sources. The funding sources include general tax revenue collected by state or local authority, co-payments for services, donor assistance and loans from international banks. There are several agents who receive these funds and channel them through providers who deliver public agricultural services.

If local authorities have significant own resources (from taxation, borrowing, etc., and not state transfers) and they are responsible for a significant share of total spending on agriculture in eligible fields, such sources of funds should be included. The financing profile provides not only the relationship between financing and service delivery functions but also direction to sources of information, to data repositories and to the main actors in the agricultural profile. Analysts should keep an open mind about the number, relative position and activities of the actors in the public agricultural system.

Eligibility of Expenditures

Once the financial system that supports public agricultural services has been identified, the next task is to decide what types of expenditures to include or exclude. Expenditures on nonagricultural activities will dilute the findings of what is intended to be a tracking exercise in expenditure on

agriculture. Expenditures on agriculture encompass all expenditures for activities whose primary purpose is to *restore, improve* and *maintain* agriculture for the nation and for individuals during a defined period of time. All such expenditure, regardless of the public institution or entity providing for the agricultural activity, should be counted. It is not enough to rely on the nature of the service provider to determine whether or not the expenditure belongs inside the boundary of expenditure on agriculture. It is the primary purpose of any given expenditure to distinguish between what is to be included or excluded. If the primary purpose or intent of the program is agricultural improvement, the expenditures should be included.

Care should be exercised not to include expenditures on nonagricultural activities even though they are paid for or provided by an agent whose primary mandate is provision of public agricultural services. Certain activities provided by the Ministry of Agriculture do not have agriculture as its primary intent and should be excluded from the expenditure on agriculture. Simply using expenditure allocations by function creates risks of omission of spending on agriculture by other ministries and inclusion of spending on nonagriculture by the Ministry of Agriculture.

Once a judgment regarding treatment of a particular expenditure exists, the treatment shall be applied from one year to the next in order to retain temporal consistency. This is important in order to discern true trends in public spending on agriculture. Decisions to accept or not accept expenditures as agriculture are arbitrary. The goal is to be consistent over time.

Analysts must choose the period within which expenditures are made – either a calendar year or a fiscal year. In a few instances, the calendar year coincides with the fiscal year. Where more than one time period is involved, adjustments need to be made so that expenditures reflect only one time period.

Variables to Measure

In order to discern how well public resources are being spent in agriculture, it is important to classify these expenditures. Expenditures on agriculture can be classified economically and functionally. These two systems reveal different aspects of public expenditure. While the economic classification breaks down expenses into different uses, functional classification provides information on the activity or service for which an expense is incurred.

The economic classes/uses or appropriation types include: compensation of employees of general government units also known as PE; use of goods and services also known as RDCs or output expenses; subsidies; consumption of fixed capital or capital expenditure; interest or borrowing expenses; grants; social benefits and other expenses. Once data on expenditure are classified economically, it is then possible to analyze the balance and sustainability of the expenditures.

Functional classes cover administration of affairs and services; operation or support of works and programs; production and dissemination of information; financial support of research and development; and financial support of commercial activities. This functional classification can be extended to identify the purpose of the service. The service can either be individual or collective in nature. This functional classification can be more elaborate depending on the manner in which public agricultural service providers are structured. These functions can be spread among several departments including human resources and administration; policy and planning; agricultural research institutes; veterinary and livestock development; agricultural training institutions; agribusiness and marketing; and national agricultural information services. The functional composition of the public budget on agriculture reveals the types of services to be furnished.

Forming the Tracking Team

While the outcome of tracking expenditure is of immediate importance, the process of executing the assessment equally matters. This guide recommends that the exercise be driven and spearheaded by the relevant department in the Ministry of Agriculture jointly with development partners. Once this responsibility is accepted, an educational campaign should be launched to sell the concept of agricultural accounts and enlist participation and cooperation from respondents.

During this awareness phase, a steering committee of high-level representatives from relevant organizations should be formed. Assembling accounts of expenditure requires support from different institutions. Having representatives on the committee from these institutions will ensure cooperation in producing data and validation of estimates. A working team comprising agricultural specialists and accountants should be formed and be charged with the responsibility of collecting and assembling data on expenditure. The team should include persons with a thorough knowledge of the agricultural policy in the country and who can identify items of expenditure which are eligible or not.

Data Plan

The financial profile of the public agricultural system is the foundation of a data plan. A good understanding of the actors helps identify the most likely sources of information. Data on public expenditure on agriculture are obtained from government budget records. Since the treasury is the main source of finances to support public agricultural services, accessing records at that level will be more efficient than getting records from each funding agent or donor. Collecting more data from funding agents, service providers and service users is important in assessing the quality and consistency of data on expenditure. Even though measurement of public expenditure on agriculture can be done at each dimension, the total amount tracked is the same regardless of where it is measured. While this is true, in principle it may not be practically achievable.

When working with records of government expenditure, analysts should clearly distinguish between planned spending, approved spending, released spending and audited spending. This guide recommends the use of officially audited expenditures.

When collecting data, care is needed to keep them disaggregated. Disaggregated data will allow analysts to aggregate them into various forms later during analyses. All the decisions and steps taken should be well documented for two purposes. First, documentation will assist in replicating the exercise in future years. Second, documentation will help explain variation in total figures on expenditure.

LITERATURE CITED

Ablo, E.; R. Reinikka. Undated. *Do budgets really matter? Evidence from public spending on education and health in Uganda*. Kampala, Uganda: Economic Policy Research Center, Makerere University.

Bevan, D. L. 2003. *Public expenditure management. Review of bank materials for Operations Evaluation Department.* Washington, D.C.: The World Bank.

De, S.; T. Dmytraczenko; C. Chanfreau; M. Tien; G. Kombe. 2004. *Methodological guidelines for conducting a national health accounts subanalysis for HIV/AIDS.* Bethesda, MD: Partners for Health Plus, Abt Associates Inc.

Fan, S.; N. Rao. 2003. *Public spending in developing countries: Trends, determination, and impact.* Discussion Paper No. 99. Washington, D.C.: Environment and Production Technology Division, International Food Policy Research Institute (IFPRI).

Fan, S.; X. Zhang; N. Rao. 2003. *Public expenditure, growth and poverty reduction in rural Uganda.* Development Strategy and Governance Division (DSGD) Working Paper No. 4. Washington, D.C.: International Food Policy Research Institute (IFPRI).

Govereh, J; J.J. Shawa; E. Malawo; T.S. Jayne. 2006. Raising the productivity of public investments in Zambia's agricultural sector. Working Paper No. 20. Food Security Research Project. Lusaka, Zambia. Duplicated.

Government of New Zealand. 2005. *A guide to the Public Finance Act.* August, 2005.

IMF (International Monetary Fund). 2006. *Government finance statistics manual (GFSM).* 2nd Edition. Washington, D.C.: Statistics Department, International Monetary Fund.

IMF; Word Bank. 2005. Update on the assessments and implementation of action plans to strengthen capacity of HIPCS to track poverty-reducing public spending. Prepared by the IMF's Fiscal Affairs Department and the World Bank's Poverty Reduction and Economic Management Network in collaboration with other departments of the IMF and World Bank. April, 2005.

NEPAD (New Economic Partnership for African Development). 2005. *Guidance note for agricultural expenditure tracking system in African countries.* South Africa. September, 2005.

Rajaram, A.; M. Krishnamurthy. 2001. Public expenditure management and accountability: Evolution and current status of World Bank work. Poverty Reduction and Economic Management Network, Operation Policy and Country Services Network. Duplicated.

Republic of Zambia. 1997. Agricultural statistical bulletin. Policy and Planning Division, Ministry of Agriculture, Food and Fisheries. Duplicated.

Republic of Zambia. 2002. Agricultural statistical bulletin. Policy and Planning Division, Ministry of Agriculture and Cooperatives. Duplicated.

Republic of Zambia. 2007. *Estimates of revenue and expenditure, Jan – Dec 2007.* Lusaka.

Salem, M.A. 2004. *Health financing profile (HFP): Utilizing NHA matrix data for effective future policies.* Mexico City: Global Forum for Health Research Forum 8, November, 2004.

WHO;WB;USAID (World Health Organization; World Bank; United States Agency for International Development). 2003. *Guide to producing national health accounts with special applications to low-income and middle-income countries.* Geneva.

The Regional Strategic Analysis and Knowledge Support System (ReSAKSS) is an Africa-wide network involving three regional nodes. Each node has been established by three of the leading regional economic communities (RECs) in sub-Saharan Africa—the Common Market of Eastern and Southern Africa (COMESA), the Economic Community of West African States (ECOWAS), and the Southern African Development Community (SADC)—in collaboration with the International Food Policy Research Institute (IFPRI) and Africa-based centers of the Consultative Group on International Agricultural Research (CGIAR) as part of the Africa Union/New Economic Patnership for African Development's (AU/NEPAD's) Comprehensive Africa Agriculture Development Programme (CAADP) implementation process.

The ReSAKSS nodes facilitate access by the RECs and their member states to policy-relevant analyses of the highest quality in order to improve policy making, track progress, document success, and derive lessons that can feed into the review and learning processes associated with the implementation of the CAADP agenda. ReSAKSS is jointly funded by the United States Agency for International Development (USAID), UK Department for International Development (DFID), and the Swedish International Development Cooperation Agency (SIDA). The Southern Africa ReSAKSS node (ReSAKSS-SA) is jointly implemented by the International Crops Research Institute for the Semiarid Tropics (ICRISAT) and the International Water Management Institute (IWMI), in collaboration with regional and national partners.

ReSAKSS SA Southern Africa
Regional Strategic Analysis and Knowledge Support System

For more information, contact

Subregional Coordinator
Regional Strategic Analysis and Knowledge Support System in Southern Africa (ReSAKSS-SA)
Private Bag X813
Silverton 0127
Pretoria, South Africa
Telephone: +27 (0)12 845 9100
Facsimile: +27 (0)12 845 9110
E-mail: resakss-sa@cgiar.org
Website: www.sa.resakss.org