TOOLKIT

PRACTITIONERS' TOOLKIT FOR AGRICULTURE PUBLIC EXPENDITURE ANALYSIS

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Cover photo: Quy-Toan Do / World Bank—Man in field sifting seeds along Red River in Northern Vietnam.

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ACRONYMS AND ABBREVIATIONS

AFDB	African Development Bank
AFDF	African Development Fund
AGDP	Agricultural Gross Domestic Product
APE	Agricultural Public Expenditure
APR	Annual Progress Report
ARD	Agriculture and Rural Development
BCC	Budget Call Circular
BFP	Budget Framework Paper
COFOG	Classification of the Functions of Government (United Nations)
CAGD	Controller and Accountant General's Department
CC	Concentration Coefficient
CDD	Community-Driven Development
CIDRS	Interministerial Commission for Sustainable Rural Development
CONGUA	*Comisión Nacional de Agua*
CSE	Consumer Support Estimates
DAC	Development Assistance Committee
DADU	District Agricultural Development Unit
DFID	Department for International Development
DIS	Direct Income Support
DRA	Direct Rate of Assistance
DSIP	Development Strategy and Investment Plan
EC	European Commission
EDPRS	Economic Development and Poverty Reduction Strategy
ENIGH	*Encuesta Nacional de Ingresos y Gastos de los Hogares*
ENNVIH	*Encuesta Nacional sobre los Niveles de Vida de los Hogares*
EU	European Union
FAO	Food and Agriculture Organization
FASDEP	Food and Agriculture Sector Development Policy
FDI	Foreign Direct Investment
FFV	Fresh Fruit and Vegetable
GBI	Gender Budget Initiatives
GDF	General Directorate of Forestry
GDP	Gross Domestic Product
GDRS	General Directorate of Rural Services
GIDA	Ghana Irrigation Development Authority
GLSS	Ghana Living Standards Survey
GNP	Gross National Product
GTZ	*Deutsche Gesellschaft für Technische Zusammenarbeit*
HR	Human Resources
IDA	International Development Association
IDB	Inter-American Development Bank
IDRC	International Development Research Center
IFAD	International Fund for Agricultural Development
IFPRI	International Food Policy Research Institute
IMC	Irrigation Management Company
ISSER	Institute of Statistical, Social and Economic Research
JBSR	Joint Budget Support Review
JICA	Japan International Cooperation Agency
LAC	Latin America and the Caribbean
LGAs	Local Government Authorities
LGCDG	Local Government Capital Development Grant
M&E	Monitoring & Evaluation
MAAIF	Ministry of Agriculture, Animal Industry and Fisheries
MARA	Ministry of Agriculture and Rural Affairs
MEF	Ministry of Environment and Forestry
MENA	Middle East and North Africa
MTEF	Medium Term Expenditure Framework
MoFPED	Ministry of Finance, Planning, and Economic Development
MoFA	Ministry of Food and Agriculture
MOU	Memorandum of Understanding
MTEF	Medium Term Expenditure Framework
NAADS	National Agricultural Advisory Service
NGO	Nongovernmental Organization
NLPIP	National Livestock Productivity Improvement Project
O&M	Operations and Maintenance
OECD	Organisation for Economic Co-operation and Development

OED	Operations Evaluation Department
PADEP	Participatory Agricultural Development and Empowerment Project
PAF	Poverty Action Fund
PEAP	Poverty Eradication Action Plan
PEC	*Programa Especial Concurrente para el Desarrollo Rural Sostenible*
PEIR	Public Expenditure and Institutional Review
PER	Public Expenditure Review
PES	Payment for Environmental Services
PESA	*Programa Especial de Seguridad Alimentaría*
PETS	Public Expenditure Tracking Surveys
PFMC	Public Financial Management and Control
PMA	Plan for Modernization of Agriculture
PROCAMPO	*Programa de Apoyos Directos al Campo*
PPP	Public-Private Partnership
PSE	Producer Support Estimates
RADU	Regional Agricultural Development Unit
R&D	Research and Development
RUTA	Regional Unit for Technical Assistance
SBFP	Sector Budget Framework Paper
SBR	Standard Business Reporting
SIDA	Swedish International Development Cooperation Agency
SOE	State-Owned Enterprises
SPA	Special Provincial Administrations
SPO	State Planning Organization
SSA	Sub-Saharan Africa
SUE	State Unitary Enterprises
SWAp	Sector-Wide Approach
SWG	Sectoral Working Group
SWOT	Strengths, Weaknesses, Opportunities, and Threats
TEDAS	Turkey Electricity Distribution Corporation
TFP	Total Factor Productivity
UN	United Nations
UNDP	United Nations Development Programme
USAID	United States Agency for International Development
VAT	Value-Added Tax
WBI	Women's Budget Initiative
WDR	World Development Report

PREFACE

This toolkit for analyzing public expenditures in agriculture contributes to a broader effort to enhance the focus, quality, and appropriate scaling of public spending in the sector. More specifically, the toolkit has two goals:

1. To provide checklists for practitioners conducting various kinds of agriculture public expenditure analyses, and
2. To provide selected examples on aspects of the checklist to help guide analysis.

The toolkit presents a diversity of approaches and describes experiences—both positive and negative—in conducting agricultural public spending analyses in different settings and with different objectives. It offers checklists of issues and options, rather than a minimum list of issues to be covered. Needs, existing work time, and budget constraints will likely drive the selection of the checklist topics to be covered in any given analysis of public expenditures. The toolkit is organized to facilitate this selectivity of topic, while maintaining a strategic perspective. The supporting examples draw on numerous analyses of public expenditures in agriculture.

The toolkit was developed by the World Bank Agriculture and Rural Development Department with support from the UK Department for International Development (DFID) as part of the partnership on "Public Expenditures for Pro-Poor Agricultural Growth".[1] This effort has benefited from the experiences and feedback of numerous World Bank staff, including regional and central unit staff working on agricultural and rural development issues, and members of the Bank's Rural Policies Thematic Group. The completion of the toolkit was led by Robert Townsend, with substantive inputs from Mona Sur, Richard Anson, Christopher Delgado, Limin Wang, Saswati Bora, Sergiy Zorya, Yurie Tanimichi, Iride Ceccacci, and Pauline Zwaans.

An initial consultation on the draft outline of this toolkit was held in February 2009, followed by a second consultation in April 2009. A global consultative workshop in May 2009 in Addis Ababa involved technical officials from several donor organizations and from governments in Africa, Asia, and Latin America.[2] Staff from donor agencies, including the International Food Policy Research Institute (IFPRI), the Food and Agriculture Organization of the United Nations (FAO), the Inter-American Development Bank (IDB), the International Fund for Agricultural Development (IFAD), and the Regional Unit for Technical Assistance (RUTA) have also been involved in developing this toolkit and provided useful feedback.

The toolkit is available in print and on the Internet. Subject to its demonstrated value and user feedback, it may be updated periodically, especially as an input for ongoing sectoral expenditure analyses and related training activities.

1 For commissioned background papers, conference materials, and other relevant information, see www.worldbank.org/agper.
2 For the Addis Ababa workshop agenda and corresponding presentations, see www.worldbank.org/agper.

INTRODUCTION AND STRUCTURE OF THE TOOLKIT

1.1: CONTEXT

The United Kingdom Department for International Development (DFID) and the World Bank Agriculture and Rural Development Department (ARD) jointly launched in June 2006 the "Public Expenditures for Pro-Poor Agricultural Growth" project. The project is composed of three modules. Module 1 produced five background papers that reviewed and analyzed trends and impacts of public expenditure in agriculture. Module 2 produced country case studies on agricultural public expenditure reviews (Nigeria, Uganda, Lao PDR, Nepal, and Honduras). Finally, Module 3 consisted of a series of lesson-learning, capacity-building activities and dissemination, which included a two-day workshop in Addis Ababa, Ethiopia in May 2009, the publication of a synthesis report and this agriculture public expenditure review (PER) toolkit for practitioners.

The increased attention on enhancing the focus, quality and appropriate scaling of public spending in agriculture is the result of the following factors:

- *The agricultural policy environment has generally improved in the poorest countries.* Macroeconomic stability, lower taxation of agriculture, and reduced conflict have improved the incentives of both farmers and agribusiness entrepreneurs to invest and produce more. Recent agricultural growth, particularly in Africa, has been driven by this less distortive policy environment, which has raised investment return. However, as the space for future policy improvements declines, future growth will need to rely more on public investments for productivity growth. As a result, the levels and quality of agricultural public spending will become an increasingly important contributor to growth, poverty reduction, and food security, particularly in Africa, and hence deserves increased attention.
- *Agricultural subsidies remain significant in richer developing countries.* Rapidly rising rural-urban income gaps in many richer developing countries have often induced spending on subsidy transfers to rural areas, rather than on investments to raise earned incomes. This emphasis often becomes self-enforcing, resulting in subsidy traps that are difficult to exit. These concerns have increased attention on public spending in the transforming economies of Asia.
- *Many governments are scaling up their support for agriculture, particularly in the poorest countries.* With greater recognition of the importance of agriculture, amplified by the global food price spike in 2008, many countries are scaling up support for agriculture. African countries have committed to increasing their spending on agriculture to 10 percent of overall public spending but also recognize that the quality of spending matters. The Africa Union's Comprehensive Africa Agriculture Development Programme is helping improve the composition of public spending, within which public expenditure analysis is an important tool.
- *Donors are also scaling up support for agriculture, often with a shift to budget support, with more reliance on government budget processes.* In support of government efforts to scale up investment in agriculture, development partners are also increasing their support. For example, the World Bank Group projects an increase in its support to agriculture from an average of US$ 4.1 billion annually in 2006–08 to between US$ 6.2 billion and US$ 8.3 billion annually in 2010–2012. There is also an increasing shift to sector-wide programs in some regions, as well as to pooled funding and budget support, which all rely more on the government budget process for allocating, implementing, and accounting for agriculture public spending, in line with the Paris Declaration and Accra Accord.
- *A desire to improve the quality of public expenditure analyses.* Many agriculture expenditure analyses have been conducted, but they remain uneven in quality and impact, especially in the implementation of key recommendations. The variability is often caused by data constraints, the size of the budget available for the analyses, insufficient focus, a lack of stakeholder buy-in, inadequate commitment by counterparts, and limited capacity.

It should be noted that the agricultural sector is different from many other sectors due to the dominancy of the private sector (farmers), the seasonal nature of production, and the multiplicity of subsectors. This unique nature of the sector requires more attention in PERs to issues such as the roles of the private vs. public sector, timing of expenditure releases, breadth and depth of the coverage of analysis, and differentiation in expenditure tracking by subsector. These issues are addressed in this toolkit.

1.2: OBJECTIVES OF THE TOOLKIT

This toolkit has two broad objectives:

1. To provide checklists for practitioners conducting various kinds of agriculture public expenditure analyses, with the goal of strengthening public budget analyses and providing information to better inform public spending decisions
2. To provide selected examples on aspects of the checklists, drawn from the growing body of public spending analyses, to help guide analysis

1.3: PRIMARY AUDIENCE

The toolkit is directed at multiple audiences, including

- Donor agency practitioners who are responsible for carrying out and/or supporting public expenditure analysis of the agricultural sector
- Expenditure analysts from academia, research institutes, and the private sector (including farmer organizations)
- Government officials, especially at the technical level, who are responsible for planning and managing public expenditures in the agricultural sector—particularly officials from Ministries of Agriculture, related ministries and agencies, and Ministries of Finance and Planning

1.4: APPROACH

The toolkit reflects the approaches, experiences, and perspectives of the many practitioners who participated in its development, including World Bank staff, staff of government agencies, and staff from other donor agencies. The toolkit offers checklists and a menu of options for conducting public expenditure analyses. It offers guidance for conducting a range of analyses and reviews including

- *Comprehensive reviews:* Undertaken as a detailed, self-standing, sector-wide agriculture public expenditure review. These are usually undertaken periodically with detailed analysis and can be programmatic, spanning over several years.
- *Rapid reviews:* Undertaken as a quick review to deepen policy dialogue, frame strategic action plans, guide agricultural project preparations, and contribute to broader multisectoral reviews, or as part of a more frequent review process in support of a county's annual budget cycle.
- *Thematic reviews:* Undertaken on a specific issue, subsector, or program. These can take the form of either a comprehensive or rapid review.

Choice among these three common types of reviews depends on the needs and circumstances of a given country, the starting point for the analysis, and the resources available. The checklists and menu of options offered in this toolkit are intended to encourage a more systematic, strategic approach to selecting and applying the relevant tools over a period of time. The ultimate goal is to improve the quality of expenditure analysis and thus its role in enhancing sectoral expenditure efficiencies and poverty reduction.

1.5: USER GUIDE

The toolkit is organized around checklists (or sets of questions and themes) to help guide analysis. The checklist references examples from previous analysis.

1.5.1 CHECKLISTS

The checklists are provided as a reminder to practitioners of the main features that might be included in an

agricultural public expenditure review. They can be used to guide the scope, the subsequent analysis and recommendations, and the dissemination and uptake of findings. The checklists highlight the major issues across the elements of expenditure analysis and are organized around: (i) the types of public expenditure reviews; (ii) preparation phase of public expenditure reviews, (iii) analysis and recommendations, and (iv) dissemination and support for implementation.

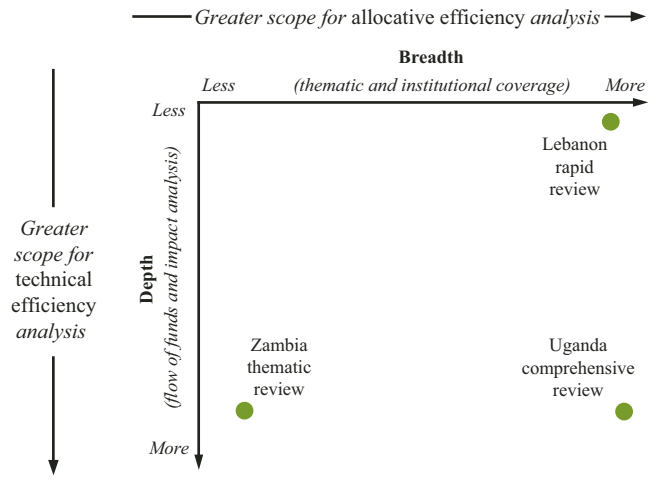
1.5.2 EXAMPLES

The last part of the document provides selected examples on aspects of the checklists, drawn from the growing body of literature on public spending analyses (drawn from studies financed by the DFID-World Bank Partnership and other studies carried out by the Bank and other organizations, including IFPRI, IFAD, FAO, and RUTA). The examples offer "how-to" advice on the issues and questions raised in the analysis checklists.

Part I: TYPES OF PERs

At the outset, it's important to highlight the spectrum of agricultural PERs undertaken, which vary by both breadth (thematic and institutional coverage) and depth (flow of funds and impact) of analysis. PER examples within this spectrum include comprehensive (extensive breadth and depth of analysis, e.g., Uganda[3]), rapid review (extensive breadth but fairly limited depth, e.g., Lebanon[4]), and thematic (limited breadth, but extensive depth, e.g., Zambia[5]) (Figure 1). Choice within this spectrum determines the scope of possible allocative and technical efficiency analyses[6]. For example, the Lebanon review focused on allocative efficiency (better aligning the allocation of spending to comparative advantage), the Zambia study focused on technical efficiency (better implementation of allocations made to a particular subsector), and the Uganda study focused on both.

FIGURE 1: Spectrum of Agriculture Public Expenditure Reviews



Source: Authors.

- **Comprehensive:** Undertaken as a detailed self-standing sector-wide agriculture PER. These are usually undertaken periodically with detailed analysis, often including an expenditure and institutional assessment.
  - Example: Uganda Public Expenditure Review 2010. The review was undertaken in three phases: (i) an analysis of trends and allocations against comparators together with an analysis of budget execution; (ii) a value-for-money analysis of related infrastructure investments (rehabilitation of rural roads, bridges, livestock markets, and fish ponds), an assessment of the quality of delivery mechanisms and strategic alignment of several agriculture services, and an incidence analysis of various government programs; and (iii) a detailed impact evaluation of the largest agricultural service program. An 80-page synthesis report was then prepared, integrating the outputs and findings of each phase. The analysis was undertaken over a 2-year period by a team composed of both government staff and development partners.
- **Rapid:** Undertaken as a quick review to deepen policy dialogue, frame strategic action plans, guide agricultural project preparations, contribute to broader multisectoral reviews, or as part of a more frequent review process in support of a country's annual budget cycle.
  - Example**:** Lebanon Public Expenditure Review 2009. As part of a rapid technical assistance to Lebanon, the review drew on previous work. It provided (i) an overview of the agriculture sector and a strategic vision, following an assessment of agricultural strengths, weaknesses, opportunities, and threats; (ii) a brief assessment of institutional capacity to deliver the strategy; (iii) a broad

3 World Bank (2010b).
4 World Bank (2010c).
5 World Bank (2010e).
6 Allocative efficiency refers to the degree to which resources are allocated in conformity with government priorities and highest returns (see Section 3.2.2), while technical efficiency refers to the capacity to use allocated resources at a cost that achieves efficiency gains and (to the extent appropriate) is competitive with market prices (see Section 3.3.2).

assessment of the alignment of public spending with the strategy; and (iv) recommendations for better alignment. The main report was 15 pages but with a detailed annex assessing the Tobacco Price Support Program (a large budget expenditure), with a presentation of possible alternative mechanisms of support. The review was completed in several months.

- **Thematic:** Undertaken on a specific issue, sub-sector or program. These can take the form of either a comprehensive or rapid review of a particular thematic area.
  - Example: Zambia Public Expenditure Review 2010 (with a focus on fertilizer subsidies). With the Zambia fertilizer subsidy program accounting for about 40 percent of public spending in agriculture, a focused assessment on the efficiency and effectiveness of the program was undertaken. The analysis (i) presented a brief overview of the fertilizer subsidy program objectives and design features, (ii) assessed the relative size of the program through a general review of Zambia's public expenditures in agriculture and focused on the impact of the annual budget cycle on implementation of the fertilizer subsidy program, and (iii) assessed the quality of service delivery (targeting, timeliness, delivery) and impact (through survey data). The analysis then presented a summary of the major findings and recommendation for program improvement. The final 80-page report integrated these analyses. The work was undertaken over a 2-year period by a team comprising both government staff and development partners.

Annual vs. periodic: Another choice to be made is whether to conduct PERs annually or periodically. Annual PERs typically have a primary focus on allocative efficiency—that is, to what extent the (preliminary) budget allocation is aligned to the national development strategy and the types of investments with highest returns and how this has changed from previous years. There is also typically some analysis of budget execution with a focus on expenditures vs. allocations and the timeliness of these expenditures, with an assessment of how this has changed from previous years. More detailed analysis of technical efficiency (e.g., public expenditure tracking surveys, cost-efficiency, incidence analysis, and impact evaluation) is not typically done annually but undertaken periodically (see **Example 1: Annual and Periodic PERs**).

Choice across the spectrum of possible PERs will depend on need, time frame for analysis, and available budget–determined during the preparation phase of PERs. Yet, teams are encouraged to do more inclusive, broader agricultural PERs, which would allow for an overview of all spending given the fungible nature of public expenditure.

Part II: PREPARATION PHASE OF PERs

2.1: ENGAGING WITH GOVERNMENT AND DEVELOPMENT PARTNER COUNTERPARTS

A checklist for practitioners:

- Decide on the main government counterparts to engage, reflecting the intended purpose of the public expenditure analysis. Counterparts could include the ministries of finance, planning, agriculture, and local government, dependent on client demand, intended purpose, and data requirements. If the issues to be addressed require eventual action by a specific government ministry, then they should be engaged in some way in the public expenditure review. For example:
  - Issues related to spending levels, the overall budget cycle, budget releases, and accountability usually require actions by the ministry of finance.
  - Issues related to decentralization, including fiscal transfers, usually require actions by the ministry of local government.
  - Issues on the composition of spending usually require actions by the ministry(ies) of agriculture. Ensuring early engagement of respective government counterparts may increase the likelihood of both getting access to expenditure data and for recommendations to be adopted.
- Decide on the expected role of government counterparts in the public expenditure analysis. Government counterparts can have varying roles, from being part of the preparation team, to being updated at various stages of progress, to being engaged at the beginning and end of the expenditure review process. The team will need to weigh the benefits and costs.
  - Ensuring government counterparts are part of the preparation team may help ensure easier access to public expenditure data.
  - Engaging senior government officials at various stages of preparation may speed adoption of recommendations.
  - Greater collaboration with stakeholders may enhance the effectiveness of the analysis but will add to the cost and time required to complete the task. The task team will need to assess these trade-offs.
- Decide on the expected role of other development partners. In many countries, development partners are becoming increasingly interested in the performance of the government budget process with a shift to more sector-wide programs. Again, the team will need to weigh the benefits and costs. Having joint development partner reviews can
  - serve to pool financial and human resources for preparation
  - avoid duplication of efforts
  - help ensure a common voice on the findings and recommendations, and
  - help ensure uptake of actions required by development partners, including donor alignment.

2.2: DEFINING THE OBJECTIVES AND SCOPE

- **General objectives.** Public expenditure review objectives should reflect need, demand, and the intended use of the public spending analysis (by the ministry of finance, ministry of agriculture, development partners, etc.).[7] These include variants of the following two aspects:
  - Identifying a set of evidence-based recommendations to improve the efficiency and equity of public expenditures through analysis of the impact of

7 The 1998 Operations Evaluation Department (OED) report (World Bank 1998) stressed that objectives also guide the level of Government and Development Partner assistance. "[I]f the

past spending, the alignment of the levels and composition of spending to sectoral objectives and to the areas with the highest impact on agricultural growth and food security (if there is an inconsistency between these areas and the sector objectives), and the performance of the budget process (based on a backward-looking diagnostic assessment and a forward-looking and strategic perspective).

- Building capacity to undertake future public expenditure reviews through database development and work with counterpart teams.

- **Specific objectives.** Specific objectives could range from identifying a specific set of policy recommendations related to allocations across thematic areas to the flow-of-fund and impacts within selected thematic areas, or they could be combined . These objectives relate to the breadth and depth of analysis to be undertaken.
- **Scope.** Decide on the *breadth* (thematic and institutional coverage) and *depth* (level of detail proposed for the analysis of flow of funds and impact) of analysis.
  - *Breadth*:

    (i) Thematic coverage: Decide on which subsectors to include. For a comprehensive sector-wide expenditure review, it's important to start by defining the parameters of the agriculture sector. The United Nations Classification of the Functions of Government (COFOG) defines the agricultural sector to include crops, livestock, fishing, forestry, water-for-production, and issues related to agricultural land. The OECD Development Assistance Committee uses the COFOG definition to aggregate cross-country donor assistance to agriculture. Use of common definitions can allow for more accurate international comparisons of public spending. In practice, many countries adopt their own definition of the sector, often aligned to sector ministries or the composition of agricultural GDP. These country-specific definitions can also be used to guide the thematic scope. Narrower thematic expenditure reviews have often focused on subsectors, types of spending (e.g., fertilizer subsidies in Zambia and Philippines), or cross-cutting themes (e.g., natural resource management in Uganda). Gender could also be an important thematic focus (particularly in Africa) (see **Example 2: Sector Scope and Analysis**).

    (ii) Institutional coverage: Decide on which public entities to include in the analysis. The spectrum of public entities engaged in the agriculture sector is often large, including ministries, local governments, and state-owned enterprises. Each often has a separate parliamentary vote in the budget. This often implies multiple data sources and subsector budget processes. In addition, decide on the extent to which the PER will try to collect off-budget expenditures in the sector, such as donor- or NGO-funded activities, state-owned enterprises, and implicit subsidies such as tax breaks for agricultural enterprises or discounts on input use such as water or fuel for agricultural enterprises.[8]

  - *Depth*:

    (iii) Budget execution: Decide on the depth of analysis on budget execution. This could range from an assessment of simply out-turns (differences between budgeted, allocated, and actual expenditures) to a more comprehensive assessment of the level and timing of budget releases to individual local governments and tracking the flow of funds to end-users.

    (iv) Impact evaluation: Decide on the extent of impact evaluation. This is often determined by the existence of baseline data and usually takes the form of impact evaluations of individual sector subprograms (e.g., extension, research, irrigation, fertilizers). In addition, decide on whether the aspect of environmental impact of agricultural programs (including carbon footprints) is warranted or of interest to government officials to include in the analysis.

  - *Selectivity*: Inclusion or exclusion of particular topics will depend on numerous factors, including (i) the policy priorities for agriculture, (ii) the specific operational requirements, (iii) the budget available to the task team to do the work, (iv) the timeframe for the analysis, and (v) the data availability and analytical studies to support the work.

PER objective is to provide a seal of good housekeeping or to reassure external partners that their assistance is being put to good uses, the [development partner's] . . . role is expected to be large and dominant. On the other hand, if the objective is to improve service delivery, the client must lead and manage the process unless a convincing case can be made otherwise."

8 Transfers from consumers to farmers arisen from border measures (e.g., import tariffs and other market support measures are not considered to be a part of budget and off-budget support).

- Complementarities. Build on ongoing initiatives to improve the efficiency and equity of public spending. These include (i) broader cross-cutting efforts by the ministry of finance to improve the overall public budget alignment, (ii) investments in other sectors that are critical for agricultural development (e.g., rural roads and other infrastructure), (iii) fiscal decentralization, (iv) mechanisms of fiscal transfers to local governments, and (v) monitoring and accountability. Dialogue on these issues is often led by other sector colleagues (e.g., public sector management, local government specialists). There are two main questions to address: How can the agriculture PER contribute to these broader efforts, and how can these broader efforts address some of the public spending issues in the agriculture sector? These questions can inform both the choice of the scope of the public expenditure analysis and the nature of the recommendations (see Example 3: Complementarities with Macro-Level PERs).

2.3: IDENTIFYING THE TYPES AND SOURCES OF DATA

- Be clear at the outset on data sources and availability (on outputs, outcomes, and impacts) as they can condition the scope and quality of analysis. It is helpful to review some of the data while defining the objectives and scope of the work. Together with government sources and other regional datasets, there are other sources of global data (Table 1).
- Clarify the constraints to obtaining the data required, the options and likelihood for overcoming those constraints, and the subsequent impact on the choice of the methodological approach to data analysis.
- Identify ways in which the study itself can help develop an action plan to address the data constraints to allow for more in-depth future analysis. In some cases, the expenditure analysis can help develop some of the data, such as a consistent time series of expenditures (and revenues, when relevant), when subcomponents of the agricultural sector have been moving organizationally in and out of the ministry of agriculture and its public expenditure reporting and/or when donor flows are off-budget.

TABLE 1: Global Sources of Data

Public Spending	*http://www.imfstatistics.org/imf/IFSGover.htm*
International Comparisons	*http://siteresources.worldbank.org/INTWDR2008/Resources/2795087-1192112387976/WDR08_24_SWDI.pdf*
Donor Spending	*http://www.oecd.org/dac/stats/agriculture*
Sector Performance	*http://databank.worldbank.org/ddp*
Prices	*http://www.fao.org/giews/pricetool/*
Agriculture Producer and Customer Support Estimates (for OECD and select non-OECD middle income countries)	*http://www.oecd.org/agriculture/pse*
Agricultural Distortions Database, World Bank	*http://www.worldbank.org/agdistortions*
Household Surveys	*http://www.fao.org/es/ESA/riga*

2.4: PREPARING THE CONCEPT NOTE

- The concept note for the PER will need to be tailored to the specific requirements, priorities, and type of expenditure analysis – reflective of the proposed breadth and depth of analysis. Generic elements of a concept note for a PER are reflected in Table 2.
- The critical step at the concept stage is to identify the right methodology for the given scope of the study. The general range of methodologies and types of analysis is presented in Table 3 (see column on Types of Analysis).
- Terms of Reference will need to be developed for the PER work contracted out, or for specific members of a PER team focusing on various aspects of a PER (see Example 4: Terms of Reference—Levels and Composition of Spending and Example 5: Terms of Reference—Budget Process and Performance).

TABLE 2: Generic Elements of a Concept Note for an Agriculture Public Expenditure Review

- Context
- Government request
- Objectives and audience
- Synthesis of recent literature, link to past and ongoing activities, and value added by the study
- Scope and methodology of the study (the respective sections of the toolkit can help)
- Consultation plan with key stakeholders
- Dissemination plan
- Resources/budget
- Team composition (including non-agriculture public sector management specialists, country economists, and government counterparts)
- Timetable
- Peer reviewers
- Key annexes, such as a draft outline of the report, with responsibilities; a brief overview of the agricultural sector (main trends and issues); a list of key references.

2.5: ESTIMATING THE TASK BUDGET AND TIME FRAME

- Make realistic estimates of the budget required with the inevitable scaling of the scope of work to the budget available—ensure required quality standards and take into account the availability and quality of data and cost-effective approaches.
  - The cost of carrying out an agricultural expenditure analysis varies widely according to the type and scope of the analysis and the amount of data that must be collected. A rapid or descriptive agricultural expenditure review can cost from about US$50,000 to US$100,000. A more analytical agricultural public expenditure review could cost about US$250,000 or as much as US$350,000 for a comprehensive analytical and participatory approach (estimates are in 2010 dollars).
- Consider options for improving cost effectiveness, including the trade-offs of using international vs. local consultants, sampling vs. more universal approaches (particularly for decentralization issues and impact analysis), rigorous vs. more basic analytical methods, and stand-alone vs. linked activities (e.g., linking policy dialogue with on-going projects or programs can improve cost effectiveness).
- Don't forget to factor in a dissemination budget, estimated to be about 15 percent to 20 percent of the overall cost. Given that the ultimate role of an agricultural expenditure analysis is to stimulate actions to improve the focus, quality, and scaling of public spending, it is highly desirable for the budget to include support for disseminating the report and for associated activities, such as training workshops. The various instruments for supporting implementation of recommendations will likely involve other sources of funding (e.g., from preparing an investment operation or budget support operation). Limited dissemination is one general area of weakness of previous PERs.
- Factor in sustainability considerations into the budget. If the agriculture PER is to become part of the institutional processes (e.g., if it becomes a regular input to the annual budgetary process), its design and costs should reflect the likely recurrent resources available from the ministry of finance or agriculture to conduct the expenditure analyses periodically.
- Explore options to augment resources, such as from other donors. The comprehensive PERs are usually undertaken with joint donor financing, while the more rapid reviews are usually financed by a single donor.
- Make realistic estimates of the time required to undertake a public expenditure analysis. As with costs, there is a wide variation in the time taken to complete expenditure reviews that is dependent on the scope of the proposed work. The rapid review, as done in Lebanon, was completed over several months, while the more detailed analyses undertaken in Zambia and Uganda were completed over about a 2-year period.
- Try to time the output of the public expenditure analysis with the budget cycle. This will hopefully allow recommendations to directly feed into decisions in the government's annual planning and budgeting cycle.

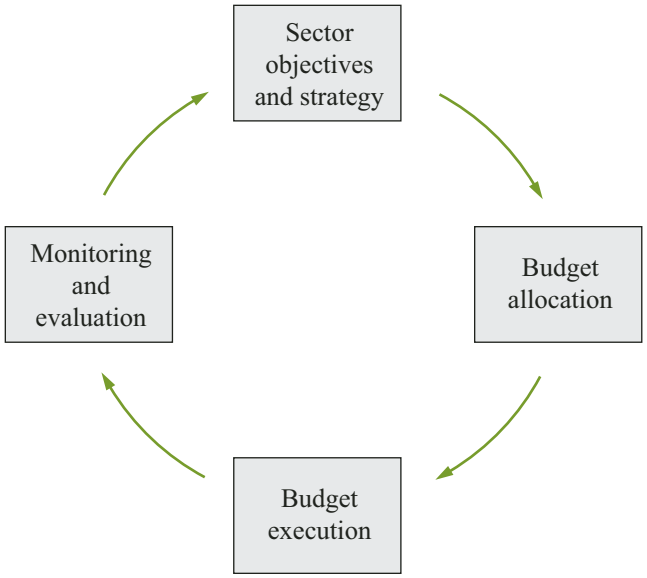
Part III: ANALYSIS AND RECOMMENDATIONS

As recommendations from a PER are directed at improving the composition, scaling, and impact of public spending, a useful framework for analysis is the budget cycle that led to the current state of public spending on which improvement is sought. Using a budget cycle framework helps focus recommendations on entry points to strengthen the budget process and subsequent improvements to public spending. A generic budget cycle includes four phases: (i) sector objective and strategy development, (ii) budget allocation, (iii) budget execution, and (iv) monitoring and evaluation (Figure 2).

1. **Sector objectives and strategy:** Includes setting of sector objectives and targets and formulation of associated strategies. The sector strategy is linked to broader national development strategies.
2. **Budget allocation:** Budget allocations are made against sector objectives and strategies within an overall public spending ceiling. Medium-term spending projections are often made within a medium-term expenditure framework.
3. **Budget Execution:** After the budget vote and approval by parliament, funds are allocated to government entities, and programs are implemented.
4. **Monitoring and evaluation:** Financial and physical reports are prepared by government entities receiving funds and submitted to the ministry of finance. Relevance of sector objectives, efficacy of design and implementation, the efficiency of resource use, and sustainability are evaluated. Results inform future planning and budgetary processes.

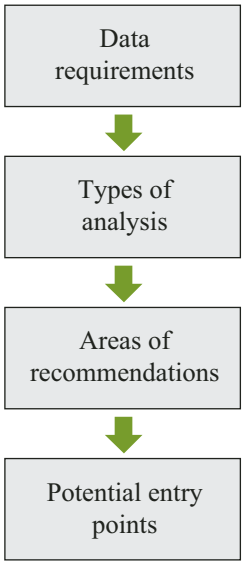
Analysis of each phase of the budget cycle includes public-spending data collection, data analysis, understanding what led to the current state of public spending, and recommendations and potential entry points for improvement. This section of the toolkit provides guidance and checklists for the data requirements, types of analysis, areas of recommendations, and potential entry points for each stage of the budget cycle (Figure 3 and Tables 3 and 4).

FIGURE 2: Generic Budget Cycle



Source: Authors.

FIGURE 3: Public Spending Analysis



Source: Authors.

TABLE 3: Summary of PER Data Requirements, Types of Analysis, Areas of Recommendations, and Entry Points

BUDGET CYCLE	PUBLIC SPENDING ANALYSIS SCOPE / QUESTIONS	DATA REQUIREMENTS	TYPES OF ANALYSIS	AREAS OF RECOMMENDATION	POTENTIAL ENTRY POINTS
	INTENDED FOCUS OF PUBLIC SPENDING				
Sector Objectives & Strategy	*Questions:* What are the government's national and sector objectives and strategies? Is the policy environment conducive to investment returns?	*Government Targets:* (e.g.) Agricultural Growth, Food Security, Poverty Reduction *Strategy components* *Policies (e.g.)* Net taxation	Desk review Performance Comparisons	Strategy Alignment Potential Gains from Policy Improvements vs. Public Spending	Sector Reviews Strategy Updates
	ALLOCATIVE EFFICIENCY OF PUBLIC SPENDING				
Budget Allocation	*Scope:* The broader the coverage, the greater the scope for analysis of allocative efficiency. *Questions:* How can allocative efficiency of public spending be improved? (Is money being allocated to the right things?) What aspects of the budget process have led to the current levels of efficiency?	*Budget allocations:* Levels Functional Composition Development vs. Recurrent Capital vs. Current Wage vs. Nonwage Public vs. Private National vs. Subnational Across provinces/districts	Simple Inductive Analysis Simple Congruence Analysis Estimating Marginal Returns	Changes to Spending Allocations across Spending Categories	Ministry/Local Government Budget Guidelines Formulas Used in Allocation Decisions Sector Review Links
	TECHNICAL EFFICIENCY OF PUBLIC SPENDING				
Budget Execution	*Scope:* The deeper the coverage, the greater the scope for analysis of technical efficiency. *Questions:* How can technical efficiency of public spending be improved? (Is implementation effective?) What aspects of the budget process have led to the current levels of efficiency?	*Budget execution:* Budgeted vs. Allocated vs. Actual Timing of Releases *Indicators on:* Quality of Services	Public Expenditure Tracking Cost Effectiveness	Budget Releases Technical Design Procurement and Fiduciary Capacity	Ministry of Finance Budget Management Reviews of Subprograms Ministry of Agriculture/ Local Government Guidelines for Project Appraisal Training and HR plans
	ACCOUNTABILITY OF PUBLIC SPENDING				
Monitoring & Evaluation	*Questions:* What indicators are used to measure performance? Who is accountable for public spending outcomes, and to whom are they accountable?	Coverage of Services Impact of Services Formal Channels of Accountability to Stakeholders	Incidence Analysis Impact Evaluation	Program Targeting Implementation Accountability Mechanisms	Ministry/Local Government Budget Guidelines Ministry M&E System

Source: Authors.

TABLE 4: Selected Indicators for Agricultural PERs and Guidance on their Use

KEY INDICATORS	GUIDANCE ON THE USE OF INDICATOR
RELATIVE SIZE OF AGRICULTURAL SPENDING	
Agricultural spending as a share of GDP	This indicator shows fiscal costs of agricultural policy relative to the size of the overall economy. In most developing countries this share averages 1–2 percent of GDP, similar to that in most OECD countries.
Agricultural spending as a share of agricultural GDP	This indicator shows the dependence of agricultural GDP on public expenditure. The higher the share, the more dependent the sector is on state support. An increase in this indicator over time may suggest a decline in the productivity of spending (expenditure growth is not matched by growth in agricultural value-added). In addition, the larger a country's dependence on agriculture (e.g., lower-income countries), the less it can afford a high agriculture spending share of agriculture GDP relative to countries with a lower dependence on agriculture (e.g., developed economies). Thus, agricultural spending at 1 percent of GDP translates into higher effective support of farmers in developed countries compared to that in lower-income countries.
Agricultural spending as a share of total budget	This indicator shows the fiscal costs of agricultural policy. It is often used for comparison of relative allocations with other sectors, reflecting the importance that governments give to agriculture relative to other sectors.
Spending on agricultural research as a share of agricultural GDP	This indicator is used for assessing an adequacy of allocations to agricultural research, which is vital for sustained productivity growth and adjustments to climate change. The general target for low-income countries is to spend at least 1 percent of their agricultural GDP on agricultural research, while for higher-income developing countries 3-4 percent is common.
LEVELS OF AGRICULTURAL PUBLIC SPENDING	
Total sector budget, in nominal and real terms	It is important to consider both nominal and real indicators because in countries with high inflation, the growth of the nominal budget does not necessarily turn into growth of the real budget.
Share of off-budget support in total sector budget	Off-budget expenditure generally refers to accounts of government transactions that are not included in budget totals or documents and typically do not operate through normal budgetary execution procedures. Such transactions may, for example, be financed through foreign aid or earmarked revenues not included in the budget. Another example is agricultural tax exemptions.
Share of decentralized sector budget	This indicator shows the extent of decentralized spending, with implications for management, flows of funds, and program implementation.
Share of foreign funds in total sector budget	This indicator shows the dependence of the agriculture budget on donor finance. A large share of donor funds, usually in the development budget, often indicates less predictability of budget levels if there are many small donor projects with different rules and/or the implementing agency has a weak capacity to comply with the donors' fiduciary requirements. Yet donor funds may bring many positive outcomes, including improved quality of investments; timely cash flows (particularly in the first months of the financial year when the government budget is not yet released but when funds are needed in agriculture); and strengthened capacity of ministries to implement government-financed programs, among many others.
ECONOMIC COMPOSITION (ALLOCATIVE EFFICIENCY)	
Share of recurrent vs. development expenditure in total sector budget	This indicator shows the composition of funds in the recurrent vs. development budget. The development budget in many developing countries often comes from donors, while the recurrent budget is typically fully financed by the government. A large development budget share may indicate a priority toward productive investments vis-à-vis wages and operating expenses.
Share of current vs. capital expenditure in development budget	Not all development budgets are for capital expenditure as is often perceived. In many African countries, for example, a large share of the development budget is allocated to current spending such as staff allowances, inputs, maintenance, and operating expenses. This indicator therefore provides a true picture of the economic composition of the development budget.
Share of current vs. capital expenditure in total sector budget	This indicator shows a complete picture regarding the nature of the sector budget, distinguishing between current and capital spending, to be found in both recurrent and development budgets.
Share of wages vs. nonwage expenditure in total sector budget	This indicator shows the balance between wage and nonwage expenses. In many countries, the recurrent budget is often used almost entirely for staff wages, leaving too little to allow an effective execution of operational tasks of technical staff.
Share of maintenance vs. capital budget in total sector budget	There is no fixed rule on the ratio of maintenance to capital spending in capital-intensive expenditures such as rural roads and irrigation. It depends on the initial capital base. In Africa, which has severe underinvestment in infrastructure, the share of capital spending for new investments is expected to exceed that for maintenance. In Asia, where much capital investment in irrigation and roads has already been made, the dominant focus would likely be on maintaining the existing structures versus investing in new infrastructure.
BUDGET EXECUTION	
Share of allocated funds to approved funds	This indicator shows the share of released funds to an implementing ministry in comparison to what is approved in the budget at the beginning of the financial year. A widening gap may be the result of cuts across all ministries or of cuts that apply only to particular sector ministries. Large deviations of fund releases weaken the link between planning and implementation and thus reduces the quality of the budget process. This indicator can be compared across different ministries to assess a relative effectiveness of agricultural sector ministries.
Share of funds actually spent relative to allocated funds	Not all released funds are actually spent. The changes in this indicator may demonstrate the absorption capacity of the ministry. However, if funds are only released in the last quarter of the financial year, even ministries with satisfactory absorption capacity may not necessarily be able to utilize all allocated funds in the shortened timeframe.
Share of released funds in the first two quarters of the financial year	This indicator shows the timeliness of fund releases. In many developing countries, a small share of funds is released in the first two quarters, limiting the ability of ministries to provide meaningful support to critical seasonal activities such as crop planting.
Share of released funds in the last quarter of the financial year	This is an additional indicator to show the share of funds that are either highly likely to remain unspent or be wasted on unnecessary activities.

Source: Authors.

- **Data requirements:** Includes agriculture sector performance and public-spending data.
- **Types of analysis:** Undertaken to assess allocative and technical efficiency.
- **Areas of recommendation:** Agriculture sector objectives, budget allocation, program design, implementation capacity, and accountability.
- **Potential entry points:** At specific points in the budget cycle (e.g., revision of ministry budget guidelines, formulas used for allocations, etc.).

3.1: SECTOR OBJECTIVE AND STRATEGY

Agriculture PERs should provide an assessment of (i) the existing sector strategies (if any) (i.e., agriculture sector strategy, rural development strategy, subsector strategies such as water resources strategy, fisheries strategy, forestry strategy, and also the link with higher level national development strategies) and (ii) the policy environment to see how conducive it is to yield returns on investments in the agriculture sector.

- Determine whether the country objectives for the agricultural sector are clearly stated. This often includes specific sector growth rates, food security targets, employment generation potential, and expected contributions to poverty reduction. Are these objectives reflected in both the national and sector strategy (are they consistent)?
- Assess the extent to which the national and sector strategies are aligned to achieving the stated sector goals. What are the components of the agriculture strategy, and are they amendable to easy translation into public spending plans? What strategic choices (trade-offs) has the government made to achieve its objectives? For example (from the WDR 2008),
  - *For agriculture-based countries*, the choice or policy dilemma is often between addressing food security directly by focusing on subsistence farming through resilient farming systems and safety nets, such as food aid, or by focusing on the more entrepreneurial actors and favored areas that can secure growth and deliver food security through cheaper food and better employment opportunities.
  - *For transforming countries*, the choice or policy dilemma is often the selection of the instruments to address the rural-urban income disparity problem between subsidy transfers or investment to raise rural households' earned incomes.
  - *For urbanized economies*, the choice or policy dilemma is often between rapid growth in a medium to large farm sector accompanied by an extensive social safety net to compensate the losers and the excluded, or earned incomes in a smallholder sector that can compete in modern food markets and nontraditional exports.
- Assess the extent to which the strategies clearly identify the roles of government in the sector, and provide a rationale for government involvement in the sector (i.e., the types of things it will finance and not finance). For example, this could include:
  - *To address market failure*—historically viewed as a situation where the pursuit of private interest does not lead to an efficient use of society's resources. Market failures are often associated with asymmetric information, noncompetitive markets, high transaction cost in coordinating activities with smallholders, negative externalities, and insufficient public goods. Public goods are the most relevant example for public expenditure reviews; given their characteristics being nonrival (consumption by one does not reduce the availability of consumption by another) or nonexcludable (no exclusion from using the good), these goods tend to be underprovided by markets, leading to the inferior social outcomes.
  - *To improve equity*—viewed as ensuring a fair distribution of society's goods to induce more equitable and often pro-poor development. A good functioning market can facilitate higher production but does not always ensure equitable distribution. This provides justification for many income redistribution programs.
- Determine the breadth of the sector strategy and the institutional arrangements for its implementation. Does it include components beyond the ministry of agriculture (e.g., rural roads, rural finance, and education)? Which government entities are involved in its implementation?

TABLE 5: An Aggregate View as a Potential Starting Point—Some Examples

COUNTRY	AGRICULTURAL GROWTH RATE % (2002–06)	RATE OF POVERTY REDUCTION	AGRICULTURE PUBLIC SPENDING AS SHARE OF TOTAL PUBLIC SPENDING, %	POTENTIAL AREA OF INVESTIGATION/ANALYSIS
Nigeria	6.9	Low	6	High agricultural growth has not yet translated into higher rates of poverty reduction. Areas of investigation could be (i) composition of spending (targeting), (ii) distributional impacts, and (iii) levels of spending.
Uganda	4.5	High	4	Relatively high agricultural growth translated into high rates of poverty reduction. Areas of investigation could be (i) increasing spending on existing programs, and (ii) sources of potential efficiency gains.
Zambia	1.9	Low	3	Current public spending patterns and policies have not translated into higher agricultural growth, and rates of poverty reduction remain low. Areas of investigation may need to be more comprehensive, including the policy environment and the composition and level of spending.

Calculations derived from World Bank data.

- Review any documented implementation performance of the sector strategy over recent years. Has there been any progress in implementation?
- Assess the extent to which the policy environment is conducive to public investment returns in the sector.

3.1.1 DATA REQUIREMENTS

- Recent sector performance data, including recent agriculture growth, food security, poverty reduction, and exports. Sources of these data include national accounts, surveys, and Millennium Development Goal data consolidated by the United Nations.
- Policy distortions data could include net taxation data (reflecting implicit and explicit taxation on the sector). For example, a source of these data is the recent global update on policy distortions.[9] In addition, the rural sector performance scores developed by the International Fund for Agricultural Development (IFAD) also provide indicators of sector policy.[10]

3.1.2 TYPES OF ANALYSIS

- Desk review of national and sector strategies.
- Performance comparisons. Compare recent sector performance against the sector objectives and strategies (e.g., recent trends on growth, food security, and poverty reduction against targets). The longer the time period that implementation of the strategy has been underway, the more comparisons can be made. Compare sector performance against other country benchmarks. Often sector performance may lag behind sector objective and strategy targets simply because the targets were overambitious, rather than because of poor relative performance (see Example 6: Sector Objectives and International Performance Benchmarks).
- If sector strategies do not exist, a rapid analysis of strengths, weaknesses, opportunities, and threats can be undertaken as a basis for assessing alignment of public spending in the PER. This is the approach taken in the Lebanon PER (see Example 7: SWOT Analysis).
- An aggregate assessment can often provide guidance for the direction of subsequent analysis (Table 5), and some analysis of sector constraints can guide potential areas of needed public investments.
- Assess the extent to which existing price policies are conducive to enhancing investment returns. A poor policy environment can erode the benefits of public spending at a high cost to taxpayers. The assessment includes both macroeconomic policies (exchange rates, interest rates, and trade policies) and sector policies (taxes and subsidies). Much of this analysis will likely build on existing work (see Example 8: Declining Taxation of Agriculture).
- Assess the extent to which access to assets (especially land and water) and the protection of these assets is conducive to investment returns. In Africa, of particular importance is the strength of land rights of women, which significantly impacts on-farm investment for food production. More broadly, essential is

9 Anderson, K (ed). 2009. Distortions to Agricultural Incentives: A Global Perspective, 1955 to 2007. London: Palgrave McMillian and Washington DC, World Bank. The policy data base can be found at: http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:21960058~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html.

10 IFAD rural sector performance score: http://www.ifad.org/gbdocs/eb/92/e/EB-2007-92-R-46-Add-1.pdf.

the design of water-right systems and those systems' impact on irrigation investment. All are important for raising public investment returns. (Cross-country indicators are provided by the components of IFAD's rural policy score.)

- Assess the effectiveness and technical objectivity of systems the country has in place (if any) to carry out ex-ante feasibility evaluations of projects. How effective have these systems been at ensuring the alignment of projects to the sector strategy and objectives (i.e., criteria for selection)? Can the review process in place to screen investment proposals with line ministries against economic, technical, social, environmental criteria be improved? Assess the adequacy of these processes in ensuring sound investment decisions and ways they can be improved.

3.1.3 AREAS OF RECOMMENDATION

- Realism of sector objectives. If current sector objectives are unrealistic compared to past performance, potential, capacity to implement, and available resources (and any expected gains from efficiency and policy improvements), it will be important for recommendations to reflect these disconnects.
- Alignment of strategy components to achieve the sector objectives. For example, some countries have an expressed agricultural growth objective with ambitious growth targets, yet much of their strategy components and public spending are directed to supporting subsistence livelihoods and safety nets. These aggregate comparisons can provide useful insights on (mis)alignment.
- Alignment of the sector and national strategy. These two strategies are sometimes not aligned, with the agriculture sector strategy being the basis for preparation of the ministry of agriculture's budget submission to the ministry of finance, while the national strategy is used by the ministry of finance as the basis for its assessment of the ministry of agriculture's submission.
- An implementable strategy. Sometimes agriculture strategies (due to their form and presentation) are not easily translated into implementable programs (components and activities), often requiring additional work and subsequent variants to get to implementation. Recommendations on ensuring an implementable strategy could help speed implementation.
- Options to improve the macro and sector policy environment. If the findings are that macro-policies (e.g., exchange rates, tariffs, interest rates) and/or sector policy (e.g., taxes, land and water policies) severely inhibit returns to public investment, efforts should perhaps focus on improving the policy environment first before focusing on public spending.
- Appraisal processes of projects within the ministries of agriculture and local government: ways to improve the quality of the appraisal process.

3.1.4 POTENTIAL ENTRY POINTS

- Sector reviews. A growing number of countries have annual sector reviews as part of the budget cycle to review sector performance over the past year, impediments to performance, and implications for public spending for the next year. This provides an important forum for debate and potential implementation of the above recommendations.
- Strategy updates. These are done by countries periodically (e.g., every five years or after new governments are elected). This may not coincide with the timing of an agriculture PER, but if it does, it offers another key entry point for the recommendations.
- Ongoing policy dialogue. In many countries there is ongoing policy dialogue through other instruments, such as development-policy lending, which also provides another important entry point for the recommendation of policy and sector strategy.

3.2: BUDGET ALLOCATION

The core part of PERs is on budget allocations and execution. Analyses of allocations focus on how to improve the allocative efficiency of public spending in the sector. The broader the coverage of an agriculture expenditure review (thematic scope), the greater the scope for analysis of its allocative efficiency. This section highlights a checklist and range of questions that could be helpful in guiding recommendations on the scale and composition of public spending on agriculture.

3.2.1 DATA REQUIREMENTS

Levels of Public Spending

- Determine how much is spent on agriculture by the government as a share of its total spending and as a percent of agricultural GDP. How have these shares changed over the last 5 to 10 years? How do these shares differ from other countries? How much of the spending on agriculture comes from outside of the ministry of agriculture (e.g., special programs linked to the president's office and tax exemptions)? Sources of data include the ministries of finance and agriculture (see Example 9: Agriculture Spending as a Share of Total Spending and of GDP, Example 10: Agriculture Spending Per Capita).
- Determine how much is spent on agriculture by donors as a share of government spending and as a share of overall donor spending in the country. How have these shares changed over the last 5 to 10 years? How do these shares differ from other countries? To what extent are these expenditures incorporated into the public budget and reflected in public spending numbers (see Example 11: Donor Spending on Agriculture)? Sources of data include the in-country donor group and the ministries of finance and agriculture. Also include NGO projects, state-owned enterprises, and implicit subsidies.
- Estimate how much is spent by the private sector (very few PERs have estimated this; an attempt was made in the Mozambique PER). One explicit objective of public investment is to stimulate private investment as a means to achieving sector objectives. Knowledge of the level of private investment would then be useful for assessing the efficiency of public spending. Questions included are: how much private investment has there been in the agriculture sector as a share of government spending, how have these shares changed over the last 5 to 10 years, and how do these shares differ from other countries. Various proxy measures will probably need to be used, given the general paucity and unreliability of data on private sector investment (see Example 12: Private Sector Investment in Agriculture). Sources of data include foreign direct investment (FDI), enterprise surveys, and household surveys (for on-farm investment).

Functional and Economic Composition of Public Spending

- Determine the composition of public spending at the national level (government and donors). Analysis could include decomposition by (i) functional area (see Example 13: Functional Allocations); (ii) economic area (e.g., development vs. recurrent)[11], and within the development budget, current vs. capital[12] (see Example 14: Capital vs. Current), wage vs. nonwage (see Example 15: Wage vs. Nonwage), public vs. private (see Example 16: Public vs. Private); and (iii) to state-owned enterprises (see Example 17: State-Owned Enterprises). Reflect how spending compositions have changed over the last 5 to 10 years. It may be useful to cite some comparisons with other countries as possible benchmarks if they are available. Sources of data include the ministries of finance and agriculture.
- Determine the functional and economic composition of public spending at the subnational level (government and donors). Reflect how the spending composition has changed over the past 5 to 10 years. Sources of data include the ministry of finance and the ministry of local government (or equivalent).

National and Subnational Composition of Public Spending

- Estimate how much the government spends on agriculture at international (e.g., on international commitments such as the WTO), regional (e.g., regional [supra-national] research), national, and subnational levels (see Example 18: National vs. Subnational). How has this changed over the past 5 to 10 years? What main factors have determined these changes? At the subnational level, what was the geographic allocation of spending across provinces, districts, or counties (see Example 19: Geographic Allocations, Example 20: Sampling Subnational Governments, Example 21: Off-Budget Expenditures)? How are these subnational allocations determined (e.g., based on historical transfers or formula based)? Are there any off-budget expenditures? How large are these?

11 Recurrent expenditure is spending on items that are consumed and only last a limited period of time. They are items that are used in provision of a good or service. In the case of the government, recurrent (and current when analyzing the development budget) expenditures include wages and salaries, operations and maintenance, and goods and services.

12 Capital expenditure covers payments for the purchase or production of new or existing durable goods (i.e., goods with a life of more than one year). This includes expenditure incurred for the acquisition of land and other physical assets, equipment, buildings, and nonfinancial assets with an expected lifetime of more than one year.

Sources of data include the ministries of finance, agriculture and local government (or equivalent).

- Estimate how much donors spend on agriculture at national and subnational levels. What is the distribution of area-based programs (and the reasons for the distribution)? How has this changed? How are these determined? What is their relation to overall district budgets?

Gender and Other Compositions of Public Spending

- Estimate to the extent possible the share of public spending with explicit targeting (gender, poverty, crop vs. livestock, subsistence vs. commercial, agronomic potential). Is there a difference in targeting between public and donor resources (see Example 22: Gender Disaggregation)?

Sources of Public Spending Finance

A sound understanding of the sources of finance and associated funding and revenue-generating mechanisms, modalities, and processes is an important part of an analysis of agricultural public expenditure. The following checklists and associated questions can help practitioners arrive at a better understanding of how public expenditures are financed and of possible tax policies and trade-offs.

- Determine the financing sources of national and subnational agricultural spending. For example, to what extent do subnational governments rely on formula-based transfers from national governments versus their own revenue generation? How has the financing source evolved over time? What is the scope for subnational governments to generate their own resources (usually mandated in the Finance Act) to ensure that decentralized services such as extension are adequately financed?
- Determine the extent to which service fees and levies are used. Is there scope to increase their use for services, such as phyto-sanitary certification or agricultural research, and/or to access key natural resources, such as forests, water, and fisheries? Are these fees too high, excluding access to services by poor people (see Example 23: Cost Recovery)? What sectoral public entities (including SOEs) generate revenues? What are the amounts, trends, and relative importance of these revenues? What are the ministry of finance's rules for reporting, using, and transferring these revenues? Are the rules followed? What are the options for enhancing the revenue-generating rules to benefit both the treasury and the sector?

3.2.2 TYPES OF ANALYSIS—ALLOCATIVE EFFICIENCY

Once the level, composition, and financing of sectoral expenditures have been identified, the practitioner can begin to develop a better understanding of their performance and emerging impacts based on assessments of their efficiency as well as their impact on growth, food security, and poverty reduction. The focus of allocative efficiency analysis is on answering the question of whether public financing is being allocated for the right things.

Simple Inductive Analysis

- Identify any stand-out issues on allocative efficiency from a simple review and comparison of the data (e.g., having small capital budget allocations relative to recurrent expenditures are going to make it hard to recapitalize the sector). If there are no operation and maintenance expenditures in nonwage recurrent spending, maintaining infrastructure (e.g., irrigation) will be difficult.[13] Lack of integration of donor financing will make comprehensive spending trade-offs and planning more difficult (see Example 24: Simple Inductive Analysis).

Simple Congruence Analysis

- To what extent have budget allocations been aligned to the sector objectives and strategy to achieve these objectives (see Example 25: Simple Congruence Analysis)? For example, allocating most resources to subsistence livelihoods types of spending (from functional analysis) will make achieving the sector growth objective difficult. If the government's objective is to increase household food security versus promoting an overall agricultural growth, the congruence analysis would need to consider measures for the increased availability of food and improved access to food by insecure households, as well as measures to increase the institutional coverage to ministries related to food security and social safety nets.

Estimating Marginal Returns

- Can the sector objectives be achieved more efficiently by reallocating resources to other areas? More precise estimates to this question can be derived from estimates of marginal returns (see Example 26: Efficiency Gains from Switching from Private

13 Maintenance is related to the performance of routine, preventive, predictive, scheduled, and unscheduled actions aimed at preventing equipment failure or decline with the goal of increasing efficiency, reliability, and safety.

to Public Goods, Example 27: Marginal Returns to Public Spending across Sectors). Estimates of marginal returns to public spending across spending categories are usually estimated across functional areas (Fan et al 2007) or across public-private categories. These types of marginal returns analyses typically require time series data and are often done as stand-alone studies. Where such studies are not readily available for a given country, the results from other countries and general knowledge about what kinds of programs have the highest returns can be used for PERs.

Estimating How Much Public Spending Will Be Needed

- Estimate how much spending is enough. Is the level of sectoral budgetary allocations consistent with the government's stated priority for the agricultural sector, the sector's importance to the economy, and the government's stated agricultural strategy (see Example 28: Elasticity Approach)? What are the trade-offs with other sectors if spending is increased?
- Assess the (indicative) costs and benefits of raising public spending on agriculture. For example, what level of taxes, levies, and tariffs are generated by the sector relative to public spending? What are the trade-offs of these policy choices? (E.g., if agricultural households are taxed, and these public finances are spent on services to these same households less the public administrative cost to provide the service, is there a net benefit? An example is the simultaneous use of import charges that raise fertilizer prices and subsequent fertilizer subsidies to lower prices. Is this a better approach than simply removing the import charges and subsidies?)

Understand and Describe What Has Led to Current Levels of Allocative Efficiency

- Describe the factors that led to the current spending patterns and recent changes at the national and subnational levels.
- Assess the strengths and weaknesses in budget preparation processes at the national and subnational levels, including approaches taken to ensure alignment of the budget with the sector objective and the associated strategy to achieve the objectives, the mechanism for assessing trade-offs, and the level of transparency and participation. The budget planning and formulation process could include establishment of sector ceilings through medium-term expenditure frameworks, annual plans, midyear budget reviews, and audits. It is useful to show a budgetary flow chart and timetable describing the current system and identifying strengths and weaknesses.
- Assess the extent of compliance with budgetary processes. (i.e., do the in-country budgetary processes need improvements or just compliance to them?)
- Assess the adequacy of institutional coordination among government agencies involved in rural development and their impact on technical efficiency.
- Describe the political economy of public spending. What is the political and economic justification for the main spending allocations? Who are the expected winners and losers of the current allocations? What are the bargained compromises needed to improve allocative efficiency (see Example 29: Understanding the Political Economy of Public Spending)?
- Assess the factors that have led to the lack of donor funding integration into the budget process, the mechanisms in place to align donor support to the sector objectives and strategy, and how those factors reduce the distortionary effects of the scale of donor support to the subnational government relative to their subnational public budgets.

3.2.3 AREAS OF RECOMMENDATIONS

- Changes in annual allocations across spending categories and in the level of sector spending: this includes changes in functional, economic, and subnational allocations.
- Changes in medium-term allocations across spending categories reflected in the medium-term expenditure framework (if used): in the absence of a formal medium-term expenditure framework, recommendations could include medium-term spending allocations for the sector to foster strategic continuity in expenditures, formulated by the ministry of agriculture.
- Ways to improve consistency, predictability, and alignment of the source of public financing: Consistency—to ensure revenue generation efforts do not outweigh the benefits of subsequent investment (i.e., efforts are consistent with long-term objectives of the sector). Predictability—to ensure medium-term investment planning. Alignment—to ensure donor financing is focused on implementation of country programs (see Example 30: Agriculture Sector-Wide Approaches).
- Ways to improve institutional coordination for more effective implementation of programs impacting agriculture outcomes (see Example 31: Institutional Coordination Mechanisms).

3.2.4 POTENTIAL ENTRY POINTS

- National ministry and subnational government budget guidelines: annual budget circular or guidelines to be sent by the ministry of finance to the ministry of agriculture or to local governments. This could include an (i) assessment of trade-offs, (ii) linking inputs to outputs to outcomes, and (iii) the way fiscal transfer ceilings are determined (see Example 32: Specific Recommendations to Government Budget Guidelines). A common pitfall of annual work plans is that they are based on activities and fail to focus enough on strategic programs and measurable results and outcomes, thus making it difficult to improve expenditure efficiencies and impacts (see Example 33: Incentive Mechanisms to Improve Budget Performance).
- Medium-term expenditure frameworks: revised annually, medium-term expenditure frameworks, prepared by the ministry of finance, offer an important entry point for recommendations to changes in the sector spending ceilings.
- Sector reviews: As with the previous phase (sector objectives and strategy), a growing number of countries have annual sector reviews as part of the budget cycle to review sector performance over the past year, impediments to performance, and implications for public spending over the next year. This provides an important forum for the above recommendations.

3.3: BUDGET EXECUTION

Analyses of budget execution focus on how to improve the technical efficiency of public spending in the sector (i.e., the efficiency of budget system implementation and programs). The deeper the coverage is of an agriculture expenditure review (of flow of funds and impact), the greater the scope for analysis of technical efficiency. This section highlights a checklist and range of questions and analytical approaches that could be helpful in guiding recommendation on technical efficiency.

3.3.1 DATA REQUIREMENTS

Budget vs. Actual Expenditures

- Determine the extent of differences between actually spent, allocated and approved expenditures at the overall sectoral level and for major programs at both the national and subnational levels. How have these changed over the last 5 to 10 years? How do these differences compare with other sectors (see Example 34: Budgeted vs. Actual)? Sources of data are primarily from the ministry of finance.
- Estimate the extent of differences in planned disbursements and actual disbursements of donor projects to the extent possible. The source of data is likely to be donors, or in some cases the ministry of finance.

Timing of Budget Releases

- Determine the timing of the budget release for agriculture to the national ministries of agriculture and subnational governments. How predictable have these budget releases been? Have they been aligned with the seasonal demand for public spending? Distinguish between recurrent and development budgets and between donor and government funds (see Example 35: Timing of Releases).

Program Implementation

- Assess the institutional processes and implementation performance at national and subnational levels (see Example 36: Approaches to Gathering District-Level Data).

3.3.2 TYPES OF ANALYSIS: TECHNICAL EFFICIENCY OF PUBLIC SPENDING

Public Expenditure Tracking Surveys

- Follow the money. Use a public expenditure tracking survey (PETS), which typically examines financial flows, facility characteristics, outputs, and accountability arrangements. PETS data can have multiple uses, ranging from a simple diagnostic tool for operations to empirical research on capture and cost-efficiency. It examines resource use and leakages. A PETS mainly evaluates the proportion of public resources (financial, human, and in-kind) that reaches each level, in particular frontline service providers. Analysis takes the form of micro-level surveys (see Example 37: Public Expenditure Tracking Survey).

Cost Effectiveness

- Estimate the cost effectiveness of programs. To what extent have financed programs been cost effective at delivering results? It may not be possible to assess cost-effectiveness (or value for money) for all programs,

so selecting major programs or projects can provide initial insights for a more comprehensive review in the future. What agricultural services does public spending buy? What are the unit costs of delivering key public services? Is there scope for reducing the unit costs of these services (see Example 38: Cost Effectiveness)?

Understand and Describe What Has Led to Current Levels of Technical Efficiency

- If actual spending is lower than budgeted amounts, where did the money go? Were readjustments to allocations made after budget approval? Were budgeted funds not released because of revenue shortfalls (cash budgets)? Or was there simply a low use of funds by ministries, so subsequent releases were not made? Answering these will require understanding the budget implementation process (budget releases, reporting, cash budgeting) (see Example 39: Explaining Inefficiencies).
- If the timing of budget releases was not as planned, why was that the case? Is cash budgeting the reason? Was it simply a delay in the fund transfer system?
- Are any of these factors unique to the agriculture sector, or are they prevalent across many sectors in the country?
- To what extent did the quality of financial management and procurement of implementing agencies impact technical efficiency? This could be assessed as part of a PETS or reviewing/drawing broader country assessments of national and subnational capacities. How timely and complete are financial management reports? How transparent is the procurement process? The assessments should identify ways to strengthen both the financial management and procurement processes.

3.3.3 AREAS OF RECOMMENDATIONS

Following on from the analysis, the areas of recommendations will likely be related to

- The budget process on ways to reduce the gap between budgeted and actual spending and on ways to ensure the timing of budget releases against the seasonal demand for agricultural programs and services.
- Technical design of programs to improve implementation and resource use efficiency.
- Procurement and fiduciary capacity, training needs for procurement and financial management, and perhaps staff recommendations at the national and local levels to strengthen capacity.
- Ways to strengthen coordination mechanisms among sector ministries and across sectors, specifically when coordinated action is needed to strengthen program outcomes.

3.3.4 POTENTIAL ENTRY POINTS

- Ministry of finance budget management reviews
- National ministry and subnational government project appraisal guidelines
- Ongoing public service reforms to ensure needed staffing and training, both for improved technical quality and financial management and procurement
- Sector reviews. As with the previous phase (sector objective and strategy), a growing number of countries have annual sector reviews as part of the budget cycle to review sector performance, impediments to performance, and implications for public spending over the next year. These provide important forums for the above recommendations.

3.4: MONITORING AND EVALUATION

Agriculture PERs should assess the coverage and impact of public spending (to the extent possible) and review the monitoring and evaluation (M&E) systems in place. What indicators are being used to measure performance? Who is accountable for public spending outcomes, and to whom are they accountable (see Example 40: Monitoring and Evaluation)?

3.4.1 DATA REQUIREMENTS

- Coverage and impact of agricultural investments and services. Rely on existing studies and surveys to the extent possible. Data requirements for rigorous impact evaluation are extensive and can be costly.
- Performance-monitoring indicators used by government at the national and subnational levels.
- Formal channels of accountability to stakeholders.

3.4.2 TYPES OF ANALYSIS

For analysis of incidence and impact of programs:

Incidence Analysis

- Measure incidence of public spending. Who's being reached by the agricultural service or investment? Differentiate by income and gender. Has this changed over time? Analysis involves household surveys (see **Example 41: Incidence Analysis).**

Impact Evaluation

- Measure impact. What impact has public spending had on household income, on agricultural growth, and on poverty reduction? This is the most data-intensive analysis given the controls needed to attribute impact to specific government interventions rather than to other factors (e.g., weather). Analysis often involves the use of multiple sources of data (see **Example 42: Impact Evaluation**).

For analysis of the M&E system, which will typically take the form of systematically answering a series of questions:

- Is there a functional institutional or sectoral monitoring and evaluation system that assesses key inputs, outputs, and intermediate outcomes of sectoral expenditures? Is there demand for an operational M&E system from senior management, such as the ministers of finance or agriculture? Can the current M&E system support a performance-based budgetary allocation system?
- Within national and subnational governments, are managers of spending units (programs, project-management units) accountable for verifiable results and outputs (not just disbursements)? Are there systems to reward excellent performance? Are there sanctions for not meeting key standards and results? Does the legislature receive regular, timely reports on the performance of expenditures by the agricultural sector or institutions? Within the national system of accountability to the legislature, how do the ministries in the agriculture sector compare to those in other sectors in complying with reporting requirements? What role does the legislature play in promoting more strategic allocations, better implementation performance, and enhanced accountability and governance of public expenditures?
- Assess and apply where possible various transparency and accountability mechanisms and tools inside and outside the government (such as M&E systems and indicators, the financial management system, timely annual accounts and audits, citizen-driven social audits and citizen report cards, and public expenditure tracking). Are there sanctions for failing to meet accountability requirements and standards? Are there rewards for surpassing standards?
- What managerial and institutional incentives are in place to generate better value for money, results, and accountability? (Note that this issue also enters into the efficiency analysis, discussed later.) Do the assessments encompass the subnational level? How do they evaluate performance at the subnational level?
- What mechanisms and sanctions exist to reduce corruption? Special reference can be made, for example, to the adequacy of procurement and financial management procedures and associated checks and balances (assessed in the previous section), various types of audits, the application and public transparency of sound procurement processes and practices, the concerted enforcement of anticorruption measures and sanctions, and corruption cases.
- How are intra and interagency coordination arrangements, mechanisms, and incentives assessed to ensure coherent budgetary allocations, enhanced and timely implementation of expenditures, avoidance of duplication of expenditures, alignment with national and sectoral strategies and policies, and clear, sound public investment priorities?
- Does a functional, sound system monitor and evaluate institutional and sectoral expenditures? To what extent is the resulting information used for decision making? What underlying factors constrain managers' demand for strong, effective M&E systems in the agricultural sector? An assessment will need to be done for each relevant ministry, with a strong focus on the ministry of agriculture.

3.4.3 AREAS OF RECOMMENDATIONS

On Improving Incidence and Impact

- Can the technical design of the underlying public programs be improved to maximize impact per unit of expenditure? Consideration includes decentralization, public-private partnerships (see **Example 43: Public-Private Partnerships**), matching grants to induce leverage (see **Example 44: Matching Grants to Leverage Resources**), enhancing environmental services (see **Example 45: Environmental Services and Climate Change**), decoupled support (see **Example 46: Decoupling Agricultural Subsidies, Example 47: The Case for and against Fertilizer Subsidies**), and better targeting of underlying programs, specifically those for women.

- Ways to strengthen implementation. This may include recommendations for quarterly or semiannual portfolio reviews for major and strategic programs and projects. It is useful to suggest simple templates that can focus the review on important strategic themes, key performance indicators, and progress in scaling up strategic programs (potential or actual). Portfolio reviews can generate multiple benefits if they are managed effectively. For example, they can highlight the need for a functional M&E system as an instrument for enhancing the quality of the portfolio.

On the M&E System

- Ways to ensure a functional, strategically oriented M&E system for the agricultural sector to (i) generate the disaggregated information required to ensure more efficient and equitable sectoral allocations, (ii) improve the implementation of expenditure programs, (iii) enhance governance and accountability of expenditures (using various mechanisms) (see Example 48: Accountability Mechanisms), and (iv) serve as a tool that facilitates learning-by-doing. Expenditure data disaggregated by program, project, activity, or region are essential for more rigorous expenditure analysis. A phased approach can be taken, starting with the more strategic programs and projects.
- More strategic and focused impact evaluation of public expenditures. The emphasis should be placed on improving monitoring of high-priority programs and projects, which will certainly contribute to more efficient public expenditures. Even so, governments generally neglect to improve evaluations of the impact of public expenditures, which require data-intensive, analytical approaches. Many governments avoid independent evaluations unless they are required by donor agencies. The limited impact evaluations that have been done also reflect the limited analytical capabilities within many ministries of agriculture, although this situation is beginning to change.

3.4.4 POTENTIAL ENTRY POINTS

- Approaches currently used for targeting program services and investments (e.g., formula-based approaches), program mid-term implementation reviews
- Ministry and subnational guidelines to strengthen existing reporting requirements
- Sector reviews. Participation by a broader spectrum of stakeholders may improve voice and accountability.

3.5: CONSOLIDATING RECOMMENDATIONS OF THE PER

- Consolidate recommendations into one section.
- Recommendations should directly follow the analysis. This sounds simple enough, but this has often not been the case. Every agricultural public expenditure analysis, regardless of its scope, should offer useful inputs to current and future decisions related to planning and budgetary management with the objective to improve the quality and scaling of public spending in agriculture.
- Recommendations should (i) reflect country conditions, (ii) build on ongoing initiatives, (iii) separate short- and long-term recommendations, (iv) separate recommendations by institution or audience, and (v) ensure appropriate sequencing. The spectrum of recommendations follows primarily from the analysis of the budget process and leads to the current levels of spending and efficiency. Following the structure of the earlier sections of the toolkit, the recommendations would likely cover

1. Agriculture sector objectives and associated sector strategy
2. Budget allocation
3. Budget execution
4. Monitoring and evaluation

- Recommendations can stimulate their further formulation and implementation by the relevant government agencies, provided there is effective leadership by the ministry of agriculture. It is not the role of the agriculture public expenditure analysis to complete this process, but by providing clear direction, it can lend considerable impetus to the process. The essence of the recommendations should be prominent in the action plan matrix or whatever format is most likely to encourage the implementation of the recommendations.

Part IV: DISSEMINATION AND SUPPORT FOR IMPLEMENTATION

- The objective of the agricultural PER (including rapid, thematic, or comprehensive) is to contribute to improved policies and implementation performance and impacts in agricultural expenditures. The completion of a sound PER report or note is only the beginning of this process. All too often, the benefits of agriculture PERs (and other expenditure review products) are not fully used after the final meeting or consultation workshop has concluded. The result is an informative report (obtained at a relatively high cost) of underused operational value. Increasingly, ministries of finance and donor agencies require ministries of agriculture and donor colleagues themselves to obtain a clearer assessment of strategic and expenditure priorities and performance before allocating increased investments (and donor assistance). This trend has heightened the demand for expenditure analyses and, more importantly, for fully using the results. Competing demands from many sectors for a share of an increasingly limited national budget are also heightening demand for agriculture PERs and are another reason to use their results. Efforts to institutionalize PERs as part of the planning and budgetary cycle will also help (see **Example 49: Institutionalizing PERs**).
- The following key questions and suggestions draw on good practices for realizing the full potential benefits of an agriculture PER. In disseminating the results of a PER and implementing its recommendations, the approach taken and the coordination of activities will be influenced by whether the sector PER is part of a country-wide PER, by the quality and significance of the analysis and recommendations, and by factors specific to the country, sector, and individuals involved. These processes are infrequently documented. The suggestions that follow synthesize experiences from various practitioners in lieu of specific notes and examples. Currently there is more art than science in this phase of expenditure analysis.

4.1: DISSEMINATION: TO WHOM AND IN WHAT FORM?

- Who is the primary target audience? In other words, who are the strategic champions of the agriculture PER report—the key actor or preferably several key actors who are most committed and best placed to implement the recommendations? If the target audience is not clearly identified or apparent, what strategies can be pursued to cultivate strategically placed champions in the course of the expenditure work? For example, is there an entry point in the form of an expenditure issue that is important to a particular individual? As noted, it is vital to actively involve the ministries of finance and planning (or equivalent) and the sectoral ministries (especially the ministry of agriculture) from the outset and at key stages of the study, especially when the initial findings and recommendations are available (see **Example 50: Dissemination Strategy**).
- Consistent with the participatory approach taken from the outset, what are the most appropriate and effective approaches for disseminating and especially for discussing and debating the results of the expenditure analysis? What sequencing is the most effective and appropriate for disseminating the results? Several focus group discussions, followed by participatory workshops, can be very valuable with strategic stakeholders (at the local and regional level), including central and local government, the private sector, academia, donor agencies, and key civil society groups. It is important to ensure that the ministry of agriculture is the main technical

counterpart and feels ownership of the consultation process, as the ministry will have primary responsibility for implementing the key recommendations (with other agencies and ideally in close collaboration with the ministry of finance).

4.2: IMPLEMENTATION OF RECOMMENDATIONS: IMPROVING PUBLIC SPENDING

- What are the implementation strategy and action plan for maximizing the operational benefits of the findings and recommendations, especially with respect to government counterparts and other key stakeholders? What are the measurable indicators of success in implementing key recommendations? It is desirable to devote time and effort to develop the action plan in concert with the key government counterparts because their ownership is vital, especially when there is a comprehensive agriculture PER. The action plan might warrant some technical assistance to support implementation, including capacity building among key stakeholders.
- What are the most appropriate implementation mechanisms that can be worked out and used within the country to promote and monitor the implementation of recommended actions? Build on existing intra and intersectoral coordination mechanisms and processes, and actively involve the ministry of finance. It may be useful to integrate the action plan into annual planning and budgeting, especially because these processes bring together staff from central and sectoral ministries. Implementation mechanisms should focus on the ministry of agriculture, given its pivotal role in sector development and coordination.
- How can other key stakeholders, especially broad-based farmer groups or apex organizations, "accompany" and support the implementation process and help provide accountability for implementing the agreed actions? Various mechanisms and tools, such as PETS, social audits, and service quality expenditure surveys, can facilitate their participation.
- What is the most effective capacity-building and analytical support that donors can provide to enhance the effectiveness and timeliness with which the action plan is implemented? Donors may be especially important in working closely with the agriculture PER champions and possibly providing transitional funding to support some of the initiatives described earlier.
- What cost-effective approaches and mechanisms can be used in periodically reviewing and discussing progress in implementing the action plan? Can these activities be undertaken, for example, as part of the annual budgetary preparation and mid-year implementation process, or as part of programmatic support to the sector, possibly supported by an agricultural government or donor working group?
- How can the implementation phase be used strategically to lay the groundwork for an updated agriculture PER, especially in the context of a sequential approach and the development of subsequent products? How can the PER tasks be institutionalized as part of ongoing planning and budgetary processes? A change in administration offers a timely opportunity for newly appointed officials to update the strategic and expenditure priorities of any existing agricultural strategy or expenditure review.
- How can institutional memory be maintained? A stronger institutional or sectoral M&E system and appropriate incentives for evidenced-based decision making can help ensure a smooth transition when the government changes, and it can also encourage a culture of transparency, learning-by-doing, and continuous innovation and improvement.

Part V: EXAMPLES

Example 1: ANNUAL AND PERIODIC PERs

An example of where a PER is undertaken annually is in Tanzania. The annual PERs usually have twin objectives of supporting the budget process and undertaking an external review of fiscal developments (World Bank 2009e). A Tanzania PER Working Group, comprising representatives from the Government of Tanzania, the World Bank, United Nations agencies, other bilateral and multilateral donors, research and academic institutions, and NGOs, determines the agenda (and focus) for the annual PER process, guides and finances the implementation of the agreed-upon work program, and reviews all outputs. The agriculture sector is included in this broader PER.

The annual PERs include a budget analysis (macro-fiscal policy and macro-economic budget framework, budget allocation, budget execution) and a public finance management assessment (budget processes and institutions). The budget analysis primarily focuses on allocative efficiency by assessing budget alignment with Tanzania's growth and poverty reduction strategy, some assessment of the functional allocations within sectors, and the allocation between central and local government. Analysis of technical efficiency is usually less extensive, focusing on the timeliness and completeness of actual expenditures against allocations (rather than more detailed public expenditure tracking surveys like cost-efficiency, incidence analysis, and impact evaluation).

The annual PERs typically provide recommendations on (i) improving the overall alignment of spending with the national development strategy, (ii) functional and economic allocation (including capital versus recurrent), (iii) national versus local government allocations, and (iv) improving elements of the budget execution cycle (e.g., integrating donor financing, stream-lining internal ministry procedures, and improving cash management systems). They may also highlight areas which may need further, more detailed analysis (e.g., large expenditure items in ministry budgets such as strategic grains reserves and input programs).

The periodic PERs (e.g., World Bank 2010b) typically include a more detailed analysis on both allocative and technical efficiency (the latter often including public expenditure tracking surveys, incidence analysis, and impact evaluation). These can be useful in establishing clear baselines and needed directional changes on key elements of budget alignment and implementation. The key elements and directional changes can then be tracked in the less detailed annual reviews. Recommendation of these periodic PERs often includes medium- to long-term strategic actions (rather than simply short-term annual action).

Example 2: SECTOR SCOPE AND ANALYSIS

A good starting point for defining and agreeing on the scope of the expenditure analysis is to determine what is meant by the agricultural sector in the particular context for the agriculture public expenditure. The UN Classification of Functions of Government (COFOG) defines *agriculture* to include crops, livestock, fishing, forestry, water-for-production, and issues related to agricultural land. An increasing number of countries recognize the need to adjust their budgetary structures to reflect broader definitions of the agricultural sector that may extend beyond the mandated responsibilities of the ministry of agriculture. In many countries, the ministry of the environment and natural resources inevitably overlaps with the ministry of agriculture (as in watershed programs). Important programs for agriculture may be managed by another ministry or agency; for example, rural roads are handled by the ministry of transport or local governments. Given the varying circumstance in each country, the precise scope of agriculture expenditures that will be covered in the agriculture PER will ultimately need to be clarified, defined, and agreed upon with the government. The analysis must also make an effort

to promote better coordination of policies and expenditure allocations among institutions.

Examples of agriculture PERs conducted in Uganda (World Bank 2010b), Mexico (World Bank 2009a), and Nigeria (World Bank 2008) illustrate some of the issues encountered when defining the scope of analysis.

The Uganda agriculture PER encountered three major issues when using the COFOG definition of agriculture:

- Over the period covered by the analysis, forestry, the use of water for agricultural production, and land issues were under the purview of the Ministry of Water, Lands, and the Environment. Land issues were subsequently transferred to a new Ministry of Lands, Housing, and Urban Development, whereas forestry and water-for-production remained with the Ministry of Water and Environment. Identifying project expenditures on forestry and irrigation was not problematic; the difficulty lay in deciding what proportion of the Ministries' overheads to assign to agriculture. The issue was decided through an analysis of expenditures under the most appropriate departments or programs, namely land valuation and registration in the Ministry of Lands, Housing, and Urban Development and water-for-production in the Ministry of Water and Environment.
- Some agricultural projects fell under agencies other than the Ministry of Agriculture, such as the Office of the Prime Minister; the National Planning Authority; the Ministry of Finance, Planning, and Economic Development; and the Ministry of Local Government. Some of these projects involved more than one sector of the economy in the sense that they had nonagricultural components (such as the building of feeder roads) and did not fall under the COFOG definition of agriculture.
- A considerable amount of agricultural activity is carried out at the district level and lower in Uganda, sometimes through the partial use of conditional grants. This arrangement made it necessary to estimate the proportions of various grants used for agricultural purposes.

For the Mexico agriculture PER (2009), the Ministry of Finance—the main source of demand for the study—requested that the Bank include federal public expenditures on "agriculture and rural development" that coincided with the Ministry's policy and budgetary structure and frameworks. Thus the Agriculture PER also assessed nonagricultural public expenditures made in rural areas under the Special Concurrent Program for Sustainable Rural Development (*Programa Especial Concurrente para el Desarrollo Rural Sostenible* [PEC]). The program does not necessarily include the budget for *all* activities pertaining to rural development, but this classification was used for the agriculture PER because the government had identified it as the federal budget for agriculture and rural development. When nonagricultural rural public expenditures are included in a particular agriculture PER, the conceptual and data challenges increase, and comparisons with other countries are limited.

In the Nigeria agriculture PER, the first challenge faced by the study team was to define *agricultural spending* with precision. After considering various definitions, the team decided to use a fairly restrictive definition: they would review public spending *in* agriculture, as opposed to public spending *for* agriculture. The more restrictive definition was adopted for two reasons. First, there were time and funding constraints. Second, public spending in other sectors had been reviewed recently through several other studies, so it was important to avoid duplication of effort. The team proceeded to define the categories of public expenditure in agriculture based on three considerations: (i) definitions of agricultural spending commonly found in the literature, (ii) the expenditure responsibilities of Nigeria's Federal and State Ministries of Agriculture, and (iii) the structure of the Government of Nigeria's expenditure and budget accounts. Based on these considerations, agriculture included the following expenditure categories: agricultural research, agricultural extension and training, agricultural marketing, the supply and subsidization of agricultural inputs (seed, fertilizer, crop chemicals, and so forth), crop development, livestock development, fisheries, irrigation (to the extent undertaken by the Federal and State Ministries of Agriculture and local Departments of Agriculture), and food security. Forestry and wildlife were initially considered but then eliminated because in Nigeria, these investments take place outside the Federal and State Ministries of Agriculture, with major implications for data collection.

Example 3: COMPLEMENTARITIES WITH MACRO-LEVEL PERS

Turkey provides an example of how a macro-level public expenditure analysis and the resulting reforms were used productively in a later agricultural public expenditure task. The resulting report, "Turkey: Policy and Investment Priorities for

Agricultural and Rural Development" (World Bank 2005a), illustrates how a sectoral study and the subsequent dialogue can deepen the broader expenditure analysis already undertaken as part of a macro-level PER, sharpen strategic recommendations, and extend reforms in sectoral institutions.

The need for a macro-level PER in Turkey (Public Expenditure and Institutional Review [World Bank 2001]) was reflected in the severe fiscal crisis in which public expenditures rose to about 3 percent of gross national product, well beyond the target of 0.8 percent. The findings of the review highlighted major weaknesses in the management of public expenditures. Although the Government of Turkey had made progress in improving budget systems, many deficiencies identified were relevant to rural institutions for most of the period under review. Information on rural sector expenditures was fragmented and presented in a way that made it difficult to analyze and interpret in a precise manner.

Following the macro-level PER, the government undertook important steps toward (i) improving budget coverage and classification; (ii) enhancing the budget preparation process, restoring its credibility with line ministries, and strengthening the capacity to formulate policies and budgets within a medium-term perspective; and (iii) improving budget execution and financial accountability. In 2003, Turkey also enacted a Public Financial Management and Control (PFMC) Law. The law provided the framework for structural and institutional reforms to upgrade public expenditure management.

By 2005, several important initiatives in budgetary reform had been taken. Budget transparency was enhanced, facilitating implementation; the linkages between policy, planning, and the budget were improved; changes were made in the role and size of public administration; and an initial rationalizing of public employment was undertaken. All of these macro-level initiatives had positive effects on budget management reforms and processes in the Ministry of Agriculture and other rural sector institutions, which probably would not have taken place without the reforms. The subsequent agriculture expenditure analysis deepened the earlier macro-level analysis and sharpened the strategic recommendations.

Example 4: TERMS OF REFERENCE—LEVELS AND COMPOSITION OF SPENDING

Terms of Reference Used for the Uganda (World Bank 2007a) Study on Levels and Composition of Spending

Context and objective: The study is part of a wider review of public expenditure in the sector that will help identify which types of expenditures are best for pro-poor growth. It will provide a comprehensive assessment of public financing in the agricultural sector, using the definition of the sector set out in COFOG. The study will assist MAAIF in undertaking further PER work in the sector and provide tools and methods to support this.

Recipient: The Ministry of Agriculture, Animal Industry, and Fisheries (MAAIF); Ministry of Finance, Economic Planning, and Development (MFEPD); and the Plan for Modernization of Agriculture (PMA) Development Partners group.

Scope: The study will look at current and historical patterns of allocation within the sector and the source of funding (government and donor) and mode of financing (loans, grants, and so forth). About 37 percent of the annual budget goes directly to the districts, which under the decentralization process are responsible for providing most of the services. The analysis thus needs to be conducted both at the national or central level and at the district or local government levels. Among the issues to be reviewed are:

- Overall trends in allocations to the sector (going back 20 years if feasible), in absolute terms and relative to other sectors, the overall budget, and sector GDP
- Functional and economic classification of the agricultural sector budget and changes therein over time
- The levels and trends of recurrent and development expenditures, clearly identifying the salary, operational costs, and development components (which are often included in both the recurrent and development expenditure categories)
- Subsectoral allocations against core functions as set out in MAAIF's Development Strategy and Investment Plan (DSIP) and the PMA core document and by commodity (crop, livestock, and fisheries)
- Allocations against policy priorities and principles set out in the Poverty Eradication Action Plan (PEAP), PMA, and other more recent policy statements, including an assessment of expenditures from the perspective of public and private sector roles and functions in the delivery of goods and services
- The scale and management of allocations to the sector functions (from COFOG) made through central government ministries and local government

- Composition and performance of the agriculture budget by funding source: government versus external or donor, and external or donor financing by funding modality (projects, sector budget support, general budget support, and so forth)
- Changes over time in the share of the agricultural budget spent at the center and transferred to districts
- Estimation of the amount of off-budget expenditure going into the agricultural sector by activity (subsector)

The consultants will work closely with MAAIF staff in the Agricultural Planning Department to ensure that they

- Become familiar with the tools, methods, and approaches used in the study and are able to undertake similar analyses in the future
- Improve their capacity for setting sector priorities and managing the annual budget process.

Example 5: TERMS OF REFERENCE—BUDGET PROCESS AND PERFORMANCE

Terms of Reference Used for the Uganda (World Bank 2007a) Study on Levels and Composition of Spending

Context and objective: The study is part of a wider review of public expenditure in the sector that will help identify which types of expenditure are best for pro-poor growth. It will provide a comprehensive assessment of public financing in the agricultural sector using the definition of the sector set out in COFOG. The study will assist MAAIF in undertaking further PER work in the sector and provide tools and methods to support this.

Recipient: The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF); Ministry of Finance, Economic Planning, and Development (MFEPD); and the Plan for Modernization of Agriculture (PMA) Development Partners group.

Scope: The study will critically review the formulation and execution of the budget by government agencies. It will assess the overall budgeting process and system, identify weaknesses, and suggest options and an implementation strategy for improvement, with a view to attaining long-term efficiency in public spending. Other specific issues to be addressed include:

- A critical assessment of the performance and effectiveness of the overall budget process—formulation; implementation; M&E of budgets, programs, outputs, and outcomes; identification of potential value-for-money issues; and recommendations on how to improve the process where necessary
- The agricultural sector budget execution and performance by item and agency, assessment of the utilization and operational efficiency of public funds, and identification of critical constraints to effective budget execution
- The trends in budget allocations to the sector, corresponding releases and actual expenditures, and implicit variances and overall sector budget execution by agency as an assessment of absorptive capacity and management issues
- Allocations and expenditures against key policy priorities, along with a description of the process underlying this prioritization. Are the linkages between objectives, organizational functions, outputs, and available resources adequate?
- Influence and impact or performance of differing funding sources (for example, projects versus earmarked budget support) on the allocation to agriculture and within agriculture and the alignment and execution of the budget against sector priorities
- The capacity of the institutions in the sector to formulate and execute their budgets and make a convincing claim for scarce public resources
- The links between and the impact of decentralization on the budget process, including the accountability of services
- Political economic analysis of agricultural public expenditures and processes and an implementation strategy

The consultants will work closely with MAAIF staff in the Agricultural Planning Department and with budget Vote holders to ensure that they

- Become familiar with the tools, methods, and approaches used in the study and are able to undertake similar analyses in the future
- Improve their capacity for setting sector priorities and managing the annual budget process reforms

Method: The study will be undertaken by a team of consultants, based for the duration of the study in Kampala and working under the overall guidance of the Agriculture

Sector Working Group. Management of the work by MAAIF on a day-to-day basis will be undertaken by the Agricultural Planning Department in MAAIF.

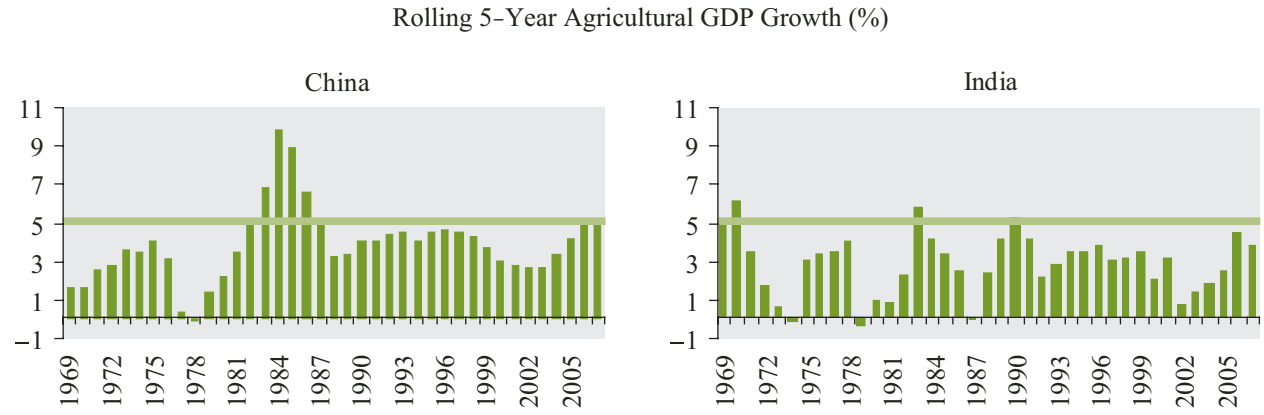
Reporting: The consultants will report back to the Permanent Secretary, MAAIF. The consultants will provide an inception report to the Permanent Secretary within five days of the beginning of the work, setting out in detail the approach to be taken, key milestones in the delivery of the final report, and the structure of the final report. The inception report will also highlight any design issues that need to be further discussed by the Sector Working Group. A draft final report will be submitted to the Sector Working Group two days before the study team finishes its work.

Time frame: The work will begin on March 19 and will run for 11 weeks.

Example 6: SECTOR OBJECTIVES AND INTERNATIONAL PERFORMANCE BENCHMARKS

Comparators of sector objectives with other countries can help gauge realism. For example, some countries have set long-term annual growth targets for agricultural growth at 10 percent. This is a high target when viewed from an historical and global perspective. For example, India has rarely exceeded a 5-year average agricultural growth rate of over 5 percent. China achieved agricultural growth above 5 percent following the 1978 reforms, but the rate subsequently settled back to between 3 percent and 5 percent and has remained there (Figure 4). Because some countries, particularly in Africa, are starting from a relatively low base and can benefit from more widespread adoption of existing technologies, growth of 5 percent annually seems achievable with sufficient and well-targeted public investment and the maintenance of a supportive policy framework, including measures aimed at increasing private sector investments in agriculture. However, sustained growth rates of 10 percent per annual have little-to-no historical precedent.

FIGURE 4: Five-Percent Sustained Agricultural Growth Is an Ambitious Target



Derived from World Development Indicators.

Example 7: SWOT ANALYSIS

The Lebanon Agriculture Public Expenditure Review (World Bank 2010c) used an analysis of agriculture strengths, weaknesses, opportunities, and threats (SWOT) to identify comparative advantage of Lebanon agriculture to be used as the basis for recommendations for public expenditure alignments. The SWOT analysis (summarized below) suggests the strategic objectives for the agricultural sector in Lebanon should be to (i) increase domestic market share and exports to Arab markets, (ii) consider exporting to Europe as a secondary opportunity, and (iii) focus on food quality and safety. Public spending recommendations derived from the analysis included options to reform the significant tobacco subsidy (as reflected in the complementary note on "Decoupling Income Support from Tobacco Production

in Lebanon: Challenges and Opportunities"), and for the immediate term, (i) improve logistics by promoting private sector investment and by providing training; (ii) increase public investment in agricultural research and development to enhance productivity and to find innovative ways to improve food quality and safety, and (iii) expand irrigated agriculture through investments in water capacity. In the longer term it was suggested to consolidate agriculture expenditures into a single institution and create a directorate that oversees and invests in food quality and safety. This would reduce the current high levels of fragmentation.

A SWOT Analysis Indicates Lebanon Is Well-Suited for High-End Fresh Fruit and Vegetables (FFVs) and Agro-Processing Markets

STRENGTHS	WEAKNESSES
• Close proximity to Gulf and European markets, which are net importers of fruits and vegetables • Large diaspora creates access points to new markets • Very positive name recognition in Gulf countries, particularly with "Lebanese Apples" • Mediterranean climate allows for a long growing season and for crop diversity • FFVs are often handpicked and gathered in unpolluted areas and Lebanon's juices are considered high quality, when made from 100 percent natural fruits and vegetables • Ready availability and accessibility to agricultural inputs, unlike in many other developing countries • Access to cheap, seasonal agriculture labor from neighboring countries (mainly Syria, but also from Egypt) • Well-established food-canning industry with extensive markets in the Gulf, in the European Union, and in North America	• Lacking food quality and safety standards • High cost structure compared to other MENA countries • Institutional fragmentation creates bottlenecks • Poor logistics, particularly in timeliness of delivery • Water scarcity as a production constraint and a lack of adequate investments in irrigation infrastructure • Weak marketing infrastructure • High debt service • Lack of land-use planning and rapid urban encroachment over prime farm land • Highly fragmented land holdings and predominance of part-time farming • Severe politicization of agricultural and rural development institutions, with agriculture programs and policies driven mainly by political considerations
OPPORTUNITIES	**THREATS**
• Organic FFVs offer higher premiums than conventional products • High-end products offer more stable returns than low-end alternatives • Food commodity prices have fallen considerably since the recent price shock, resulting in lower food subsidies, which may enable realignment of public investment in R&D and food quality and safety • Low penetration rate of MNA FFV exports to the European Union • "Unfreezing" the agriculture free-trade agreement with Syria • Enhanced flow of goods across the Syrian border • Production and packaging of high-value organic products (e.g., olive oil, vinegar, soap) for the European Union • Integration of FFV with emerging eco-tourism • Investment in water resources, particularly in the poor areas of the south (e.g., Hermel and Akkar)	• Egypt, Syria, and Turkey compete in Lebanon's major export markets; Jordan is an emerging threat • Climate change • High vulnerability to future grain-price shocks • Projected long-run increase in key input prices (i.e., petroleum and fertilizer) • Lack of political interest to push agriculture strategy forward • Loss of most valuable coastal arable land due to urban encroachment and salinization • Soil erosion in mountainous areas due to costly maintenance of terraces, haphazard construction, quarries, etc. • Loss of image of Lebanese FFV in Gulf markets due to uncontrolled problem of pesticide residues and more rigid import standards in the Gulf

Source: World Bank 2010c.

Example 8: DECLINING TAXATION OF AGRICULTURE

The Uganda agriculture public expenditure (World Bank 2010b) review highlights the policy prerequisites for efficient public spending, indicating that Uganda has successfully addressed these prerequisites by largely eliminating agricultural price distortions and that the current policy environment is conducive to public investment returns. Using data from the recent global study on agricultural distortions, the PER shows that Uganda has shifted from agricultural taxation to agricultural support in recent years.

The Direct Rate of Assistance (DRA) to agriculture was 1 percent during 2001–04, with zero support to exportable products and 13 percent support to importable products through import tariffs (Table 6). By contrast, taxation of coffee and cotton was as high as 80 percent to 90 percent in the late 1980s, but still 50 percent to 70 percent by the late 1990s, inhibiting investment returns.

TABLE 6: Distortion Indicators for Ugandan Agriculture, Five-Year Averages, %

COMMODITY	1961–65	1966–70	1971–75	1976–80	1981–85	1986–90	1991–95	1996–2000	2001–04
Coffee	–15	–39	–64	–89	–73	–74	–20	–2	–1
Cotton	–13	–22	–53	–80	–47	–51	–4	0	0
Exportables DRA	***–11***	***–28***	***–59***	***–88***	***–66***	***–66***	***–8***	***–1***	***0***
Rice	14	21	52	49	48	36	7	13	18
Importables DRA	***16***	***22***	***52***	***81***	***48***	***54***	***14***	***14***	***13***
CHANGING STATUS COMMODITIES									
Maize	–1	8	10	17	0	–13	–4	7	0
Beans	11	–7	0	0	0	0	–4	4	0
DRA agriculture	**0**	**–4**	**–8**	**–14**	**–7**	**–7**	**–1**	**2**	**1**
DRA non-agric.	**8**	**9**	**13**	**15**	**13**	**13**	**8**	**10**	**8**
TRA agriculture	**–8**	**–13**	**–21**	**–29**	**–20**	**–19**	**–9**	**–9**	**–7**

Source: Matthews et al. (2006).

Example 9: AGRICULTURE SPENDING AS A SHARE OF TOTAL SPENDING AND OF GDP

Examples of the presentation of these spending shares include the Nigeria (World Bank 2008), Ukraine (Zorya 2006), and Uganda (World Bank 2010b) PERs. They provide a historical snapshot of agricultural expenditures, normally in comparison with other key variables (e.g., agricultural expenditures as a percentage of total expenditures, as a percentage of agricultural GDP, and relative to other countries or comparators, and wherever possible, disaggregated by tier of government).

The Nigeria agriculture PER (World Bank 2008) presents Nigeria's agricultural public spending expressed as a share of total public spending (Nigeria versus selected comparators) and as a share of GDP (Nigeria versus selected countries) (Table 7). In 2000, Nigeria's agricultural expenditures expressed as a share of total public spending was lower than that of all other African countries for which data were available, and it was also substantially lower than the regional averages for Asia and Latin America. In the same year, Nigeria's agricultural spending expressed as a share of agricultural GDP was low, not only compared with the Latin American and Asian averages, but even when compared with the Africa-wide average. The two sets of data, together, allow making a cross-country comparison of agricultural spending expressed as a share of total public spending.

TABLE 7: Agriculture Spending as a Share of Total Spending and of GDP: Nigeria vs. Selected Countries

	AGRICULTURE SPENDING					
	AS A % OF TOTAL SPENDING			AS A % OF GDP		
REGION/COUNTRY	1980	1990	2000	1980	1990	2000
Africa	**6.42**	**5.15**	**4.05**	**7.40**	**5.44**	**5.71**
Botswana	9.71	6.47	4.29	24.28	47.99	71.71
Burkina Faso	5.47	5.83	7.15	2.98	2.79	4.38
Cameroon	2.22	4.06	2.01	1.22	3.58	0.95
Côte d'Ivoire	3.40	2.97	1.46	4.17	2.24	1.08
Egypt	4.35	4.73	6.85	12.56	7.13	11.21
Ethiopia	8.38	4.91	6.55	1.49	4.05	6.59
Ghana	12.23	4.10	2.57	2.30	1.21	2.00

(Continued)

TABLE 7: Agriculture Spending as a Share of Total Spending and of GDP: Nigeria vs. Selected Countries *(Continued)*

REGION/COUNTRY	AGRICULTURE SPENDING					
	AS A % OF TOTAL SPENDING			AS A % OF GDP		
	1980	1990	2000	1980	1990	2000
Kenya	8.42	6.03	4.82	7.65	6.64	7.05
Malawi	10.17	11.1	4.30	8.97	7.34	4.53
Mali	8.31	2.33	4.84	3.70	1.69	3.93
Morocco	6.46	4.98	3.29	11.59	8.11	7.87
Nigeria	**2.80**	**2.91**	**0.74**	**1.80**	**2.20**	**1.14**
Togo	7.03	3.51	1.78	7.87	1.74	1.23
Tunisia	14.52	8.00	5.76	32.42	17.61	15.02
Uganda	32.55	3.91	4.00	2.80	0.86	2.38
Zambia	22.97	2.91	5.08	60.85	4.36	6.21
Zimbabwe	7.03	11.18	1.70	13.01	20.6	5.36
Asia	**14.80**	**12.23**	**9.11**	**9.44**	**8.51**	**9.54**
LAC	**8.04**	**2.02**	**2.53**	**11.51**	**6.79**	**11.1**
Total	***11.25***	***7.90***	***6.95***	***10.76***	***8.04***	***9.34***

Source: Database for Fan, Yu, and Saurkar (2008). Derived from Nigeria Agriculture PER (2008) (Tables 3 and 4).

TABLE 8: Uganda Agriculture Sector Budget as a Share of National Budget and GDP (%), 2001/02–2008/09

	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
Approved agriculture budget as share of national budget	5.7	5.6	4.1	3.8	4.4	4.6	4.3	3.8
Released agriculture budget as share of national budget	8.2	5.5	3.8	3.3	4.8	n/a	n/a	n/a
Approved agriculture budget as share of GDP	n/a	n/a	1.5	1.4	1.5	1.7	1.6	1.6
Released agriculture budget as share of GDP	n/a	n/a	1.4	1.2	1.2	n/a	n/a	n/a

Source: Ministry of Finance Planning and Economic Development; Ministry of Agriculture, Animal Industries and Fisheries.

TABLE 9: International Comparison of Fiscal Transfers to Agriculture, Average for 2002–04

REGION/COUNTRY	AGRICULTURE AS A SHARE OF GDP	SHARE OF AGRICULTURAL FISCAL EXPENDITURES IN NATIONAL GDP	SHARE OF AGRICULTURAL FISCAL EXPENDITURES IN GDP ADJUSTED TO THE SIZE OF AGRICULTURE
	A	*B*	*B/A*
Ukraine (budget expenditures)	11.6%	1.3%	0.11
Ukraine (total fiscal expenditures, including VAT expenditures)	11.6%	2.1%	0.18
HIGH-INCOME COUNTRIES			
Australia	3.0%	0.31%	0.10
Canada	2.3%	0.51%	0.22
European Union	2.3%	0.65%	0.28
United States of America	1.6%	0.73%	0.46
MIDDLE-INCOME COUNTRIES			
Turkey	13.0%	2.0%	0.15
Mexico	4.0%	0.7%	0.18
Venezuela	5.0%	0.5%	0.12

TABLE 9: International Comparison of Fiscal Transfers to Agriculture, Average for 2002–04 *(continued)*

REGION/COUNTRY	AGRICULTURE AS A SHARE OF GDP *A*	SHARE OF AGRICULTURAL FISCAL EXPENDITURES IN NATIONAL GDP *B*	SHARE OF AGRICULTURAL FISCAL EXPENDITURES IN GDP ADJUSTED TO THE SIZE OF AGRICULTURE *B/A*
China	15.0%	1.2%	0.08
Brazil	9.3%	0.7%	0.08
Russia	6.0%	0.95%	0.16
LOW-INCOME COUNTRIES			
Uganda	32%	1.5%	0.05
Tanzania	45%	1.2%	0.03
Ethiopia	44%	2.7%	0.06
Kenya	29%	1.3%	0.04

Source: OECD (2004), World Bank (2005a), Tangermann (2006), Zorya (2006), and World Bank (2006). Note: The reference year for Russia is 2003.

The Uganda agricultural PER (World Bank 2010b) presents historical trends of sector expenditures in the national budget and GDP and shows that over time, the approved budget for agriculture in relative terms has declined from a level that was already quite moderate (Table 8).

Ukraine's Agriculture Fiscal Policy Analysis (Zorya 2006) presents an informative international comparison of fiscal transfers to agriculture (Table 9). The comparison shows that Ukraine's fiscal spending on agriculture is at the same level as that of middle-income countries and even some high-income countries. This table was added to by the Uganda PER (World Bank 2010b).

Example 10: AGRICULTURE SPENDING PER CAPITA

Trends in per capita expenditure levels are useful for assessing patterns and possible biases of agricultural spending and evaluating whether expenditures are consistent with stated policies. Examples from Turkey, Mexico, and Guatemala analyze regional expenditure patterns on a per capita basis and compare per capita expenditures across various countries.

The Turkey Agriculture PER (World Bank 2005a) reports that total per capita spending is in line with planned regional priorities (based on per capita income levels for each province, as indicated in the Five-Year Plan) and shows a negative correlation (–0.70) between per capita income and total per capita spending by region, which means that more spending occurred in less developed regions (Table 10). The review points out significant organizational differences. There is a strong negative correlation between per capita spending for rural roads and per capita income; however, the Ministry of Agriculture and Rural Affairs' per capita spending does not establish such a strong negative correlation. On the other

TABLE 10: Correlation of Per Capita GDP and Per Capita Organizational Spending, Turkey, 2002

	CORRELATION BETWEEN PER CAPITA GDP AND PER CAPITA SPENDING	
1	Per capita spending for Ministry of Agriculture and Rural Affairs services	–0.30
2	Per capita spending for State Hydraulic Agency (irrigation services)	–0.51
3	Per capita spending for General Directorate of Rural Services (rural roads services)	–0.75
4	Per capita spending for General Directorate of Rural Services (drinking water services)	–0.50
5	Per capita spending for GD (road services)	–0.64
6	Per capita spending for Turkey Electricity Distribution Corporation (electricity services)	0.32
7	Per capita spending for Ministry of Environment and Forestry services	0.18
8	Per capita rural spending	–0.70

Source: Turkey Agriculture PER (World Bank 2006e).

hand, the Ministry of Environment and Forestry and Turkey Electricity Distribution Corporation per capita spending show positive correlation between per capita GDP and per capita spending.

The Mexico Agriculture PER (World Bank 2009a) points out that Mexico's large Agriculture and Rural Development expenditure program represents a very significant fiscal effort undertaken by the government in favor of the rural population. The review showed that the average public expenditure per capita (some US$700 per rural inhabitant) is similar in urban and rural areas, unlike many other Latin American countries, where an urban bias persists in the allocation of public expenditure. Mexico's public expenditure in agriculture is the highest in the Latin American and Caribbean Regions in terms of overall expenditure and of the size of the agricultural sector.

A comparison of countries in Latin America in terms of the historical average per capita agricultural expenditure (per rural inhabitant, constant prices) is provided in Table 11.

TABLE 11: Agricultural Expenditure Per Capita (in US$ Per Rural Inhabitant), LAC

COUNTRY	1985–88	1989–92	1993–96	1997–01	AVERAGE
Uruguay	82.07	162.83	450.15	622.71	346.69
Mexico	167.04	206.23	279.22	268.06	232.37
Venezuela	169.03	80.00	48.95	92.07	97.19
Brazil	n/a	15.64	199.12	154.04	95.84
Costa Rica	89.41	93.01	102.90	71.57	88.19
Argentina	8.93	67.42	123.72	123.38	83.36
Chile	0.00	34.99	102.41	138.25	72.99
Panama	76.48	41.03	49.25	109.75	71.52
Dominican Republic	27.73	43.95	51.40	84.61	53.84
Nicaragua	n/a	12.21	46.84	56.77	30.59
Guatemala	12.11	11.13	23.34	60.03	28.61
Peru	n/a	18.23	46.73	44.18	28.28
Ecuador	9.38	10.16	25.36	32.88	20.24
Jamaica	15.56	12.31	17.81	23.68	17.71
Paraguay	6.90	11.76	24.71	24.23	17.33
Honduras	18.57	7.72	4.63	14.54	11.55
Bolivia	4.38	5.05	1.64	19.59	8.36
Average	**40.45**	**49.04**	**94.01**	**114.14**	**76.75**

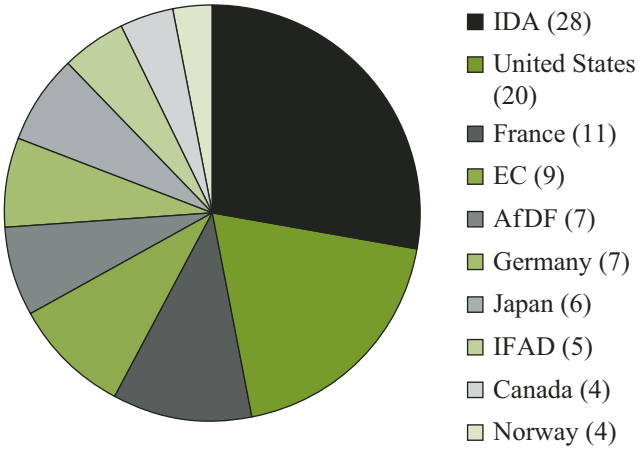
Source: FAO LAC Regional Office database from several countries (1985–2001) as referenced by R. Lopez (2004).

Example 11: DONOR SPENDING ON AGRICULTURE

Donor financing still accounts for a larger share of overall spending in the agriculture sector, providing resources for over half of the government budget in many countries. In addition, countries often receive financing from multiple donors. The OECD maintains a database of donor commitments by donor, by country. These data show both levels and shares of donor spending. Figure 5 shows the average shares of donor spending in the period 2006-08 in Sub-Saharan Africa.

Most bilateral donors currently provide aid only in the form of grants. However, some larger donors also provide soft loans for agriculture, including Japan (US$708 million in 2008) and France (US$102 million). Among multilateral agencies, the major loan provider was IDA (US$1 billion in 2008). Overall, 28 percent of aid to agriculture was in loan form in 2008. Development Assistance Committee (DAC) members' loans went mainly to lower-middle-income countries (77 percent),

FIGURE 5: Donor Shares in Total Donor Spending to SSA, Average 2006–08 (%)



Derived from OECD data.

whereas projects in least developed countries were practically all financed through grants (OECD 2010).

However, when estimating donor financing at a country level, it is important to avoid double counting when aggregating a donor's budget and off-budget expenditures, especially when a high proportion of the national budget is provided by donors. The Uganda agriculture PER (World Bank 2010b) highlights the importance of gathering information also from local institutions to take into account the increased role of nongovernmental organizations (NGOs) in specific areas of the country. It was estimated that the total value of the agricultural inputs supplied in the northern regions by NGOs was equivalent to 10 percent of COFOG-based expenditures on programs and activities. Information on those programs was unavailable at the district or the country level.

Example 12: PRIVATE SECTOR INVESTMENT IN AGRICULTURE

Private investment accounts for the majority of investment in the agricultural sector (in many countries, private investment makes up at least 70 percent of all investments, varying according to the prevailing policy regime and subsector). Very few countries compile and analyze data on private investments in the agricultural sector, especially considering that there are many factors involved (especially small-scale farmers, who are the main private investors). The Mozambique agriculture PER (World Bank 2009b) highlights six sources of data and discusses several possible approaches to improving existing data systems to provide better information for monitoring how effectively public expenditures on agricultural development stimulate investment in agriculture (see the background paper "What are the facts on private investment trends in agriculture?" prepared for the Mozambique PER). The six data sources are:

1. **Authorized Investment Projects.** Usually available through investment promoting centers, they cover both foreign and national investments, often with a breakdown by sector, province, district, and country of origin, along with the proposed owner's equity capital, the value of loans and supplementary capital, and the expected number of jobs to be created.
2. **Foreign Investment Inflows.** Foreign capital inflows are usually compiled by a country's central bank for the balance of payment statistics. In the case of Mozambique, the data are obtained from documents filed by foreign investors, who must register inflows in order to qualify for later repatriation of dividends and capital.
3. **Commercial Bank Lending to Agriculture.** A country's central bank usually compiles regular data reports on commercial bank credit to the economy, with breakdowns by sector, type of loan, and province. Net flow of lending can be calculated as the differences in credit outstanding at two points in time. Data is also often complied on gross new lending, repayments, and net lending by broad sector classification and type of loan.
4. **Private Investment in the National Accounts.** There are three ways of measuring GDP, one of which includes estimating gross private capital formation. However, most countries use the sum-of-value-added method.
5. **Agricultural Survey (Small- and Medium-Scale Producers).** These surveys often provide a measure of on-farm investment (or capital stock), which can be tracked over time through repeated surveys.
6. **Enterprise Surveys.** Similarly, enterprise surveys can also be an important source of information on private investment (capital formation) in agriculture, and input from the sector on questionnaire design is important.

The Vietnam PER (World Bank 2005b) provided estimates of private investments, showing that agriculture depended heavily on the state budget (estimated to account for about 57 percent of total investment in the sector between 1999

and 2002), owing to the relatively small level of private enterprise (nonhousehold) investment (which was 40 percent of the total investment, on average). Foreign direct investment (FDI) in agriculture accounted for a small share—only 3 percent of investment capital over the study period, much smaller than the 17 percent for the whole economy. Nonstate local enterprises have a similarly small presence.

There have also been efforts to measure private investment in the agriculture sector in India, including a recent study by Golait and Lokare (2008) at the Reserve Bank of India. Note that the estimate in Table 12 is relative to public and private investment, the former not being the total public spending (excluding expenditures on items like subsidies and maintenance).

TABLE 12: Trends in Investment in Agriculture and the Overall Economy

	AVERAGE ANNUAL INVESTMENT IN AGRICULTURE			AVERAGE ANNUAL INVESTMENT IN THE OVERALL ECONOMY			SHARE OF AGRICULTURE IN TOTAL INVESTMENT, %
DECADE/YEAR	PUBLIC	PRIVATE	TOTAL	PUBLIC	PRIVATE	TOTAL	
1950s	n/a	n/a	4,370	n/a	n/a	25,508	17.9
1960s	2,904	3,929	6,833	21,281	27,577	48,858	13.9
1970s	4,851	7,297	12,149	33,511	44,690	78,201	15.3
1980s	6,443	7,840	14,283	57,539	71,914	1,29,454	11.4
1990s	4,837	12,299	17,136	74,265	1,48,627	2,22,892	7.9
2000–06	5,237	17,184	22,387	85,327	2,27,216	3,12,543	7.4
2000–01	4,435	15,574	19,809	81,718	1,80,428	2,62,146	7.6
2001–02	5,488	14,872	20,360	82,824	1,68,840	2,51,664	8.1
2002–03	4,760	16,740	21,500	75,469	1,64,485	2,39,954	9.0
2003–04	5,699	18,487	24,186	82,998	2,04,946	2,87,944	8.4
2004–05	4,832	18,028	22,860	87,311	2,93,569	3,80,880	6.0
2005–06	6,206	19,400	25,606	1,01,640	3,51,028	4,52,668	5.7

Source: Adapted from Golait and Lokare (2008). Data computed from National Accounts Statistics and Agricultural Statistics at a Glance, Ministry of Agriculture, Government of India. The Golati and Lokare paper can be found at http://rbidocs.rbi.org.in/rdocs/Content/PDFs/cap_ad.pdf.

Example 13: FUNCTIONAL ALLOCATIONS

Functional composition of sector expenditure provides an additional means of understanding allocative efficiency in terms of priorities, level, and balance. Public funds should be allocated to obtain the highest social payoffs for growth and poverty reduction. This first step is determining the functional composition of spending. Valdes (2008a) provides estimates on the composition of general services and supports estimates in selected countries using various functional aggregates (Table 13).

TABLE 13: Composition of General Services Support Estimates in Selected Countries (% avg. 2004–05)

ITEM	MEXICO	BRAZIL	CHILE	UNITED STATES	EUROPEAN UNION	NEW ZEALAND	SWITZERLAND
Research and development	16.2	30.7	23.0	5.9	16.4	40.3	18.1
Agricultural schools	21.5	13.7	1.1	0.0	7.8	8.6	3.7
Inspection services	16.5	3.7	9.3	2.6	6.0	32.3	2.4
Infrastructure	13.8	44.5	55.2	14.0	42.4	18.4	18.1
Marketing and promotion	31.2	0.4	11.0	70.5	19.5	0.0	11.2
Public stockholding	0.0	6.9	0.0	0.4	7.3	0.0	8.6
Miscellaneous	0.7	0.0	0.8	6.6	0.6	0.2	37.9
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source: Valdes (2008a) estimates, based on OECD PSE/CSE database, 2005 and 2007.

TABLE 14: Functional Composition of the Uganda Agriculture Budget (%, 2005/06–2007/08)

	BUDGET ALLOCATIONS			AVERAGE OVER THE PERIOD
	2005/06	2006/07	2007/08	
Research	17	19	23	20
Advisory services	30	45	41	39
Livestock disease	9	7	4	7
Plant pests and diseases	1	1	0	1
Livestock and fish regulatory services	2	2	2	2
Planning and policy	2	2	1	2
Institutional development	4	1	0	2
Water capacity building	3	4	4	4
Seed capacity development	9	3	3	5
Processing and marketing	7	2	2	3
Physical infrastructure	12	14	18	15
Promotion	3	1	1	2

Source: Uganda PER (World Bank 2010b).

Another example is the functional composition in the Uganda agricultural PER (World Bank 2010b). The PER presents a broad functional composition of sector expenditure and changes in these over time (Table 14).

The public expenditure can also be grouped into the categories used by OECD for constructing its Producer Support Estimates. The expenditures are divided into payments to producers and general sector support. The payments to producers include the payments based on (i) outputs, (ii) input use (variable input use, fixed capital, and on-farm services), (iii) current area planted or animals numbers (coupled support), (iv) noncurrent area planted (decoupled support), and (v) income support. The general support services include (i) agricultural research, (ii) training and technical assistance, (iii) extension services, (iv) rural infrastructure, (v) marketing, (vi) public stocks, and (vii) inspections and veterinary services The database for all OECD and selected non-OECD countries can be accessed at www.oecd.org.

Example 14: CAPITAL VS. CURRENT

Development expenditure is often falsely assumed to consist of only or mainly capital spending. In many developing countries, especially in Africa, the development budget includes little capital spending but mainly nonwage current spending. An economic decomposition of public spending in the Uganda agriculture PER (World Bank 2010b) illustrates that development expenditure makes up about 80 percent of the agriculture budget in Uganda but is heavily oriented toward nonwage recurrent expenditures rather than toward capital expenditures (Table 15). Often the clear split between capital and current spending is not directly available in the ministry budget, and additional estimates are needed to ensure accurate calculations.

TABLE 15: Economic Composition of MAAIF's Budget (Excluding Grants and Domestic Arrears), 2005/06–2008/09 (Ush billions)

	2005/06			2006/07			2007/08			2008/09		
	REC	DEV	TOTAL	REC	DEV	TOTAL	REC	DEV	TOTAL	REC	DEV	TOTAL
Wage bill	2.5	6.4	**8.9**	2.5	8.3	**10.8**	2.5	7.7	**10.2**	2.6	5.3	**7.9**
Nonwage current	1.9	41.3	**43.2**	2.3	39.2	**41.5**	4.0	45.6	**49.6**	4.3	35.3	**39.6**
Capital outlays	0.0	17.2	**17.2**	0.0	11.0	**11.0**	0.0	19.4	**19.4**	0.0	13.2	**13.2**
MAAIF budget	**4.4**	**64.9**	**69.3**	**4.8**	**58.5**	**63.3**	**6.5**	**72.7**	**79.2**	**6.9**	**53.8**	**60.7**

Rec = recurrent, Dev = development

Source: Uganda agriculture PER Task Team estimate, based on MoFPED (various years).

TABLE 16: Economic Composition of Agricultural Sector Budget (Excluding Local Governments) in Tanzania, 2010/11 (Tsh Billions)

	DEVELOPMENT	RECURRENT	TOTAL	% OF TOTAL
CURRENT				
Wage bill	9.2	22.7	31.9	9.0
Goods & services	49.7	121.5	170.9	48.4
Maintenance	7.9	1.3	9.2	2.6
Current transfers	51.5	58.2	109.7	31.0
Total current expenditure	**118.1**	**203.5**	**321.7**	**91.1**
CAPITAL				
Infrastructure	8.9	0.1	9.4	2.6
Equipment	6.8	1.4	8.2	2.3
Other capital	7.0	2.5	9.5	2.7
Studies	4.0	0.5	4.5	1.3
Total capital expenditure	**26.7**	**4.9**	**31.6**	**8.9**
Total	**144.8**	**208.4**	**353.2**	**100.0**

Source: Zorya and Francken (2010).

TABLE 17: Share of O&M in Recurrent and Total Expenditure in Agriculture

COUNTRY	O&M (AS % OF RECURRENT AGRICULTURAL EXPENDITURE)	O&M (AS % OF TOTAL AGRICULTURAL EXPENDITURE)
Ethiopia (2002–06)	34	13
Kenya (2002/03)	25	20
Ghana (2002–04)	11	6
Turkey (1999–2003)	32	2
Vietnam (1997–2002)	25	6
Lao PDR (2002–04)	38	2

Source: Ghana and Kenya from Akroyd and Smith (2007); remaining countries from PERs.

A similar situation is found in the Tanzania agriculture PER (Zorya and Francken 2010), where in 2010/11, the capital spending made up only 18 percent of the development budget and 9 percent of the total sector budget, compared to a 40 percent share of the development budget in the total sector budget (Table 16).

An important recurrent spending item linked to maintaining capital investment is spending on operations and maintenance. There is a wide variation in the share of O&M spending across countries shown in Table 17, reflecting differences in sector priorities as well as perhaps inconsistencies in reporting expenditures across countries (as in the Uganda development expenditure above).

Example 15: WAGE VS. NONWAGE

Further disaggregation of current spending into wage and nonwage spending can provide more insights into spending efficiency. Following the Uganda example (World Bank 2010b), Table 18 provides the wage and nonwage decomposition of the development budget. Goods and services (comprising seeds, fertilizers, pesticides, and other agricultural input) grew from 49 percent of the nonwage budget in 2005/06 to 80 percent in 2008/09 (Table 18). Similarly, disaggregation of the capital outlays provides some interesting insights. The largest infrastructure elements are livestock and wholesale markets, rural communal roads and bridges, and machinery and equipment. Investment in irrigation was extremely low.

TABLE 18: Decomposition of Wage vs. Nonwage MAAIF Budget, 2005/06–2008/09 (Ush Billions)

	2005/06	2006/07	2007/08	2008/09	AVERAGE	% SHARE
Wage bill	***6.41***	***8.30***	***7.70***	***5.30***	***6.93***	***11.1%***
Salaries	0.90	0.99	1.16	0.80	0.96	1.5%
Allowances	5.51	7.21	6.44	4.50	5.97	9.3%
Nonwage current	***41.30***	***39.16***	***45.58***	***35.30***	***40.33***	***64.6%***
Goods and services	20.39	18.47	30.63	28.14	24.41	39.1%
Medical and veterinary supplies	3.04	1.72	0.80	0.68	1.56	2.5%
Capital outlays	***17.17***	***11.03***	***19.41***	***13.23***	***15.21***	***24.3%***
Nonresidential buildings	8.16	4.47	10.03	4.75	6.85	11.0%
Other structures (markets)	n/a	2.51	5.93	5.30	4.58	7.3%
Machinery and equipment	2.21	0.25	0.28	0.02	0.70	1.1%
Livestock	0.64	0.30	n/a	n/a	0.23	0.4%
Irrigation	n/a	0.28	0.20	0.01	0.12	0.2%
Roads and bridges	4.98	2.70	0.90	0.69	2.31	3.7%
Land	1.18	n/a	2.00	1.15	1.15	1.8%
Development budget	***64.87***	***58.49***	***72.69***	***53.83***	***62.47***	***100.0%***

Source: World Bank 2010b AgPER Task Team estimate, based on MoFPED (various years).

Example 16: PUBLIC VS. PRIVATE

Many agriculture PERs have not classified expenditures as public or private goods, thereby bypassing an important opportunity to engage government planners and policy makers in an important policy discussion on the appropriate and evolving role of the state and the corresponding emphases on public and private goods in public expenditures. A practical issue in classifying expenditures by type of good is that the PER team must obtain data that are disaggregated to the activity level to make more precise classifications while recognizing that if disaggregated data are not available, expenditures may have to be attributed to more than one expenditure category. Below are two examples drawn from the Mexico (World Bank 2009a) and Honduras (Anson and Zegarra 2008) agricultural public expenditure reviews that classified spending categories by public and private.

The Mexico agriculture public expenditure (World Bank 2009a) presents two tables that classify expenditures along public and private goods:

1. *Public goods:* (see page 15, Table 2–2, of Mexico PER) presents a breakdown of these programs in the *Programa Especial Concurrente para el Desarrollo Rural Sostenible* (PEC) (Mexico's public expenditure program for ARD, funded by the federal government) according to three subtypes of public goods (social, productive, and indirectly productive). Included here are programs typically provided by governments in market economies, generally because they supply goods or services whose consumption is neither excludable nor rivalrous. These programs usually include investments like rural infrastructure (excluding on-farm structures) and general social or productive services such as rural education and health, telecommunications, information, training and research systems, technology transfer to small producers, sanitary systems, natural resource conservation and environmental programs, emergency programs, and operational budgets of institutions.
2. *Private goods:* (see page 16, Table 2–3, of Mexico PER) presents the breakdown of PEC expenditures according to private goods programs, again broken down into three subtypes (social, productive, and indirectly productive). Included here are programs that are usually provided (or could be provided) by the private sector in market economies (mostly because they supply goods or services whose consumption is excludable and rivalrous) and also government programs that provide measurable subsidies to individuals or families usually under some targeting criteria. Included in this category are, among other

things, subsidies to on-farm productive infrastructure and equipment, subsidies to rural credit and agricultural insurance, input support, marketing support, and compensatory cash transfers. It should not be assumed that government funding of private goods is necessarily undesirable. There are private goods that are productivity enhancing, and it may make sense for government to invest in them for policy purposes, even if they consist of measurable subsidies to individuals or families. This is, for instance, the case with *Oportunidades,* which enhances human capital, and with many *Alianza* subsidies, which enhance the productive potential of farms.

The Honduras agriculture public expenditure program (Anson and Zegarra 2008) classified expenditures using the three-category typology of agricultural expenditures employed by FAO in a study covering 16 Latin American countries (Table 19). It grouped items of agricultural public expenditure into three categories: private goods, public goods, and equity and poverty-reduction-oriented goods. Some items of expenditure were assigned to more than one category. For instance, irrigation was classified as a private and public good (with 50 percent of expenditures in each category). Integrated rural development expenditures were classified as equity-enhancing (75 percent) and as a private good (25 percent). These are some of the judgments that must be made for this empirical classification. The classification is as follows:

TABLE 19: Classification of Public Expenditure by Private, Public, and Equity and Poverty-Reduction Oriented

PRIVATE GOODS	PUBLIC GOODS	EQUITY AND POVERTY-REDUCTION ORIENTED
• Commercialization • Production promotion • Forestry promotion • Fishing and aquaculture promotion • Targeted rural productive promotion (50%) • Irrigation (50%) • Integrated rural development programs (25%)	• Training • Communication and information services • Soil and natural resources conservation • Rural electrification • Irrigation (50%) • Land programs (agrarian reform) • Associative promotion • Housing • Water rights regulation • Agricultural property regularization • Education • Research • Justice • Rural roads • Phyto- and zoo-sanitation • Recreation and sports	• Targeted rural productive promotion (50%) • Integrated rural development programs (75%) • Public services in rural areas • Social infrastructure for rural communities • Promotion of community groups • Promotion of ethnic groups • Promotion of women • Promotion of rural families • Basic sanitary conditions in rural areas (water and sanitation) • Water for rural communities • Health and nutrition

Source: Anson and Zegarra 2008.

Example 17: STATE-OWNED ENTERPRISES

It has generally proven successful for the public sector to sharply reduce its expenditure allocations to state-owned enterprises (SOEs) unless they perform a public function or respond to genuine market failures. Governments are therefore substantially curtailing public funding for SOEs, especially for revenue-earning entities, which have increasingly been privatized.

Expenditure allocations to SOEs tend to have a double-displacement effect: they displace expansion of the private sector and markets; and they displace expenditures on vital public goods, which the private sector has few incentives to provide. This double displacement has been documented in Vietnam, where a large number of SOEs are active in the agricultural sector. The Vietnam Agriculture PER Integrated Fiduciary Assessment (World Bank 2005b) reports that 319 SOEs, excluding irrigation-management companies and state forestry enterprises, are active in the agricultural sector. Of this total, just 28 provide public goods. The remainder offer services in exchange for fees from users; of these, 171 are considered profitable, 43 just manage to cover their costs, and 105 are unprofitable. The latter are supported by loans from state-owned commercial banks and allocations from the state budget.

Over the four years prior to 2003, the debts of agricultural SOEs doubled and reached twice the size of the agricultural

budget. The Vietnam Agriculture PER Integrated Fiduciary Assessment (World Bank 2005b) suggested that a 2.5 percent reduction in the debts of SOEs would result in sufficient savings to double spending on research and extension. While some of these enterprises provide public services, particularly in remote areas, many engage in activities that could be provided by the private sector (e.g., agricultural marketing and processing). The crowding out of the private sector has the effect of discouraging private investment, which is desperately needed to maintain growth and competitiveness in agriculture.

Example 18: NATIONAL VS. SUBNATIONAL

The degree to which disaggregated data are compiled at the subnational level varies according to the relative importance of subnational expenditures and the availability of data. Local governments receive funding for providing agricultural services from a number of sources. The Uganda agricultural PER (phases 1 and 2) (World Bank 2007a) provides a detailed table of allocations between central and local governments (Tables 20 and 21). Depending on the funding source, different funding channels are used to direct funds to local governments. Of these, the most significant sources are the conditional grants (A2 and A3).

TABLE 20: Sources and Channels of Funding for Agriculture and Local Government

FUNDING SOURCE	FUNDING CHANNEL	EXAMPLE
A) Government Transfers	A1) Unconditional transfers	• Unconditional Grant
	A2) Conditional nondiscretionary transfers	• Agricultural Extension Grant (Wage or Nonwage) • National Agriculture Advisory Service
	A3) Conditional discretionary transfer	• Local Government Development Fund • Plan for the modernization of Agriculture Nonsectoral Conditional Grant
B) Projects	B1) Central projects implemented through LGs	• Area Agricultural Modernization Program • District Development Support Program
C) Direct Funding to Communities	C1) Donor/NGO	• Northern Uganda Social Action Fund • Sasakawa–Global 2000
D) Local Revenue	D1) Locally generated revenue	• Licenses, fees, market dues

Source: World Bank (2007a).

TABLE 21: District Conditional Grants Transferred to Local Governments for Agriculture (Based on COFOG Definition) 2001/02–2005/06 (Ush Billions)

GRANTS TRANSFERRED TO LOCAL GOVERNMENTS	2001/02	2002/03	2003/04	2004/05	2005/06
Agricultural Extension (wage)	2.16	2.83	3.19	3.89	3.85
Agricultural Extension (nonwage)	2.90	2.73	2.81	2.92	2.78
National Agriculture Advisory Service (District)	2.42	9.32	13.75	15.13	24.87
Plan for the modernization of Agriculture Non Sectoral Conditional Grant	4.44	4.09	4.20	4.01	4.22
Local Government Development Fund	1.62	1.06	1.69	1.42	0.67
Total-District Grants	13.4	20.03	25.64	27.37	36.39
Total COFOG agriculture	*131.23*	*140.64*	*147.45*	*108.11*	*148.11*
% transferred to LGs	*10.3*	*14.2*	*17.4*	*25.3*	*24.6*

Source: World Bank (2007a).

The Lao PDR agriculture PER (Cammack et al. 2008) illustrates the high proportion of agricultural expenditures allocated through provincial governments relative to the central government (about 70 percent versus 30 percent on average, although the proportion varies by year) (Table 22). Knowledge of the relative weights of spending at the national and subnational levels can help guide the level of attention in PERs on understanding the subnational budget processes. Where agricultural expenditures at subnational levels of government are comparatively large or growing, it is vital to ensure that these expenditure data are collected. If the data are not being collected systematically, the need for a system to collect, preserve, and distribute these data should be a key element of the expenditure analysis.

TABLE 22: Evolution of Agriculture Expenditures, Lao PDR (in Constant 2000/01 KN Billion)

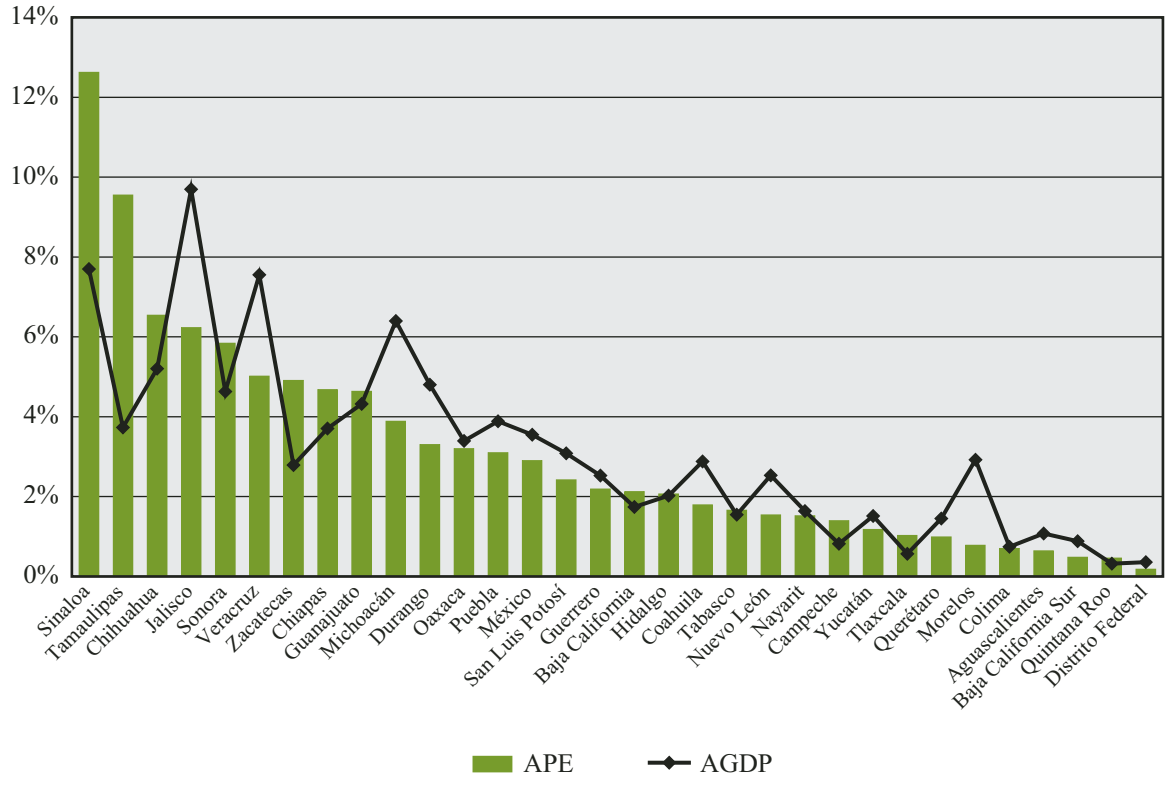
	2000/01		2002/03		2004/05	
	CONSTANT 2000/01 KN BILLION	%	CONSTANT 2000/01 KN BILLION	%	CONSTANT 2000/01 KN BILLION	%
Provinces	509.3	86.5	332.1	83.3	140.3	65.7
Centre	79.7	13.5	66.5	16.7	73.3	34.3
Total Agriculture	589.0	100.0	398.7	100.0	213.6	100.0
Total All Sectors	**3547.8**		**3453.1**		**3714.0**	

Source: Cammack et al 2008.

Example 19: GEOGRAPHIC ALLOCATIONS

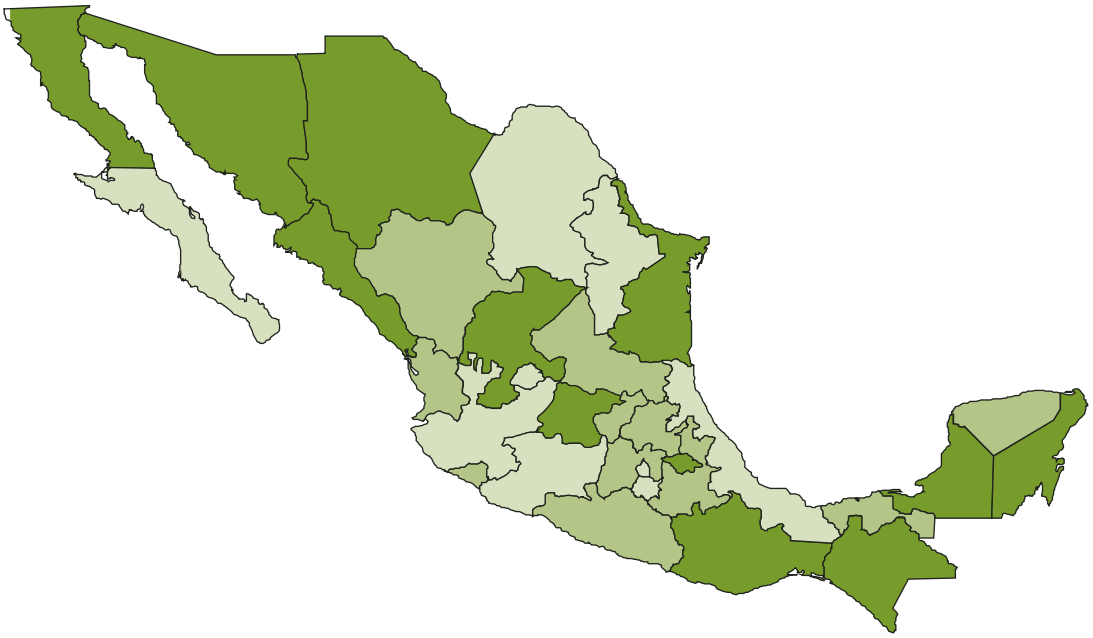
The Mexico agriculture PER (World Bank 2009a) shows that the allocation of agriculture public expenditure by states is correlated to the size of their agricultural sectors. Figure 6 shows that the distribution of Agricultural Public Expenditure (APE) and agricultural GDP are closely correlated. In fact, the correlation coefficient is 0.70, although some states (Tamaulipas, Zacatecas, Tlaxcala, Sinaloa, etc.) receive disproportionately higher shares in relation to their contribution to agricultural GDP, while others (Morelos, Baja California Sur, Aguascalientes, etc.) receive disproportionately lower shares. Figure 7 shows a map highlighting the APE received by states relative to their agricultural GDP. It shows that the states receiving higher proportions of APE are those in the northern and southern parts of the country, whereas the majority of the central states receive less.

FIGURE 6: State Share of National Agricultural GDP and Agriculture Public Expenditure (2005–06) % (States ordered from left to right by descending level of State Agricultural Public Expenditure received in 2006)



Source: Scott (2008)

FIGURE 7: Map of Mexico Indicating the Share of Agriculture Public Expenditure Relative to Agriculture GDP (2006)



Dark green states = agriculture public expenditure is more than 16% of agricultural GDP (12 states)
Medium green states = agriculture public expenditure is between 15% and 11.1% of agricultural GDP (11 states)
Light green states = agriculture public expenditure is less than 11% of agricultural GDP (9 states)

Source: World Bank 2009a.

Example 20: SAMPLING SUBNATIONAL GOVERNMENTS

State and local governments in Nigeria account for about 46 percent of all public expenditure. The proportion is estimated to be even higher in the agricultural sector. The Nigeria Agriculture PER (World Bank 2008a) team collected expenditure data at the federal level as well as at the lower tiers of government. Because subnational data was not readily available from a central source, data on state and local government expenditures were collected at the local level.

Due to resource constraints, it was impossible to collect all statistics; therefore, a case study approach was preferred. Three states and three local governments were chosen for in-depth analysis, including data collection. The selection was based on the following considerations: (i) high importance of agriculture in the state's economy, (ii) capacity within the state's public institutions to provide information and data, (iii) expressed interest in collaborating with the agriculture PER team, and (iv) location in different geopolitical zones.

The nonexistence of historical data at the local level constrained the compilation of time-series data. The original study design called for the analysis to cover at least 10 years; however, because few data was available prior to 2000, the length of the past chronology was reduced. To compensate, results of other studies by the World Bank and IFPRI, which took a longer view and provided a historical perspective on the performance of the agricultural sector, were included in the analysis. The challenge then became that of integrating the statistics and results of other studies when trying to reach an overall assessment of sector performance and the possible role of public expenditures.

Example 21: OFF-BUDGET EXPENDITURES

Many countries have sizeable off-budget expenditures. Failure to consider these expenditures in PERs can yield a distorted view of public expenditure levels, composition, and impacts. Many off-budget allocations tend to be donor financing. Assessing the importance of these expenditures and identifying options for integrating (or at least accounting

TABLE 23: Disbursements to Uganda's Agricultural Sector by Two Off-Budget Donors, 2000/01–2006/07 (Ush Billions) (*agriculture* defined according to COFOG parameters)

	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07
USAID	15.16	10.32	15.29	23.22	20.86	19.55	13.77
Sida	1.75	1.32	2.24	0.81	0.68	1.33	0.00
Total	**16.91**	**11.64**	**17.53**	**24.03**	**21.53**	**20.88**	**13.77**
COFOG total:	NA	131.23	140.64	147.45	108.11	148.11	NA
USAID/Sida as % of COFOG total for the agriculture sector	–	8.9	12.5	16.3	19.9	14.1	–

Source: USAID and Embassy of Sweden, Kampala, May 2007.

Note: NA = not available. Due to the nature of the data provided by the two agencies, it was not possible to review the items of expenditure to make sure that they complied with the COFOG definition of agriculture. Following discussions with the program officers, it was decided to include 100% of the USAID funding classified as "Agriculture" and none of the "Environment" funds, whereas 75% of Sida's "rural development/agriculture (natural resources and environment) disbursements" were included. Historical exchange rates were obtained from various UBoS annual reports and from http://ec.europa.eu/budget/inforeuro/index.cfm?Language=en.

for and tracking) them within the overall national budget are thus important aspects of an expenditure review, as the examples from Uganda and Russia indicate.

The Uganda Agriculture PER (phases 1 and 2) (World Bank 2007a) reports that off-budget funds from donors and NGOs contribute significantly to the overall funding of the agricultural sector, defined according to COFOG criteria. Table 23 summarizes development assistance provided by USAID and Sida, two important donors in the sector in Uganda. Neither of these agencies channels funds for agriculture through the national budget. Both operate autonomously, maintaining only ad hoc links to the MAAIF and its semiautonomous agencies. The table shows that the volume of funds provided to the sector by just these two off-budget development partners contributed an additional 10 percent to 20 percent to the total government budget over several years. In addition to USAID and Sida, several other development partners provide off-budget support to the sector, including GTZ, FAO (which also provide on-budget support), UNDP, France, and JICA (some of its interventions are also on-budget). Clearly it is difficult for the MAAIF to carry out its key functions and direct investments in support of sectoral development goals when agencies that provide significant sums of money to the sector operate independently, in many instances marginally working alongside the MAAIF and its staff.

At the same time, NGOs have become significant players in Uganda's agricultural sector, particularly in recent years through, among other things, the provision of free agricultural inputs to internally displaced people, particularly in the northern districts. Such inputs have included livestock, seed, plant cuttings, pesticides, veterinary drugs, farm tools, and crop processing equipment. Based on data collected by FAO (Food Security Group, 2007) during a survey of approximately 25 agencies providing agricultural inputs to approximately 300,000 households in Uganda's northern districts during the first season of 2007, it is estimated that the total value of inputs supplied amounted to almost Ush 9 billion. Given that agricultural inputs are also supplied in the second season, albeit to a smaller number of farm households, the total annual value of agricultural inputs provided by NGOs and other humanitarian agencies is estimated at approximately Ush 14.4 billion. This off-budget expenditure represents almost 10 percent of the total expenditure related to agriculture (defined according to COFOG criteria) in 2006/07. Care has to be taken to avoid double counting in aggregating NGO and donor off-budget expenditure, however, because a high proportion of NGO funding is provided by donors.

Once again, this is an important area of the agricultural sector over which neither the MAAIF nor the District Production and Marketing Directorates have any control. Nor do they have any powers or resources to regulate the provision of inputs to ensure that quality standards are being met and that all communities benefit equally from the resources being made available.

The Russia Agriculture PER (World Bank 2006b) highlights a different source of off-budget expenditures driven by government agencies themselves. These expenditures are significant in scale, nontransparent, and potentially highly distorting. Three types of entities in Russia work with off-budget expenditures and revenues: (i) government departments that

collect fees for services provided, (ii) state unitary enterprises, and (iii) state-owned enterprises. Allowing government agencies to collect fees for providing public services and having state-owned enterprises or state unitary enterprises provide public services on behalf of the government are not in themselves bad practices. However, the quality of services that these sources of revenue help finance needs to be subject to the same level of regulation and monitoring as directly budgeted expenditures. During the chaos of the 1990s, a pattern of loose controls on state-owned enterprises and state unitary enterprises led to a deficiency in the control and monitoring of these agencies. Of most concern is that very little information on revenues, expenditures, and services provided by these organizations is reported back to the government, and almost nothing is available for public review. Because most government agencies receive government budget funds, they are subject to tighter financial control and audit requirements than state-owned enterprises or state unitary enterprises.

Example 22: GENDER DISAGGREGATION

The Bank (World Bank 2009c) provides information on gender-budget analysis tools that are used to review general or mainstream budget expenditures (for instance, within the annual budget of a nation or of a specific sectoral program) or to review expenditures specifically targeted to groups of women or men to meet prioritized needs or promote equal opportunities. *Gender-budget initiatives* can be defined as "diverse efforts aimed at breaking down the government's budget in order to analyze its impact on women, men, girls, and boys, as well as on other axes of social differentiation (such as race, ethnicity, class, and caste). Their main purpose is to examine whether public expenditures are allocated in an equitable way, and hence promote gender equality" (Balmori 2003). They can also help to reshape government policy goals and resource allocation.

The Bank (World Bank 2007b) provides information on gender-informed public finance management. In the last decade, more than 60 countries have undertaken analyses of public budgets to assess differential incidence and its effect on men and women, as well as to measure their economic contributions (Table 24).

Different Approaches to Gender-Informed Budget Analysis

Approaches have differed in terms of focus, coverage, and methodology:

- The Women's Budget Initiative (WBI) in **South Africa** expanded its initial broad focus on the national budget to analyses of specific budgets for domestic violence prevention, treatment, housing, and child support grant programs, among others. The **Uganda** Gender Budget Project analysis covered the national budget by sector. In **Mexico**, the analysis focused on

TABLE 24: Seven Tools for Gender-Budget Initiatives and Examples of Their Use

TOOL	APPLICATION
Gender-aware policy appraisal	Designed to analyze policies and programs from a gender perspective and identify how these policies and the resources allocated to them are likely to reduce or increase gender inequalities.
Gender-disaggregated beneficiary assessment	Implemented to evaluate the extent to which programs or services meet the needs of actual or potential beneficiaries, as identified and expressed by the beneficiaries.
Gender-disaggregated public expenditure benefit incidence analysis	Used to evaluate the distribution of budget resources among women and men, girls and boys, by estimating the unit costs of a certain service and calculating the extent to which this service is being used by each group.
Gender-disaggregated analysis of the impact of the budget on time use	Designed to establish a link between budget allocations, the services provided through them, and the way in which different members within a household spend their time.
Gender-aware medium-term economic policy framework	Designed to incorporate a gender perspective into the medium-term frameworks of policy development, planning, and budgetary allocations, such as by disaggregating variables by gender, combining national income accounts and household income accounts, and highlighting and challenging gender-blind, underlying assumptions about how the economy works.
Gender-aware budget statement	Generated by government agencies for use in reports on the implications of their expenditures on gender-equity objectives.
Disaggregated tax-incidence analysis	Used to assess the differential impacts of taxation on women and men, as well as to evaluate the level of revenue raised in relation to the needs and demands for public expenditure.

Source: Balmori (2003).

antipoverty programs and public expenditure on health in several states. Korea and the Philippines analyzed women-targeted policies and activities at the local level. In Morocco, gender budgeting is being introduced also at the local level. In general, the more specific or focused the gender-informed budget exercise, the easier its implementation.

- Most efforts have covered public expenditures classified into (i) women-specific expenditures, (ii) gender equality expenditures in sectors or line ministries, (iii) mainstreamed government expenditures that provide goods or services to the whole community, and (iv) expenditures to achieve equity in public sector staff rosters. Some also extended coverage to revenues: the South African WBI looked at taxation to reduce bias against women, and a review of the value-added tax (VAT) in Uganda recommended tax relief on items used by women in the care economy.
- The most commonly used method takes the government's policy framework and examines it sector by sector, both in terms of utilization of budget expenditures and longer-term impacts on men and women. The Uganda analysis compared administration expenditures with public services that citizens received and proposed reallocations within and between sectors. The Mexico analysis focused on how gender-neutral programs recognized and addressed the limitations women face and whether they covered women's needs and built their capacities. Ideally, these analyses should cover the four dimensions of government budgets and their interaction: expenditure, revenue, the macroeconomics of the budget, and participation in budget decision-making processes.
- Tools have included gender disaggregated beneficiary assessments, public-expenditure benefit incidence analysis, and tax incidence analysis, among others. Chile has included gender as a cross-cutting theme in a performance-based national budget and is using incentives (salary bonuses) for public sector staff as a tool to achieve measurable results.
- The Bank has undertaken gender-disaggregated public expenditure reviews in a number of countries, including Cambodia, Ghana, Morocco, Paraguay, St. Vincent and the Grenadines, Vietnam, and Uganda. Most have combined the use of gender-disaggregated benefit incidence analysis with gender institutional analyses or gender impact assessments of public programs. The reviews have shown that undertaking gender analysis can contribute to better targeted, more efficient, and more equitable public expenditure.

Lesson and challenge. The main lesson from the experience with gender-informed budget analysis is that changing public policy priorities is a more complex process than pointing out gender differences and disparities in budgets. The implementation of budget initiatives requires upgrading the technical skills of budget officials and gender experts, raising public awareness of gender issues to ensure the sustainability of the initiatives, and supporting well-informed coalitions of NGOs for advocacy. Most importantly, effective government agencies are central to their implementation. The key challenge for gender-informed budget analysis and policy making is moving beyond gender-targeted interventions to full and sustained gender mainstreaming in the budget process.

Example 23: COST RECOVERY

Cost recovery has an important role in promoting more efficient use of limited resources and in contributing revenues to sustain public expenditures. It is always a challenge to recover the costs of supplying key goods and services, especially if they generate private goods, but cost recovery issues are worth pursuing in expenditure analysis.

From Mexico Water PER (World Bank 2006c): Agriculture uses 76 percent of the available water resources in the country but contributes only 1.9 percent of the water use fees and bulk water tariffs collected by the National Water Commission (Comisión Nacional de Agua, CONAGUA). Despite the water scarcity in many parts of the country, farmers pay only a portion of the costs involved in delivering irrigation water. In addition, water charges, although theoretically based on the volume of water used, are normally calculated per hectare because of the lack of water-measuring devices. The current water tariff structure does not fully cover the operation, maintenance, and depreciation costs of irrigation infrastructure. Also, farmers pay a small fee when their water use exceeds their concession. This fee does not take into account the opportunity cost of water, which would set the price at the marginal cost. Low water pricing and lack of measurement encourage

TABLE 25: Cost Recovery in Irrigation

	COLLECTION RATE	PERCENTAGE OF COST RECOVERED
Tunisia 1991	NA	70% of O&M costs
Turkey 1998	76%	37% of total costs
Colombia 1996	76%	52% of O&M costs
Mexico 1998–2002 (IDs)	90%	72% of O&M costs
Morocco 2004 (large-scale irrigation)	50–60%	54–190% of O&M costs (depending on the irrigation scheme considered)
Italy 1997	NA	60% of total costs
Jordan 1999	NA	50% of O&M costs

Source: Mexico Water PER (World Bank 2006c).

the excessive use and wasting of water, a situation that is certainly not unique to Mexico. Many countries highly subsidize the cost of irrigation water, with farmers paying only part of the O&M costs. Cost recovery for O&M of irrigation systems is generally better in Mexico than in other developing countries (Table 25).

Recommendations from the Mexico Water PER (World Bank 2006c): increase cost-recovery level to *at least* recover fully O&M costs requirements, taking into account appropriate maintenance needs, and curb the over-exploitation of water resources by (i) eliminating or decoupling the energy subsidy to the use of electricity, (ii) introducing a small water use fee for irrigation in the areas that suffer the most from water resources scarcity, and (iii) generalizing wherever possible volumetric water pricing.

Vietnam Irrigation (World Bank 2005b): While in theory cost recovery from users is expected to fund O&M fully, in practice this is not occurring. Subsidies from the government budget are still a major source of funds for O&M. These subsidies, however, are insufficient to cover the deficit, and MARD estimates that the state budget allocation to maintain irrigation infrastructure is only about 60 percent of the amount needed. Funding for operating and maintaining the water distribution system, from the headworks to the village, is a provincial responsibility under Ordinance 32 (April 2001) and Decree 143-CP (November 2003) on Exploitation and Protection of Irrigation Schemes. Decree 143-CP obliges the provinces to set service fees at a level to cover the normal operating expenses of their irrigation management companies. The decree allows for an exemption or reduction of fees in localities affected by a high incidence of poverty or by disasters. However, it does not specify a mechanism by which such exemptions should be financed. Consequently, these important measures are still to be implemented by provincial people's councils and related central agencies.

Two other problems are the low level of fees actually set and the low collection rates. The fees are set by the Provincial Peoples' Committee with the approval of the Provincial Peoples' Council and are usually set at a compromise level below the Irrigation Management Companies' (IMC) actual costs. Collection rates are 80 percent to 90 percent in low-cost gravity schemes (Mekong Delta) and 50 percent to 70 percent in high-cost pump schemes (Red River Delta) and in areas where poverty is high. As a result, the available funds meet only about half of the estimated necessary annual maintenance, with budgets focused on emergency repairs rather than on a more cost-effective program of routine maintenance.

Reform is conceptually simple but difficult to implement. Raising fees to a level that fully covers actual costs and ensuring the collection of 100 percent of the fees due would be impractical, at least in the short to medium term, on both poverty grounds and on grounds that it would force users to pay for major system inefficiency. Three steps toward a long-term goal of full cost recovery would be (i) correct accounting of real costs of O&M to quantify the deficit, (ii) fully fund this deficit through increasing the O&M share of public expenditure in irrigation on an agreed schedule that would phase out the subsidy as the efficiency of service delivery improves, and (iii) make payments from the government directly to poor communes to pay irrigation fees to the IMCs rather than exempt poor communes from fees. The present system of paying the subsidy to the provinces does not ensure that the subsidy is passed on to the IMC. This results in service deterioration and impacts IMC

efficiency. A fourth step would be to introduce full cost recovery packaged with rehabilitation and improved service delivery. Pilots in Vietnam have shown that participatory irrigation management is resisted by farmers if the section being turned over to them is in poor condition).

Example 24: SIMPLE INDUCTIVE ANALYSIS

A simple review of spending allocation data and comparisons with international standards can reveal important insights for policy consideration. Here are some examples.

Capital vs. Current Spending

The economic composition of expenditure matters for growth. Using data from 43 developing countries over a 20-year period, Devarajan, Swaroop, and Zou (1996) argue that reallocating funds from capital to current expenditures, while keeping the overall level of expenditure constant, can foster long-term economic growth. In Turkey, for example, 24 percent of rural spending goes to irrigation. The recurrent share of irrigation investment is 44 percent, while the share of O&M in recurrent expenditures is only 2 percent (World Bank 2005a Turkey). However, O&M expenditure in irrigation has been found to yield higher returns than new capital investments. In India, for example, rates of return for O&M expenditures on irrigation have been found to be between 29 percent and 40 percent (Pradhan 1996). Diminishing marginal returns on excessive capital investments render them unproductive. This argument could also be made for excessive recurrent spending, especially when salaries and wages represent a large share of recurrent expenditures. For example, in India, the intensity of current spending (the share of expenditure in agricultural state domestic product) outweighs the intensity of capital expenditures by more than double (an average for all states of 5.6 percent for current and 2.2 percent for capital expenditures from 1998/99 to 2000/01). In the state of Punjab in India, more than 80 percent of expenditures are for salaries, leaving little for operational expenses. About 87 percent (in 2001/02) of the O&M expenditure for irrigation goes to wages and salaries, thus neglecting actual work (World Bank 2003).

Wage vs. Nonwage

Though an efficient capital or recurrent balance is country-specific, the composition of recurrent spending across countries is dominated by salaries and wages. Allocating funds to other components of recurrent expenditures, such as O&M, can bring high returns (Devarajan, Swaroop, and Zou 1996). However, there is no predetermined norm for determining the optimal level of spending on O&M. For example, the effectiveness of agricultural services is believed to be reduced if expenditures on wages and salaries exceed 60 percent of the total recurrent budget, leaving O&M with a small share of total agricultural expenditure (World Bank 2005a). While international benchmarks suggest a ratio of salary-operational expenditure of 60 to 40 (or 1.5:1), the ratios for salary-nonsalary costs in Pakistan's North West Frontier Province for 2002/03 were at least 3 to 1 and as much as 32 to 1 for the Agriculture and Livestock Departments (World Bank 2004 Pakistan). In Bangladesh, 90 percent of the revenue budget of the Department of Agriculture Extension goes to staff salaries. To improve the effectiveness of extension services in the country, it is recommended that at least 30 percent of the total budget of the Department is allocated to cover operational costs of the service (World Bank 2005c).

Example 25: SIMPLE CONGRUENCE ANALYSIS

The Honduras agricultural PER (Anson and Zegarra 2008) includes a simple assessment of whether the stated agricultural strategy—the Special Food Security Program *(Programa Especial de Seguridad Alimentaría,* PESA)—is consistent with actual budgetary allocations to the agricultural sector. A simple methodology was used: the expenditures of the various sectoral agencies in 2004 were aggregated and allocated according to strategic themes outlined in PESA, which enabled an estimate of the extent of alignment of budgetary allocation with the program (in percentage terms). Expenditures on rural development were excluded because their disaggregated levels were not known. The results are reflected in the table below, showing that only about 30 percent of all sectoral expenditures are in line with PESA strategic priorities (Table 26). This pattern is common to many countries. This example illustrates a simple congruence analysis that has been used in several analyses of public spending.

TABLE 26: Comparison of Budgetary Allocation to Strategy Elements in Honduras, 2004

STRATEGIC THEME ACCORDING TO THE SPECIAL FOOD SECURITY PROGRAM	AMOUNT (US$ MILLION)
Market Development and Trade Agreements	–
Agricultural Phytosanitary	0.15
Technology Innovation	3.00
Agricultural Education	1.17
Agricultural/Rural Finance	6.70
Development of Rural and Irrigation Infrastructure	5.30
Sustainability of Natural Resources	20.0
Access to Land, Judicial Security, and Social Equity	6.75
Subtotal	**43.07**
Total Public Expenditures (Five Years)	**144**
Proportion of Public Expenditure to Support Strategic Themes	**30%**

Source: Anson and Zegarra (2008).

Example 26: EFFICIENCY GAINS FROM SWITCHING FROM PRIVATE TO PUBLIC GOODS

The below extract from the Mexico PER (World Bank 2009a) highlights the efficiency gains from switching from private to public goods (Valdes 2008b).

> Recent econometric work finds that for many countries in Latin America and the Caribbean it is crucial to shift rural public expenditures from large subsidies going to specific groups of producers and towards the increased provision of public goods. To illustrate just how important the mix of private and public good spending can be, Ramon López[14] used the database from the Food and Agriculture Organization's Latin American and Caribbean Regional Office to classify expenditures by several countries over 1985–2001. Public goods included technology generation and transfer, soil conservation, sanitary and phytosanitary protection, communications and information services, rural infrastructure, and social services (education and health). Private goods included commodity-specific items, marketing assistance and promotion, subsidized credit, and irrigation.

The key message from the analysis is that while government expenditures do have a positive effect on agricultural per capita income, the composition of those expenditures is important. The long-run effects on per capita agricultural GDP of increasing the share of expenditures going to subsidies were large and negative (and highly statistically significant). A reallocation of 10 percentage points of public expenditures from subsidies to public goods would increase per capita agricultural income by about 2.3 percent *without increasing total expenditures*. On the poverty side, the analysis found that the mix of expenditures had no statistically significant direct effect on poverty, in part because of the poor state of rural poverty data. The main impact of the mix of public expenditures on poverty is indirect, through the effect on per capita agricultural income. Overall, the findings from Lopez's cross-country analysis for Latin America are consistent with other analyses for India and China, where spending on rural roads and agricultural research was found to have large poverty alleviation effects.

The allocation criteria for expenditures are not complex in theory—public goods should be a priority, and the coverage, targeting, and cost-effectiveness of transfers should be part of the evaluation of any project. But in practice it is complicated to design public spending because the policy maker requires empirical measures of the relevant "elasticities," reflecting how agricultural growth and poverty reduction respond to expenditures on various program categories. From a national development perspective, policy makers require information on how national welfare responds to agricultural development. Policy design is further complicated by the heterogeneity of farming conditions with respect to initial product mixes and levels of productivity, access to

14 The work by Ramon Lopez of the University of Maryland was pioneering in this area and first developed for the WB regional report "Beyond the City, The Rural Contribution to Development" in 2005, and later published as Lopez and Galinato (2007).

infrastructure, soil fertility, and access to markets. This heterogeneity stems in part from the natural resource base and geography, but also in part from the approach governments have taken in the past to expenditures on public goods. Past investments in infrastructure and institutions, such as telecommunications and transport, and the support network of finance, research, and extension, will determine the ability of small-scale farmers to take advantage of opportunities in both domestic and international markets. Finally, although the role of governments as providers of public goods is well-established, the performance of governments is often disheartening.

Example 27: MARGINAL RETURNS TO PUBLIC SPENDING ACROSS SECTORS

Estimating marginal returns to public spending across sectors is a fairly data-intensive exercise. IFPRI has used this approach in many countries with results summarized in Fan et al. (2007). The country studies typically develop a simultaneous equation model to estimate the various effects of government expenditure on production, inequality, and poverty through different channels. Through subsequent differential equations, they estimate the marginal impact of different types of government expenditures. For example, for the study on India, marginal returns for an additional Rs 100 billion of government expenditure were estimated for various types of public spending. These estimates can be used to compare the relative benefits of equal incremental increases in expenditure on different items (Table 27).

TABLE 27: Marginal Returns to Public Spending in India

	POVERTY (% POINT)		AGRICULTURE TOTAL FACTOR PRODUCTIVITY (% POINT)		NUMBER OF POOR REDUCED	
	(PER 100 BILLION RUPEES AT 1993 PRICES)				(PER MILLION RUPEES)	
TYPES OF SPENDING		RANK		RANK		RANK
R&D	–0.45	2	6.01	1	84.5	2
Irrigation	–0.05	7	0.61	4	9.7	7
Roads	–0.65	1	2.37	2	123.8	1
Education	–0.22	3	0.62	3	41.0	3
Power	–0.003	8	0.12	8	3.8	8
Soil and Water	–0.12	5	0.43	6	22.6	5
Rural Development	–0.13	4	0.49	5	25.5	4
Health	–0.09	6	0.38	7	17.8	6

Source: Fan, Hazell and Thorat (2000).

Example 28: ELASTICITY APPROACH

An IFPRI analysis used an elasticity approach to estimate the agricultural public spending required to achieve the agricultural growth needed to meet the first Millennium Development Goal. Estimates were provided by individual African countries (Fan *et al* 2008). The IFPRI study used both growth-poverty and expenditure-growth elasticities to estimate the required agricultural growth rates and corresponding public expenditures needed to achieve this goal. The required agricultural growth rates are estimated using elasticities of poverty with respect to both agricultural and non-agricultural growth, and the additional spending needed in agriculture is calculated based on these growth rates and the expenditure elasticities of growth. The model simulations account for the impact of the nonagricultural sector by using nonagricultural-growth elasticity of poverty. The share of the nonagricultural sector is expected to increase over time, and thus its impact on poverty reduction may also increase. Therefore, the study also considers the nonagricultural sector in order to avoid overestimating the agricultural growth and spending required to achieve the first Millennium Development Goal. The simulations were conducted for the 30 countries in Sub-Saharan Africa in which the agricultural sector contributes at

least 10 percent of the gross domestic product (GDP) and where the majority of the poor depends upon agriculture for their livelihood. The choice of countries was governed by the availability of expenditure data. (More details on the methodology can be found at: http://www.ifpri.org/sites/default/files/publications/ifpridp00751.pdf.)

Example 29: UNDERSTANDING THE POLITICAL ECONOMY OF PUBLIC SPENDING

The determination of a country's public budget and its vote in parliament (for example) is a political process. Understanding the political economy of public spending can help guide recommendations for improvement. The *World Development Report 2008: Agriculture for Development* highlights this aspect for India and Zambia as presented here. The recent book *Political Economy of Agricultural Price Distortions*, edited by Kym Anderson (2010), provides the rich set of conceptual and econometric studies using both the new developments in general political economy theory and the new set of panel data on agricultural distortions to improve understanding of why governments intervene in agricultural markets in the way they do.

Birner, Sharma, and Palaniswami (2006) reports on issues related to electricity subsidies to agriculture in India. With 55 percent to 60 percent of India's irrigated land supplied by groundwater, electricity for tube-well pumps is an important input. Most state governments provide electricity to farmers at a subsidized flat rate, and often for free. But the quality of service is poor because of erratic and limited supply and voltage fluctuations, which can result in crop losses from forgone irrigation and damaged pumping equipment.

The electricity subsidies to agriculture are also fiscally draining and environmentally damaging. In Punjab, electricity subsidies to agriculture in 2002/03 were 7 percent of state expenditures. Together with other policies that promote water-intensive crops such as rice, the electricity subsidies contribute to the overexploitation of groundwater. About 60 percent of the state's groundwater resources are already overexploited, with extraction rates exceeding recharge rates, which is clearly not sustainable.

Increasing electricity prices and introducing metering are technically and economically sound, but they are not politically feasible, so far. Larger farmers obviously benefit more from the subsidy, and they have political influence, but there is more to these subsidies.

The introduction of subsidies followed massive farmer protests against electricity price increases in the 1980s. Now, their continuation responds to the increasing income disparity between the agricultural and nonagricultural sectors, worsened by India's relatively low agricultural growth rate. Making electricity free is a politically convenient instrument to transfer income to the agricultural sector. Unlike other policy instruments, it does not require implementation by the (often ineffective) public administration. Farmers who buy water from pump owners—a considerable portion of farmers in most states—potentially benefit from the subsidy, too, which increases the attractiveness of this policy instrument for politicians who want to win state elections.

Addressing jointly the quality of electricity supply and its cost is a key element of reforming the subsidy policy. However, because of widespread power theft and losses, states lack the credibility to deliver better service in exchange for higher prices. One option would be to decentralize the energy supply to local governments or community groups, relying on local accountability to improve electricity quality. Elite capture must still be prevented, but this community-oriented option has the potential to break the political impasse. This exemplifies a trade-off between potential efficiency cost from the loss of economies of scale in decentralized generation and not making any progress at all.

In Zambia, no strong opposing coalition exists for the elimination of high spending on fertilizer subsidies (Beintema and others 2004; Govereh and others 2006; Pletcher 2000). About 5 percent of Zambia's national budget goes to agriculture. In fiscal year 2005, more than half the agriculture budget was spent on the Fertilizer Support Program (37 percent) and crop marketing (for maize) under the Food Reserve Agency (15 percent). Only 3 percent of the budget went to irrigation development and other rural infrastructure, and 11 percent went to operating costs, which included agricultural research and extension. Spending on agricultural research and development fell from about 1.2 percent of agricultural GDP in 1985 to about 0.5 percent in 2000.

Why is spending on fertilizer subsidies so high? There are no powerful groups that would benefit from its elimination, despite its being an economically unproductive use of public resources. This contrasts with early reforms in maize milling,

where the private sector gained significantly from privatization and strongly supported the reform. Under the fertilizer program, traders often benefit.

A 2002/03 household survey showed that only 29 percent of farmers acquired fertilizer. Of those farmers, 59 percent acquired it through private dealers and 36 percent obtained it through the government Fertilizer Support Program. Both groups had higher income and wealth and were close to tarmac roads and district centers. However, those receiving fertilizer through the government program were predominantly civil service employees in a program intended to be targeted at the poor. Parliamentarians also benefited, sometimes informing groups of farmers that there was no need to repay loans on fertilizer received.

The economic costs of the program are high, both from lower spending in higher-productivity areas such as agricultural research, extension, and infrastructure and from slower diversification away from maize production.

Example 30: AGRICULTURE SECTOR-WIDE APPROACHES

Donors account for a large share of public spending in the agriculture sectors of many low-income countries. In an effort to improve the alignment of donor support with government strategies and to reduce the transaction cost of aid (reducing multiple planning and reporting requirements, different procurement and financial management systems), agriculture sector-wide approaches (SWAp) are being increasingly adopted by governments and donors. The Paris Declaration and Accra According on aid effectiveness are supportive of this approach across all sectors. In agriculture, about 18 countries have adopted a SWAp.

In Uganda, a coherent country-led poverty reduction strategy was supported by a sound agricultural strategy and institutional reforms. The management of aid flows for a coherent pro-poor expenditure strategy, including a strategy for rural areas, has resulted in relatively stable long-term commitments by donors. In Tanzania, government leadership has overcome fragmentation (17 bilateral and multilateral donors supported agriculture in 2005) largely through "basket funding" (pooling donor resources) guided by an agreed agricultural development program. Ghana has also progressed in harmonizing development assistance and aligning it to its agricultural development strategy.

Nicaragua's sector-wide PRORURAL[15] program was launched in 2005. The government, the private sector, and 15 donors (which supply more than 90 percent of donor assistance for agriculture) signed a Code of Conduct to promote country leadership, harmonization, and alignment in supporting national priorities in the agricultural sector. A common fund, guided by a Memorandum of Understanding (MOU), was established in 2006 to pull together contributions of donor agencies into a single account, used according to the priorities defined by Nicaraguan institutions. The setup of a sectoral Medium-Term Expenditure Framework (MTEF) and an annual budget plan provided the basis for approving disbursements, using the government' financial and procurement procedures.

Example 31: INSTITUTIONAL COORDINATION MECHANISMS

An important aspect of some agriculture PERs has been to provide a description of the role of agricultural public institutions (at various tiers of government), an assessment of their effectiveness, and the arrangements for coordination among institutions.

The Turkey agriculture PER (World Bank 2005a) shows that the public spending in the rural sector is channeled through both central and local government agencies. Central government in Turkey is administered through a series of ministries and affiliated agencies which include (i) the General Directorate of Rural Services, accounting for the largest share of the 2003 rural sector budget; (ii) the State Hydraulics and Waterworks Organization; (iii) the Ministry of Agriculture and Rural Affairs; and (iv) the Ministry of Environment and Forestry and the General Directorate of Forestry.

Ministries have field offices at provincial and district levels, which are under the authority of the provincial governors (*vali*) and district subgovernors (*kaymakam*). The provincial administration operates on the principle of deconcentration (i.e., a delegation of power from the central administration to the provincial level). Provincial governors and subgovernors are appointed by the central government and have authority over the field offices of the central administration.

15 Experiences and results from the Global Donor Platform's in-country facilitation sevices: http://www.donorplatform.org/component/option,com_docman/task,doc_view/gid,396.

Local administrations also have a certain responsibility for expenditures in Turkey. They are coordinated by the Ministry of the Interior through its General Directorate of Local Authorities. Estimates from the State Planning Organization indicate that total consolidated expenditures of local administrations (all sectors) represent 4 percent to 5 percent of GNP.[16] Moreover, they account for 30 percent of the investment budget; however, their investment spending is focused almost exclusively on urban areas, mainly drinking water supply and urban transportation. Furthermore, only Special Provincial Administrations, which account for 16 percent of local administrations' total budget, spend for road and water supply investments in rural areas.

The Ghana Agriculture PEIR (Kolavalli et al. 2009) summarizes in a flow chart how ministries, departments, and agencies in the agricultural sector are organized. The Ministry of Food and Agriculture (MoFA) is the lead agency for the agricultural sector. MoFA has seven technical directorates and three subvented agencies: the Ghana Irrigation Development Authority (GIDA), the Grain and Legume Development Board, and the Veterinary Council. GIDA is represented in the Ghana Water Resources Commission, which coordinates water resources development across sectors. At the regional level, MoFA is represented by the Regional Agricultural Development Units and at the district level by the District Agricultural Development Units.

In summary, the Ministry of Food and Agriculture is part of a complex institutional landscape in which the responsibility for important agricultural functions, such as agricultural research and cocoa development, is shared with agencies that are located under other ministries. Likewise, MoFA has to function in a complex decentralized system. This implies considerable coordination challenges for MoFA because the Ministry has the overall mandate to lead the sector.

The Mexico Agriculture PER (World Bank 2009a) describes and assesses the interinstitutional coordination mechanism for the Agriculture and Rural Development (ARD) sector. The Sustainable Rural Development Law of 2001 established a coordinating framework for ARD public expenditures through the Interministerial Commission for Sustainable Rural Development (CIDRS), headed by the Ministry of Agriculture, Livestock, Rural Development, Fisheries, and Food. The expectation was that CIDRS would develop a rural development strategy and serve as a forum to coordinate the government's ARD activities. A strategy, however, has not been developed, and CIDRS has not yet actually managed to orient and coordinate the allocation of federal resources to ARD programs. Thus the PEC (Mexico's public expenditure program for ARD, funded by the federal government) annually prepared by CIDRS has, to date, not functioned as a planning tool. It operates as an annual budget exercise where the budget lines of all rural development programs are tabulated together. PEC appears as an annex of the annual federal budget.

An Agriculture Sectoral Working Group (SWG) for promoting interinstitutional coordination of the budgetary process was established in Uganda (World Bank 2010b). The SWG has the task of reviewing sector strategies and investment programs, recommending projects for submission to the Plan for Modernization of Agriculture Secretariat and Development Committee that are in line with sector plans, preparing agriculture Sector Budget Framework Paper (SBFP) as a basis for compiling the annual budget for the sector and enabling the MTEF for the sector to evolve over time, providing the main forum for the sector-wide approach to planning and budgeting for the agricultural sector, identifying policy issues for consideration and action by the Ministry Top Policy Management, providing information for the Joint Government of Uganda Donor Reviews, and monitoring budget implementation vis-à-vis the aims and objectives set out in the Budget Framework Paper (BFP). The SWG is chaired by the Permanent Secretary of the Ministry of Agriculture, Animal Industries, and Fisheries. Typically, the SWG is conveyed after the distribution of the Budget Call Circular and may meet also during preparation of the Budget Framework Paper (BFP). Funding for the SWG activities is budgeted from within the sector MTEF ceilings.

Example 32: SPECIFIC RECOMMENDATIONS TO GOVERNMENT BUDGET GUIDELINES

An expenditure analysis should provide specific recommendation to government budget guidelines, through a careful review of actual practices and underlying constraints in terms of institutional and staff incentives and capacities. Below are examples from the macro (Turkey) and sectoral level (Uganda and Ghana).

16 This compares to central government consolidated budget expenditures, which represent around 40 percent of GNP.

The Turkey Agriculture PER (World Bank 2005a) discusses key results of the macro-level PEIR (World Bank 2001) along with constraints to further progress. It was noted that, after the review, the Government of Turkey took important steps toward improving budget coverage and classification, enhancing the budget preparation process, restoring its credibility with line ministries, strengthening the capacity to formulate policies and budgets within a medium-term perspective, and improving budget execution and financial accountability. Recommendation centered on the Public Financial Management and Control Law, enacted in late 2003, which provided a legal framework for structural and institutional reforms to upgrade public expenditure management. Specific recommendations related to the need to clarify roles and responsibilities of public administrations and to transfer some responsibilities to the private sector.

The Uganda Agriculture PER (phases 1 and 2) (World Bank 2007a) comprehensively assesses the budgetary processes followed in the agricultural sector. The Study Team examined the most recent Sector Budget Framework Paper (SBFP) guidelines and suggested modifications to improve the SBFP's analytical content and internal consistency. Recommendations followed the structure of the headings of the 2007/08 SBFP and related to the sector priorities, performance, budget allocations and objectives, mid-term budget priorities, expected outputs, performance indicators, and planned activities. In particular, the Team suggested improving the methodology of the SBFP by (i) providing a more detailed explanation of expenditures and shortfalls, (ii) clearly linking indicators to specific outputs and activities, and (iii) prioritizing activities requiring additional resources.

The Ghana Agriculture Public Expenditure and Institutional Review (PEIR) (Kolavalli et al. 2009) contains a qualitative assessment of the budgetary processes for agriculture that uses the sectoral Mid-Term Expenditure Framework (MTEF) at the Ministry of Agriculture and the local level. The MTEF is a major component of the Public Financial Management Reform Program (1999) and aims at (i) linking budget expenditures more closely to national priorities through a national strategic planning process, (ii) integrating aid-finance programs and policies into mainstream sector-resource allocation processes, (iii) elaborating three-year sector expenditure proposals based on anticipated resources availability, and (iv) developing an activity- or performance-based budget system that enhances the government's ability to monitor expenditure efficiency and effectiveness by linking expenditure directly with outputs. The PEIR highlights that at both the central and local levels, the rigidity of the organizational process, the lack of planning capacity, and the heavy administrative costs are unlikely to yield substantial improvements to the budgetary process and that serious weaknesses remain even 10 years after the introduction of MTEF.

The review found that persistent divergences between budget allocations and disbursements were a government-wide problem and that disbursement rates varied across spending categories, with budget allocations for personal emoluments more likely to be fulfilled than the two complementary expenditure categories (services and investments). The team underlined that MoFA tried to face these budgetary challenges through enhancing financial control via means such as periodic internal audits. However, it was recommended that to be effective, (i) the audit should have been more frequent and (ii) the monitoring teams should be composed by adequate staff and well-endowed to overcome logistical challenges.

Example 33: INCENTIVE MECHANISMS TO IMPROVE BUDGET PERFORMANCE

An example of an incentive mechanism to improve budget performance is the system of local government grant transfers introduced by the Government of Tanzania (United Republic of Tanzania 2006). The Local Government Capital Development Grant (LGCDG) system provides grant financing for local capital improvements conditioned on local government authorities (LGAs) meeting minimum requirements that ensure that funds transferred to them are properly used.

In addition, the LGCDG system includes performance measures to encourage continued improvements beyond the minimum conditions. The minimum conditions and performance measures relate to several functional areas: financial management, fiscal capacity, planning and budgeting, transparency and accountability, human resource development, procurement, project implementation, and council functional processes. LGAs are assessed against these measures annually, the outcome of which determines the levels of grants received in the subsequent year. LGAs who do not meet the minimum conditions do not get capital grant transfers. LGAs who do meet the minimum conditions get the grants, with

those that show improved performance measures during the annual assessment getting higher levels of grant transfers. All LGAs have access to a capacity-building grant that can be used for training (e.g., on financial management, planning and budgeting, procurement, etc.) to improve performance scores in subsequent assessments. The performance assessment and associated capacity building funds are aligned to improving capacity across the entire budget cycle—planning, budgeting, procurement, implementation, accounting, and auditing.

The basic premise of the LGCDG system is to avoid wastage or misallocation of scarce public resources by giving resources to those LGAs that have demonstrated capacity to manage well, and by building the capacity of all LGAs. This system was developed and is being implemented in close collaboration with development partners, who are also supporting the LGCDG system. The performance assessments have subsequently been extended to include measures related to agriculture through the Agriculture Sector Development Programme.

Example 34: BUDGETED VS. ACTUAL

The agriculture PERs reviewed in World Bank (2010d) showed large discrepancies between planned and actual budget execution far exceeding accepted international standards developed under the Public Expenditure and Financial Accountability partnership, which says that actual expenditures should deviate no more than 10 percent from the budget to qualify as efficient execution (see Table 28). A review of Agriculture PERs has found that typically execution rates are higher for recurrent costs, of which a large portion consists of salaries, compared to capital costs. In terms of funding sources, execution is higher for nationally funded programs as opposed to foreign-financed, which tend to have stricter fiduciary requirements that delay disbursement. The gap can arise from two factors: (1) discrepancy between the amount of budget approved and the amount of budget actually disbursed to the ministry and (2) low disbursement by the ministry to intended activities. There is a myriad of underlying causes for these low rates. For the first factor of discrepancy between the approved amount and the disbursement *to* the ministry, these include late release of funds, cutbacks in approved budgets due to revenue shortfalls or unforeseen demands on available funds, and so on. For the second factor of low disbursement *within* the ministry, these include procurement delays, low accountability and nontransparent fiscal relations between state and local government, weak internal institutions and implementation plans involving the various executing agencies, weak monitoring systems to track the delayed disbursements of approved funds, poor expenditure recording, unauthorized expenditures, poor internal controls, no uniform formats, late reporting, and so on.

TABLE 28: Disbursements as a Share of Budget Allocations (%)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	AVERAGE EXECUTION RATE (%)
HONDURAS											
Agriculture & Forestry	–	67.7	64.9	56.6	73.4	56.8	44.9	60.1	57.3	62.4	**59.4**
NIGERIA											
Agriculture	–	–	–	–	91	58	60	85	103	–	**79.0**
ETHIOPIA											
Agriculture Rural	83	86	72	71	80	79	85	82	–	–	**79.8**
UGANDA											
Ag., Animal Industries, & Fisheries	–	–	–	–	85.2	82.1	103.5	160.5	118.7	90.4	**106.7**

Source: Brzeska and Fan (2009).

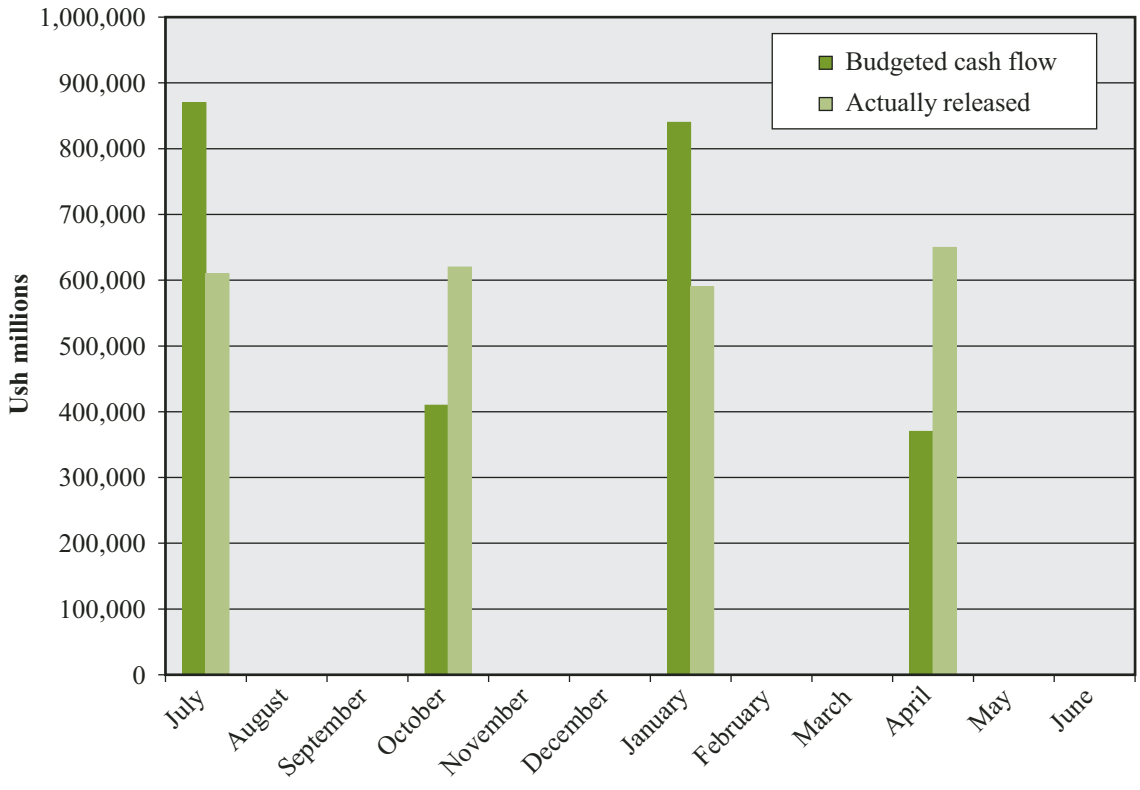
Note: Recurrent cost only.

Example 35: TIMING OF RELEASES

The Uganda Agriculture PER (World Bank 2010b) shows that in addition to the shortfalls in allocations, the effectiveness of the public expenditures was weakened by uncertainty in seasonal cash flows. The development budget typically is released in four equal installments in the first month of each quarter. However, the cash budget system restricts quarterly fund releases to cash flow availability. While this practice helps to ensure macroeconomic stability, it may destabilize activities at the central and local government levels. Because wage payments and Poverty Action Fund (PAF)–related expenditures have first call on available funds, nonwage recurrent expenditures and government development expenditures on non-PAF activities tend to be affected the most.

Cash flow within the National Agricultural Advisory Service (NAADS) provides a good example of how seasonal requirements can affect expenditures. NAADS District expenditure is classified as a Poverty Action Fund activity, and as such, releases made on a regular quarterly basis are usually 98 percent to 99 percent of budget allocations. The seasonal nature of many agricultural operations, however, means that NAADS District expenditures peak in the first and third quarters of the financial year, when crops are planted (see Figure 8). One effect of cash-budget ceilings and limited cash releases to the Ministry of Agriculture, Animal Industry, and Fishery (MAAIF) is that some anticipated donor project expenditures cannot be undertaken. At the national level, it used to be the case that some donor projects required the government to provide counterpart funds to pay for various items before donor funds were disbursed. This restriction appears to have been relaxed by most, if not all, development partners. It is necessary that, within the overall cash flow available, the Ministry of Finance, Planning, and Economic Development (MoFPED) should cater to the relatively small but particular cash flow requirements of agencies such as NAADS to improve its operational effectiveness.

FIGURE 8: NAADS (Districts) Budgeted and Actual Cash Flows, 2005/06 (Ush Millions)



Source: World Bank (2010b).

Example 36: APPROACHES TO GATHERING DISTRICT-LEVEL DATA

The Ghana PEIR (Kolavalli et al. 2009) illustrates various approaches and sources for collecting the required information. The expenditure review primarily involved collecting and analyzing data, whereas the institutional review was more participatory. The participatory methods included two consultations with senior management and consultations with a group of retired staff. The study team chose to examine the workings of district offices, as organizational strengths and weakness are likely to be most noticeable at the points of service delivery. After a preliminary document review, the team did a scoping study at the East Akim District Agricultural Development Unit (DADU) to understand how the district offices function and to identify suitable approaches for capturing critical aspects of how the DADUs functioned.

Following the scoping study, the team presented the research plan to regional and national directors in a meeting organized in Accra. They recommended four districts for case studies, one in each agro-ecological zone, to capture any differences in the challenges faced in delivering services: Dangme East in the coastal zone, Wassa Amenfi West in the forest zone, Wenchi in the Transition Zone, and West Mamprusi in the Savannah Zone.

The DADUs in these districts were requested to compile the required information before the team visited. During the first three weeks of February, a team of consultants visited the districts to interact with staff and collect the information. In the districts, senior officers were interviewed individually, and the group discussions were held with the field staff. Data collected from the district offices included (1) details of performance assessment for one year; (2) details of dates of recruitment, promotions, and current positions of all staff; and (3) annual work plans, progress, and financial reports. The staff was asked to individually provide the following information: (1) a list of activities carried out in the previous five days, including distances traveled, time spent interacting with farmers, number of farmers contacted, and other information; and (2) the training and promotions received during the staff member's employment with the ministry. In addition, staff responded to a survey instrument that included questions designed to elicit their perceptions of various issues relevant to their work, the importance of various factors in their work environment, and the accountability structure. The survey was completed by 67 staff members.

The study also used data collected through a survey by the Institute of Statistical, Social, and Economic Research (ISSER) and IFPRI as part of the project "Making Rural Service Provision Work for the Poor," focusing on rural water supply and agricultural extension. The survey covered households, elected and appointed District Assembly members, District Assembly staff, farmer-based organizations, agricultural extension agents, and organizations involved in rural water supply. The data presented in this report were collected in four districts (Wassa West, Wassa Amenfi East, Tolon Kumbungu, and West Gonja). Data on public agricultural expenditures were obtained primarily from the Controller and Accountant General's Department, MoFA, the Council for Scientific and Industrial Research, the Ghana Cocoa Board, the Ministry of Road Transport, the Ghana Statistical Service, and many other institutions, in addition to published sources. Information from the agencies and case study interviews mentioned earlier was used to analyze factors relating to institutional performance.

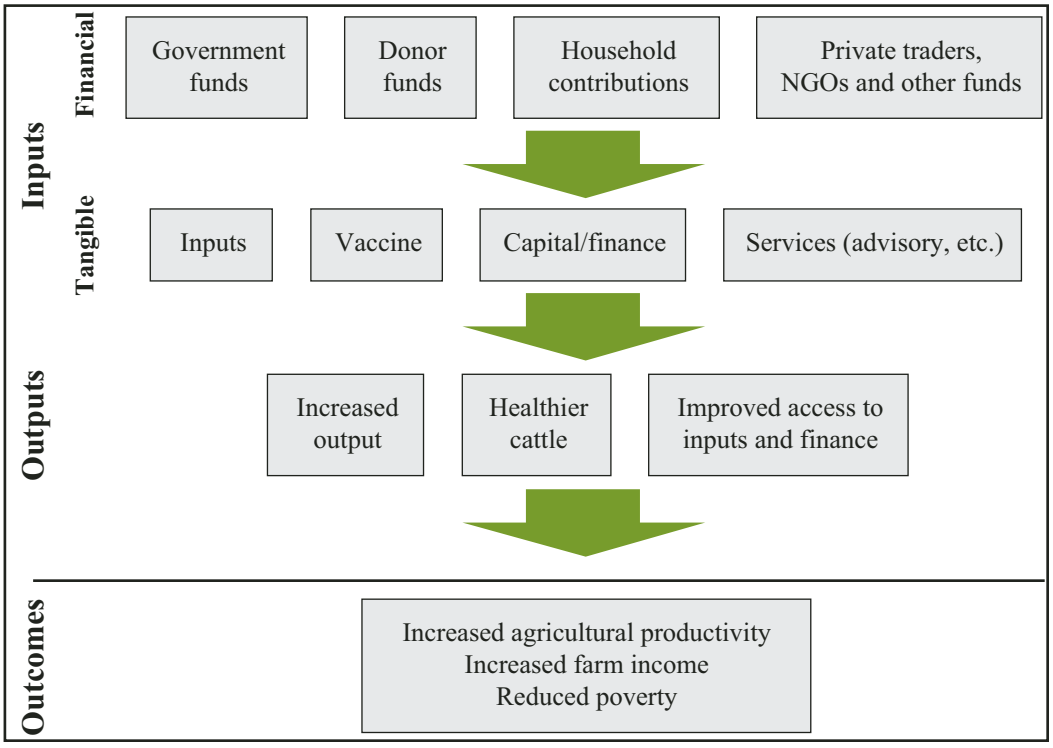
In examining expenditures, several analyses were done:

- *Trend analysis*, to assess the size and composition of public (mainly government) expenditure in the agricultural sector
- *Unit cost analysis*, to assess the efficiency of providing public goods and services in the sector
- *Benefit incidence analysis*, to assess the effectiveness of delivery and utilization of public goods and services in the sector
- *Case studies*, to identify the binding constraints for improving public agricultural expenditure management and the delivery and utilization of public goods and services in the sector

Example 37: PUBLIC EXPENDITURE TRACKING SURVEY

The Uganda Agriculture PER (World Bank 2010b) includes an excellent analysis in which a Public Expenditure Tracking Survey (PETS) was used to help assess the technical efficiency of the major development projects in the agricultural sector between 2005/06 and 2007/08. The methodology involves four key steps, outlined below in an extract from the Review.

FIGURE 9: Relationship between Inputs, Outputs, and Outcomes in Agriculture



Source: Uganda Agriculture PER Task Team.

Step 1: Define the result chain suitable for PETS in agriculture. To improve efficiency in agriculture—in other words, to get more outputs and outcomes without spending more—one needs to define *inputs, outputs*, and *outcomes*. Figure 9 shows how these terms can be used for agriculture and how they are related.

Outcomes are what stakeholders should be interested in achieving, inputs are the means to getting there, and outputs are milestones along the way. The evaluation of outcomes of most agricultural public expenditures is critically important but also difficult, and generally such information is not available in Uganda. There is a time lag in agricultural production, and it is challenging to link specific inputs directly to marginal values of products. For example, when a vendor is contracted and undertakes civil work (inputs) to construct a wholesale market (output), it is important to have information about how traders and farmers use the market and the market's effect on transaction costs (outcomes). When farmers use cattle vaccine (input), they expect that cattle will be healthier (output) and that healthier cattle will be more productive (outcome). Each of these result chains requires a rigorous impact evaluation comparing targeted and nontargeted households, and the evaluation must cover a sufficient timeframe to allow outcomes to be realized and properly documented.

This kind of rigorous impact evaluation is presented for the NAADS program in the report. Similar detailed evaluations of additional programs were not feasible given the time and resources available. Instead, the PETS methodology was used to identify sources of inefficiency in the delivery of public services. The PETS methodology was complemented by focus group discussions with project beneficiaries, service providers, agricultural staff in the local government and MAAIF, project management unit staff, and political leaders to obtain qualitative feedback on service quality and project performance. This combination of quantitative (PETS) and qualitative (focus group) information provides an understanding of the factors affecting the quality of service provision and makes it possible to evaluate the operational efficiency of project implementation. For evaluating NAADS, the quantitative results of the impact evaluation were combined with qualitative assessments in selected districts.

Step 2: Set up the operational framework for analyzing technical efficiency. For operational purposes, it is important to distinguish between *waste*, *leakage*, and

inefficiency. Waste and leakage can be dealt with in a different way from inefficiency—for example, by imposing stronger control systems, developing better incentives against malpractice, and improving accountability. Public service inefficiency, which stems from poor choices related to policy, technology, or management, is harder to detect, with assessment demanding more knowledge of the service in question.

Inefficiency can arise because changing circumstances can cause the optimal choice or combination of inputs or the appropriate type of output to change over time. For example, a government can be doing the right thing but using the wrong mechanism (delivery instrument), resulting in inefficiency. In contrast, waste occurs when a completely unnecessary and avoidable cost is borne by the public sector. It can arise from many sources, such as weaknesses in the system, weak capacity, low levels of management accountability, improper planning, and corruption. Examples of waste include (1) duplication of administrative functions, either between MAAIF and local governments or between MAAIF and other ministries and agencies; (2) unnecessary delays and contract disputes in project implementation, which lead to cost overruns; (3) improper appraisal and feasibility work, which lead to delays and cost overruns; and (4) poor asset maintenance, which leads to early replacement of physical capital such as irrigation, market, and road infrastructure.

Leakages occur when released funds are not spent on the inputs for which they were intended. One way to look for leakage is to track the flow of financial and physical resources. This is the methodology used in PETS, which tracks the flow of funds between different layers of government. For instance, the procured cattle do not end up with the designated beneficiary but with someone else. Leakages in public service increase the cost (input) of achieving a given level of service (output) and result in a deteriorating measure of efficiency. But since leakage is not a consequence of choices in policy, technology, or management, for operational purposes, leakage should be detected separately.

Step 3: Select the indicators of efficiency. The most simple but highly useful indicator of efficiency is unit cost (the cost of producing one unit of output). Other things being equal, reducing unit cost will improve the efficiency of production. While knowing the level of unit costs is important, it is also necessary to know whether the current level of unit costs is appropriate and to know which factors most affect variations in unit cost across different projects. There are several ways to assess whether the level of current unit costs is appropriate. For instance, unit costs for procured goods can be compared with market prices. Unit costs of centrally and locally prepared items may also be compared. For civil work such as building roads, unit costs can be compared with other projects and guidelines from the Ministry of Infrastructure.

Step 4: Analyze the findings and develop hypotheses of what drives inefficiency. It is one thing to identify the factors that mechanically drive unit costs up or down. It is quite another thing to identify the underlying causes of these factors and prescribe remedial actions at the local, MAAIF, and national government levels.

Example 38: COST EFFECTIVENESS

The Ghana Agriculture PEIR (Kolavalli et al. 2009) shows how, using the case studies as a representation of their respective regions, the study team estimated the unit cost of providing agricultural extension services, including farm and home visits, demonstrations, and farmer training. The cost associated with these services includes the direct operational costs (fuel, materials, and so forth), cost of the time spent by the agricultural extension agents (which can be prorated based on their annual salaries and benefits), and indirect or overhead costs associated with supervision and management of the agriculture extension agents (accounting for time and related operational costs and investments at the regional, extension directorate, and headquarter levels). Table 29 gives details of the outputs, total costs, and unit costs in 2006, as well as the assumptions used in estimating the costs. The total costs were not significantly different across the three regions considered here.

Unit costs can be estimated for other investments in the sector, and comparisons with other countries or regions can be useful. For example, WDR 2008 shows the unit costs over time and between Sub-Saharan Africa, which is much higher than non-Sub-Saharan African countries (see Table 30). Understanding the source of these difference can help guide improvements to future cost effectiveness.

TABLE 29: Cost of Extension Services Provided by MoFA in Selected Regions, 2006

	BRONG-AHAFO REGION	NORTHERN REGION	WESTERN REGION
COSTS (GH¢)			
Salaries and benefits	2,061,752	2,264,505	1,841,860
Operations	203,744	223,780	182,014
Overhead[a]	124,959	137,247	111,631
Total	2,390,455	2,625,532	2,135,506
ACHIEVEMENTS			
Number of home and farm visits	20,871	71,934	29,076
Number of demonstrations	6,012	628	1,600
Number of farmers trained	58,175	45,526	23,750
UNIT COST (GH¢ PER FARMER REACHED)[B]			
Equally weighted[c]	52	64	93
Unequally weighted[d]	66	51	85

Source: Authors' calculation, based on Government Financial Statistics (Office of the Accountant General); 2006 MoFA releases to cost centers; and 2006 annual reports of MoFA cost centers. Note: (a) Based on 11% total headquarters (including directorates) expenditure allocation to the Extension Services Directorate, and 9.5%, 10.5%, and 8.5% of total RADU and DADU expenditure allocation to the Brong-Ahafo, Northern, and Western RADUs and DADUs, respectively; (b) assumes 10 farmers reached in each demonstration; (c) assumes equal weights to home visits, demonstrations, and training in terms of time spent by AEA in those activities; and (d) assumes more weight to home visits (60%) than to demonstrations (25%) and training (15%).

TABLE 30: Comparison of Cost Per Hectare of Irrigation

	1970-74	1975-79	1980-84	1985-89	1990-94	1995-99
Sub-Saharan Africa						
Number of projects	3	9	11	15	4	3
Cost per hectare (2000 US$)	4,684	24,496	11,319	7,669	8,287	8,347
Non-Sub-Saharan Africa						
Number of projects	21	66	75	41	49	6
Cost per hectare (2000 US$)	3,433	4,152	5,174	2,252	3,222	3,506

Sources: African Development Bank and others (2007); Carter and Danert (2006); IFAD (2005); International Water Management Institute (2005); World Bank (2006t).

Note: Rates of return on externally financed irrigation projects in Sub-Saharan Africa and the rest of the world (two-thirds of which were in Asia) during 1970–99.

Example 39: EXPLAINING INEFFICIENCIES

The Uganda agriculture PER (World Bank 2010b) presents an analysis of the broad country-level policy environment and the sector-level and project-specific factors that affect the technical efficiency of projects.

Analysis on country-level policy environment: The prerequisites for launching projects quickly and smoothly are often beyond the immediate influence of the Ministry of Agriculture, Animal Industry, and Fishery (MAAIF), including ratification by Parliament, the provision of counterpart funds, and overall procurement and fiduciary capacity in the public sector. If foreign loans are ratified without delay, and if counterpart funds are provided in full and on time, MAAIF and local governments are enabled to deliver goods and services efficiently to beneficiaries. If the opposite is true, a project's effectiveness is likely to be hampered from the very beginning. MAAIF needs to be much more proactive in bringing these issues to national attention and looking for concerted remedies at the national and local levels. In Uganda, the environment is not entirely conducive to implementing agricultural projects. It takes about one-and-a-half years for Parliament to ratify a loan. *Delayed ratification* reduces project benefits. For the National Livestock Productivity Improvement Project, for example, a year's delay in project implementation is estimated to reduce the economic rate of return by 5 percent (from 23 percent to 18 percent). The *untimely release of counterpart funds* by the Ministry of Finance, Planning, and Economic Development reduces the quality of project implementation. As indicated previously, *outturns of government funds* ranged from 10 percent to 50 percent for

the period under review. After Parliament ratifies a project, one year is typically needed to establish a *procurement and management unit* that meets domestic and local requirements and to *open special project accounts*, especially if a project includes more than one ministry. Most of these issues are relevant to all projects, not just agricultural projects. Yet even if these problems are beyond MAAIF's immediate control, MAAIF can still raise them with MFEDP and propose concrete remedies.

Analysis on sector-level factors: The impact of individual projects is considerably circumscribed by the lack of a strategic approach for using public expenditures to support agriculture. One example is the current strategy for improving farmers' access to inputs through subsidized input distribution by development projects, complemented by farmer training. This strategy fails to resolve the real causes of farmers' poor access to inputs, including high transaction costs (caused by poor rural infrastructure), slow progress in microfinance development, and weak technical and business capacity of private agro-dealers. Once the projects are phased out, inputs are still not accessible. Project expenditures are likely to have been wasted, given that they could have been used for infrastructure or other public investments with more sustainable outcomes.

Analysis on project specific factors: Most MAAIF development projects with infrastructure components are characterized by long delays (three to five years) in building and rehabilitating rural infrastructure. Aside from the issues just mentioned, important problem areas include improper appraisal and feasibility work, poor coordination of preparation and implementation between MAAIF and local governments, inadequate operating budgets for local technical staff, ineffective project procurement, and problems related to land tenure.[17] These result in high cost overruns, low-quality work, and other kinds of waste. Given that capital expenditures account for such a large share of the development projects reviewed (81 percent of MAAIF's capital budget), MAAIF needs to take immediate action to devise remedies to deal with these problems. These lessons from experience should be taken into account when new investment projects are prepared.

Other important lessons on technical inefficiencies emerge from studies of how goods and services are delivered to farmers and frontline service providers. First, the unit costs of goods procured at the central level is usually 20 percent to 50 percent higher than comparable market prices or unit costs at the local level. Second, the delivery of centrally procured goods is prone to wastage. The mortality rate of livestock distributed through several projects is unacceptably high (ranging from 7 percent to 38 percent across interventions). In several instances, a significant number of cattle and goats died in the first months after delivery. The distribution of vaccines entailed low value for money and substantial wastage because vaccines were overpriced and storage facilities were inadequate. Records of financial and physical resource transfers from the central management units to the districts often do not match, suggesting wastage, diversion, or leakages, although the source of the problem remains unclear (possibilities include poor record keeping and thus low accountability, diversion from intended beneficiaries, corruption, resource misallocation, improper accounting, or simply insufficient information from project implementation units). Leakages were more pronounced for in-kind transfers than financial transfers, suggesting that inputs and goods were more easily directed away from their intended beneficiaries or uses. A key lesson from these experiences is to decentralize procurement to reduce costs and to place resources directly at the command of the beneficiaries to improve accountability. For example, such costs are lower for NAADS because most procurement is decentralized and involves the local communities and beneficiaries.

Example 40: MONITORING AND EVALUATION

There is general agreement that weak M&E systems are one of the most fragile links in the entire chain of expenditure management. While this weakness can be observed in all sectors of an economy, it is especially serious in the agricultural sector, given its great diversity of actors and stakeholders. A Monitoring and Evaluation system (M&E) for the agricultural sector is crucial to (i) generate the disaggregated information required to ensure more efficient and equitable sectoral allocations, (ii) improve the implementation of expenditure programs, and (iii) enhance the governance and accountability of expenditures (using various mechanisms). Expenditure data disaggregated by program, project, activity, or region are essential for more rigorous expenditure analyses. A phased approach can be taken because performance-based budgeting systems take time to develop. Emphasis tends to be placed on improving

17 Land tenure problems are often related to improper appraisal and weak coordination of activities with local governments.

monitoring in high-priority programs and projects, which will certainly contribute to more efficient public expenditures.

The Ghana agriculture PEIR (Kolavalli et al. 2009) contains good insights into underlying problems with M&E and describes strategies for enhancing the role of M&E systems as instruments for promoting greater efficiencies and impacts on agricultural expenditures. The review identifies a need to sharpen the focus on a few strategic outcome indicators. The Food and Agriculture Sector Development Policy II (FASDEP II) includes a comprehensive list of almost 60 indicators. Collecting and managing information on such a broad range of indicators, even though each indicator might be useful in some sense, is a rather challenging task. MoFA may wish to focus M&E reporting by strategically selecting a few key outcome-related indicators in addition to selected key output-oriented indicators. There is a need to "mainstream" M&E indicators with other management processes by making them relevant for managers as source information to perform their tasks more effectively. It would be useful to have indicators that are relevant for managers in districts and regions to monitor the activities and outcomes.

The Mexico Agriculture PER (World Bank 2009a) devotes an entire chapter to assessing M&E and institutional aspects of ARD programs. The rapid development of the ambitious institutional M&E systems, especially since 2006, is remarkable, but the actual implementation is facing practical challenges, especially in ARD programs. These are related to (i) the limited availability of experienced talent in M&E, which hinders the implementation and oversight of good M&E; (ii) the insufficient feedback of the evaluation results into managerial and budgetary decision making**; (**iii**)** the fact that evaluations are limited to single programs and not at the level of the entire PEC to track progress in rural development; (iv) the absence of a unified information system and database for different ARD programs, or even different agricultural support programs, to coordinate the distribution of resources at the beneficiary level; and (v) annual evaluations that are costly to implement and unnecessary in most cases. The review also contains recommendations to address some of these issues: (i) evaluation of single programs and of the entire PEC, (ii) development and integration of databases of the beneficiaries of ARD programs, (iii) deeper program evaluations at longer intervals instead of the current annual cycle, and (iv) systematic use of evaluation results for managerial and budgetary decisions based on action agendas agreed upon by the evaluators, the implementing agency, and a third party. Adherence to these agendas should be monitored closely. As a logical follow-up to the law on sustainable rural development (*Ley de Desarrollo Rural Sustentable*), it was suggested to start a "rural proofing" system to anticipate and monitor national policies' impact on the rural sector.

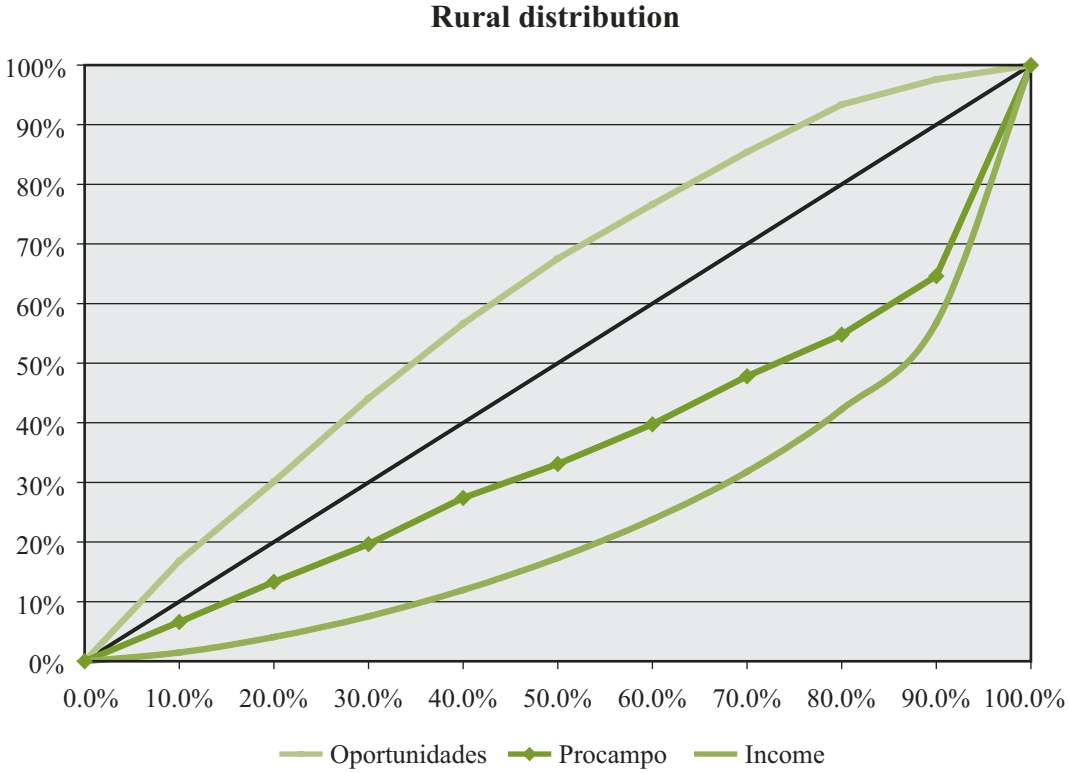
Example 41: INCIDENCE ANALYSIS

The following extract from the Mexico PER (World Bank 2009a) provides an example of an incidence analysis with a primary focus on the equity of public spending across producers and households.

> Data Requirements: The availability of household and producer databases reporting both agricultural support programs and a relevant measure of household and producer well-being or wealth to allow distributive analysis is limited. Three kinds of data sources are used, which are complementary but not strictly comparable: (i) general household surveys including ARD transfers (the National Household Income and Expenditure Survey, or ENIGH, 2004 and 2006 surveys and *Encuesta Nacional sobre los Niveles de Vida de los Hogares*, *or* ENNVIH, 2002 survey), (ii) evaluation surveys for certain programs (*Alianza, Oportunidades*); and (iii) administrative data of the programs (*Programa de Apoyos Directos al Campo*, or PROCAMPO*, Ingreso Objetivo*, *Alianza Rural Development Program*, or PDR).[18] The distribution of benefits is analyzed using two types of ordering corresponding to the different data sources. In the case of administrative data, producers are ordered by landholding, which is the only measure of wealth and welfare reported in these data. In the case of the national household surveys, benefits received are analyzed by population deciles ordered by (current) income per capita. Household and producer data allow coverage of the principal ARD programs, including the principal agricultural support programs and rural social programs like *Oportunidades* and the

18 General household surveys have the important advantage of being nationally representative and including high-quality data on income and other measures of household well-being, but their sample size is not designed to capture specific transfer programs accurately, especially when these have limited coverage or concentrate a large share of their benefits among a relatively small proportion of producers. The other two sources are of course designed to capture the program beneficiaries and transfers accurately but are not nationally representative and generally contain limited or no household income data. The analysis obtained from the three sources must therefore be interpreted carefully and in a complementary way.

FIGURE 10: Comparison of Distribution of PROCAMPO and Oportunidades Transfer for Rural Population Decile (% 2006) (Ordered from Left to Right by Pretransfer Income Per Capita)



Source: Scott (2008); calculations based on data by ENIGH 2006.

Seasonal Employment Program (PET), as well as a number of other smaller rural development programs. Using the distribution of irrigated land as a proxy for the distribution of hydrological, hydro-agricultural, and *tarifa 9* electricity subsidies, the agricultural support programs covered in this incidence analysis represent 75 percent of Agricultural Public Expenditure.

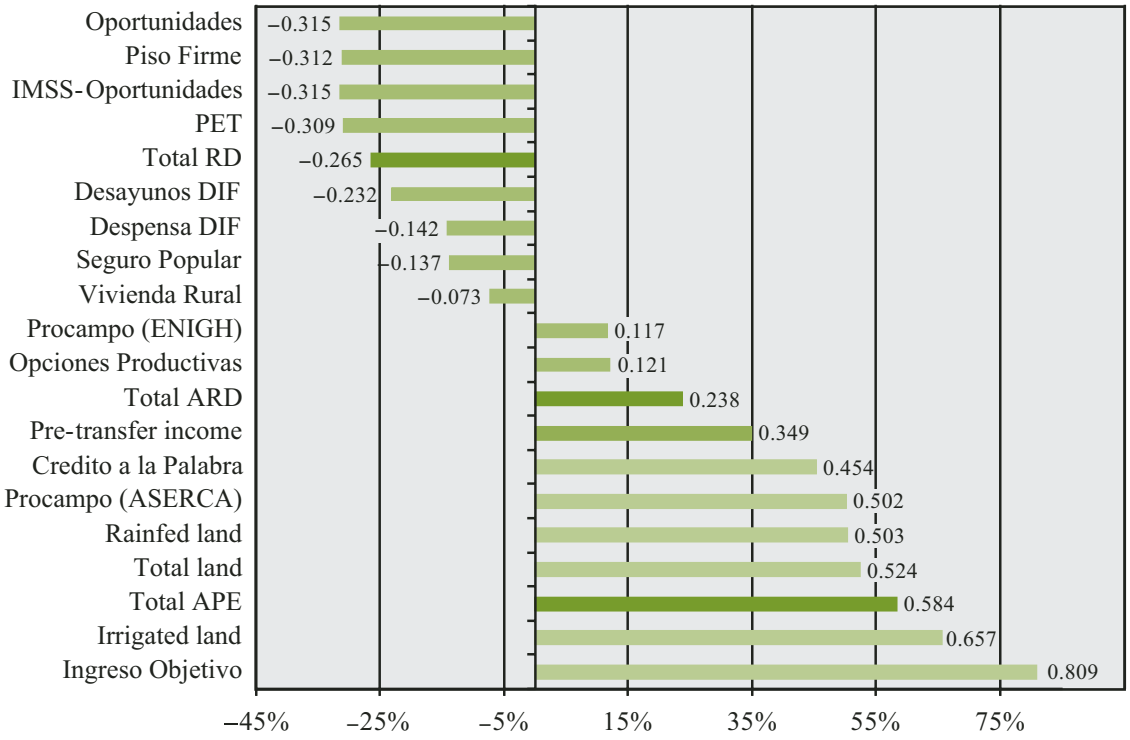
First analysis using household surveys (PROCAMPO and Oportunidades**):** Figure 10 compares the distribution of *PROCAMPO* and *Oportunidades* resources using ENIGH data.[19] The contrast between *Oportunidades* and PROCAMPO is evident from their concentration curves in the income space. Although both programs are more progressive than the income distribution, *Oportunidades* is highly progressive (pro-poor) while PROCAMPO is regressive.

Analysis using household surveys and administrative data (9 social and rural development programs): ARD expenditures are an inefficient redistributive instrument, whereas agriculture public expenditure is not only inefficient but actually contributes to increasing income inequality**.** To assess the global impact of ARD expenditures on rural income inequality, the agriculture public expenditure programs are contrasted with nine social and rural development programs reported in ENIGH 2006 and in a special "Social Module" commissioned by the Ministry of Social Development (SEDESOL) with ENIGH 2004. Concentration coefficients (CCs) are used to measure equity.[20] As shown

19 The distribution of PROCAMPO benefits differs substantially according to whether ENIGH data or administrative data of the Agricultural Commercialization Supports and Services program (*Apoyos y Servicios a la Comercialización Agropecuaria,* ASERCA) are used. The latter data result is a substantially more regressive distribution than the former. This is because, like most household surveys, ENIGH does not capture household incomes at the top of the distribution very well. In view of this difference, we report in some sections two sets of results for PROCAMPO, one using ENIGH data and the other using ASERCA data.

20 The concentration coefficient (CC) is a generalized form of the Gini coefficient that shows the concentration of a particular income source *x* (in this case payment from ARD programs) when recipients are ranked by an index *y* (in this case pretransfer income). The CC ranges from –1 when all transfers are received by the poorest households, through 0 when all households receive the same amount of transfer income, to +1 when all transfers are received by the richest households.

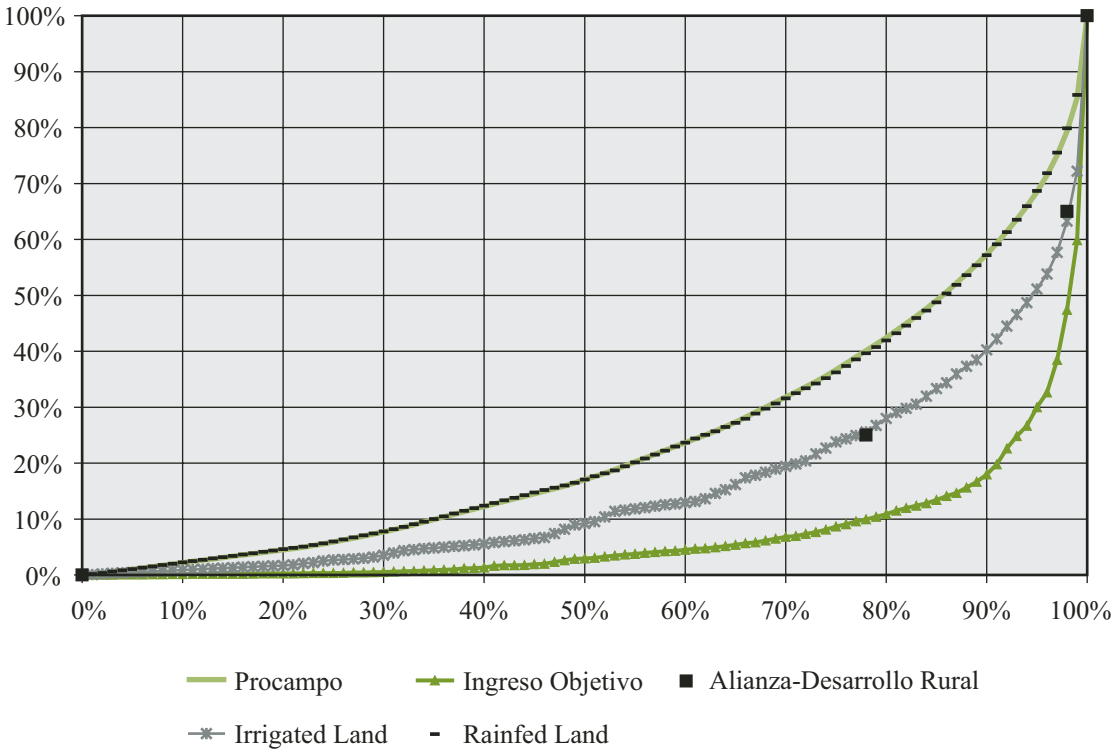
FIGURE 11: Concentration Coefficients of ARD Expenditures, Income and Land (2006)



Source: Scott (2008), using ENIGH 2006.

Note: Data for 2004 are used for the following programs: Piso Firme (Firm Foundation), PET, the Pantries and Breakfasts (Desayunos y Despensas) Program of the National Service for Integral Family Development (Desarrollo Integral de la Familia, DIF), Vivienda Rural (Rural Housing), Opciones Productivas, and Crédito a la Palabra. ENIGH 2004 (Social Module), and ASERCA Beneficiary databases.

FIGURE 12: Concentration Curves of Major Agricultural Programs and Land (%)



Source: Scott (2008).

in Figure 11, the CC of ARD expenditures is regressive in absolute terms (CC = 0.24) but still progressive relative to the distribution of pretransfer income (CC = 0.35). Agriculture public expenditure is more regressive (CC = 0.58) than the distribution of pretransfer income (CC = 0.35), thus actually contributing to increasing income inequality. By contrast, rural development expenditure (RDE) is progressive (pro-poor) in absolute terms (CC = –0.26), with the notable exception of the two productive SEDESOL programs, *Opciones Productivas* (Productive Alternatives) (CC = 0.12) and *Crédito a la Palabra* (Credit on Demand) (CC = 0.45).

Analysis using program evaluation surveys and administrative data: To compare the principal APE programs, Figure 12 presents concentration curves derived from the administrative data for PROCAMPO, *Ingreso Objetivo*, and *Alianza PDR*. For comparative purposes, the distribution of rain-fed and irrigated land is also shown. There is an extreme concentration of benefits for all programs. The poorest producer decile (in terms of land) receives a tenth of a percentage point of *Ingreso Objetivo* and similarly insignificant fractions of the other programs. At the other end of the distribution, the richest producer decile receives the following shares of transfers: (i) 45 percent of PROCAMPO, (ii) 55 percent of the *Alianza PDR*, (iii) 60 percent of energy and hydrological subsidies (proxied by irrigated land), and (iv) 80 percent of *Ingreso Objetivo*.

Example 42: IMPACT EVALUATION

Most agriculture PERs lack resources to undertake specialized data-intensive, quantitative impact evaluation. When limited data are available, the evaluation of results often relies on existing impact studies or on a comprehensive literature review of key findings of the impacts of public expenditures of similar projects undertaken elsewhere.

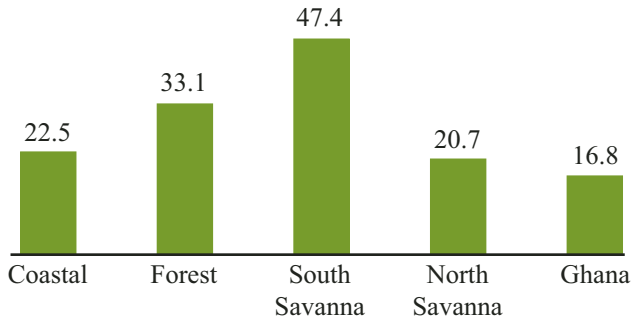
The Vietnam Agriculture PER (Volume II) (World Bank 2005b) relied on existing impact studies showing that government expenditures have been crucial to growth and poverty reduction in Vietnam. Two studies have measured the impact of this spending. The first, by Fan et al. (2004), found that government spending on irrigation, roads, and agricultural research has contributed to both agriculture growth and poverty reduction. The second study, by Barker et al. (2002), estimated determinants of agriculture growth for the same period and found that public investment in irrigation was the most important source of agriculture growth (accounting for 28 percent of the growth), followed by agriculture research (27 percent). An important finding from these two studies is that while irrigation has been the largest source of growth, the aggregate irrigation investment program has become uneconomic. The conclusion is that the sector expenditure program should select only those irrigation investments with acceptable rates of return and that savings should be reallocated to high-return activities, particularly agricultural research.

The Nigeria Agriculture PER (World Bank 2008a) summarizes key findings from a comprehensive literature review used to analyze the impact of agricultural research and extension in the country. The agriculture PER also undertakes qualitative assessment of the core agricultural subsectors in relation to their institutional and public finance characteristics. These subsectors include agricultural input supply and subsidies, agricultural financial services, and national strategic food reserves.

The Ghana Agriculture PER (Benin et al. 2008) highlights that lack of information limits the possibility to conduct impact analysis on key subsectors. Required data include (i) time-series data, disaggregated by region and district, on government and other public expenditures on the various agricultural subsectors (crops, livestock, fishery, forestry, and natural resource management) and (ii) data on functions or activities (research, extension and training, marketing, inputs such as seed, fertilizer, and chemicals, and infrastructure like irrigation, feeder roads, marketing information system, and post-harvest handling). However, the Ghana agriculture PER uses various quantitative methods to assess the effectiveness of public spending, including benefit-incidence analysis of impacts at the local level. Data from the fifth Ghana Living Standards Survey were used to understand the geographical distribution of households' income and showed that the effects of ongoing poverty reduction strategy were mainly benefiting the south of the country, deepening the divide between north and south.

Econometric analysis from Benin et al. (2008) was used to guide new efforts to target agricultural and rural development analysis (Figure 13). A cost-benefit analysis was undertaken.

FIGURE 13: Benefit-Cost Analysis of Public Expenditures in Ghana



Source: Benin et al. (2008). Note: Benefits are measured as the total value of household agricultural production and income (from crops. livestock, forestry, fishing, hunting, and so forth) per capita in 2005–06. Costs are Government of Ghana and AgSSIP expenditures at the regional and district levels between 2000 and 2006.

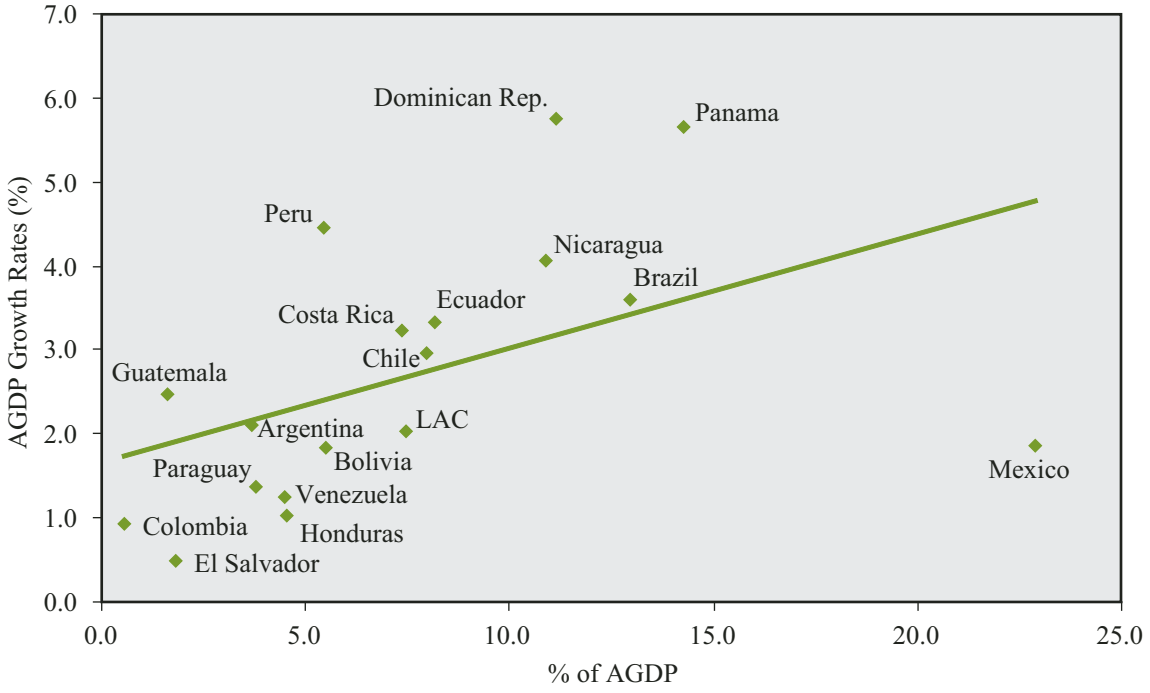
Results showed that (i) different agro-ecological zones have different comparative advantages in production and that (ii) there is a trade-off between allocating resources to areas where the growth effects are highest (Southern Savannah) and areas where the prevalence of poverty is highest (Northern Savannah). Results suggested that an effective strategy should take into account returns associated with different types of agriculture expenditures (e.g., extension, research, input support, or irrigation) in different regions.

Empirical Results: The Mexico Agriculture PER (World Bank 2009a) presents empirical results showing that the impact of Mexico's agricultural public expenditure (APE) on agricultural growth seems comparatively small, that the impact of APE on total factor productivity (TFP) is also low, and that a negative correlation exists between public spending on private goods and state agricultural growth (Figure 14).

The APE on TFP was also found to be low for Mexico. This was calculated by comparing growth rates in agricultural GDP and TFP from 1981–2001 with average APE and AGDP expenditure rates for 1985–2001, ordering countries by the latter (Figure 15).

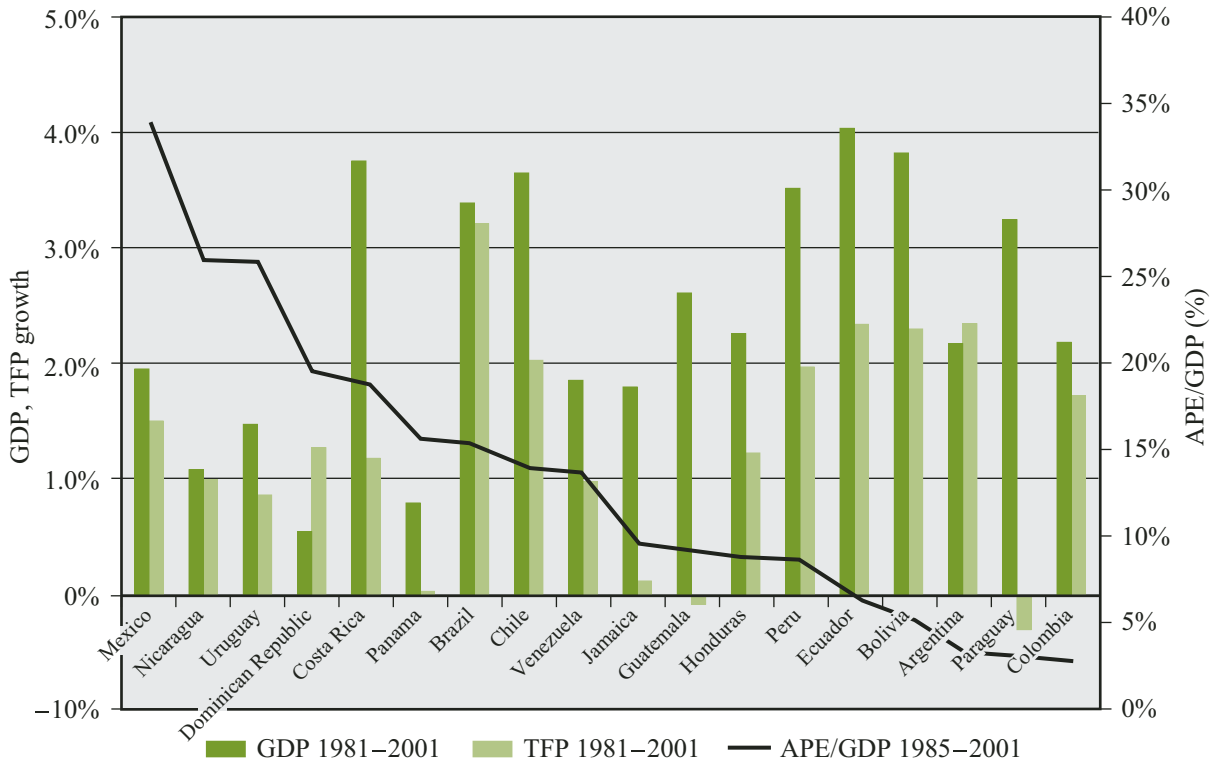
A negative correlation between spending in private agricultural goods and state-level AGDP growth was found. Controlling for the levels of mechanization, fertilization, and expenditures in public goods, a 10 percent increase in APE in private goods as a percentage of the value of agricultural production is associated with a 2.6 percent reduction in AGDP growth.

FIGURE 14: Agricultural Growth Rate in Latin America and Caribbean in Relation to Agricultural Public Expenditure (as a Percentage of GDP), Average 1997–2001



Source: Valdes (2008a) using FAO (2005). Agricultural GDP growth rates are based on World Development Indicators Database

FIGURE 15: Average Annual Agricultural GDP and TFP Growth Rates and Distribution of APE/AGDP (as a Percentage, 1981/5–2001)



Source: APE and Agricultural GDP from FAO (2005); Agricultural TFP growth rates from Avila and Evenson (2004).

Example 43: PUBLIC-PRIVATE PARTNERSHIPS

Different types of public-private partnerships (PPPs) are important for delivering better and more efficient agricultural services, for sharing the cost of public expenditures, and for stimulating private investment. PPPs are part of a broader strategy for the state to shift toward more effective roles and arrangements to improve the efficiency and equity of public expenditures on agriculture. The partnership approaches listed below are useful for enhancing the composition and impact of public expenditures and broadening the participation of stakeholders. These approaches can be applied in different ways, accompanied by appropriate funding mechanisms and "rules of the game," depending on the particular country and sector (*WDR 2008*, para. 11.39):

- *Contracting out* is suitable for functions that require public finance but not necessarily public provision. It is increasingly used for agricultural advisory services, as in Uganda.
- *PPPs go beyond outsourcing*, creating joint responsibilities for financing and providing agricultural services and infrastructure, as with Banrural, which provides financial services to smallholders in Guatemala. Not all such programs are suitable for targeting the poor, but they can still free up public resources, which can then be targeted toward the poor under other institutional arrangements.
- *PPPs involve third sector organizations*, such as producer organizations, along with public agencies and private businesses, as with Ghana's Sustainable Uptake of Cassava as an Industrial Commodity Project.
- *Devolving management authority to user groups* is widely applied in natural resource and irrigation management, as with the irrigation scheme of the Office du Niger, in Mali. The opportunities and challenges of devolution to user groups are comparable to those of community-driven development.
- *Privatization* works best where state involvement is no longer needed. Veterinary services are a good example. Across 10 Sub-Saharan countries, the

number of private veterinarians increased from 70 in the mid-1980s to 1,780 in 2004. Community-based paraveterinarians have improved service provision, too.

Service cooperatives, formed and owned by producers, can provide pro-poor agricultural services. In India, dairy cooperatives provide services to more than 12 million households, benefiting women particularly because of their role in dairy farming.

Example 44: MATCHING GRANTS TO LEVERAGE RESOURCES

Morris et al. (2007) provides an overview of several principles that should guide effective matching grant schemes. Matching grants are another form of market-smart subsidies and can be used to fund start-up activities. Under the typical matching grant program, the recipient of the matching grant (which can be an individual, a group of individuals, a firm, or a not-for-profit organization) is required to mobilize local resources, which are then combined with external funding (the matching grant) to pursue a defined set of objectives. Because matching grants are usually provided only once to a given recipient, they do not imply a recurring commitment of resources on the part of the granting agency, meaning that it is usually easy to devise an exit strategy. Most matching grant programs simply terminate as soon as their funds are fully disbursed. Matching grants can be particularly useful in situations where credit markets are weak, financial risk is high, or both. In such cases, the public or donor funds are used to leverage private investments until financial and risk markets emerge.

Matching grants can be used for promoting fertilizer market development at three levels in the supply chain. They can be used to foster (1) agricultural innovation, (2) business development, and (3) community-driven investment.

1. *Agricultural innovation grants* can be awarded—usually through competitive procedures—directly to producer organizations or to partnerships of farmers and research and extension services to develop and test innovations related to soil fertility and other types of innovations, depending on farmers' priorities. Farmers' involvement ensures that local demand increasingly guides the development and dissemination of technology. The approach shows promise, but it requires substantial local public and private financial support and a highly professional unit to administer the program. Grants may be managed completely by farmer groups to allow them to test and adapt new technologies, as is being implemented for soil fertility management and complementary practices in Tanzania.
2. *Business development grants* can be awarded competitively to individual entrepreneurs or to entire firms. Business development grants are generally designed to improve business performance by encouraging investment in business processes or building staff capacity. In the fertilizer sector, they can be used to encourage risk-taking, for example, by stipulating that recipients must expand fertilizer distribution into new market areas or carry new product lines.
3. *Community-driven development (CDD) grants* can be used to support agricultural income generation at the community level. Direct transfers for productive activities, including investment in soil fertility, may be justified if they reduce poverty by targeting the very poor and if they stimulate some private sector development. By encouraging recipients to engage in collective action to obtain technical support or arrange the purchase of inputs or market outputs, CDD grants can provide options that are not open to individuals acting alone.

Matching grants have some drawbacks, however. Administration of matching grant programs can be costly, because it is often difficult to distinguish between needy applicants who really are unable to mobilize investment resources on their own and more well-heeled applicants who are perfectly capable of accessing commercial credit. If this distinction is not maintained, matching grants can end up going to creditworthy recipients, thereby crowding out private sector lending. Finally, matching grant programs are ripe for political manipulation, and administrators of matching grant programs often come under pressure to steer grants to those with political and economic influence.

Because matching grants are generally market smart, or at worst market neutral, they have been growing in popularity. However, considerable care is needed in designing a matching grant program (McKean and Ostrom 1995; Van der Meer and Noordam 2004). Experience suggests that grant programs are much more likely to be successful when some simple guidelines are followed:

- The type of grant selected should be tailored to local circumstances, including the quality of local technical expertise.

- The economic rationale for public cofinancing should be articulated clearly.
- Rigorous and transparent eligibility criteria and assessment procedures are important, as is competent fund management with clear objectives and procedures.
- To ensure that proposals address private sector priorities, an initial investment may be desirable to build the capacity of potential recipients so that they can develop and defend proposals that identify key problems, critically evaluate alternative solutions, and justify grant funding based on clear net benefits in economic and social terms.
- A significant learning period should be allowed to enable stakeholders to gain experience in working with the grant scheme and to make adjustments as necessary.
- Administrative costs must be controlled rigorously to create a sustainable private market for support services within a limited period. Fifteen percent appears to be an international norm for start-up and staffing costs, administering grants, M&E, institutional development, and training to prepare proposals.
- Often there are trade-offs between ensuring that operations are cost-effective and ensuring that they are conducted with accountability and transparency, and some balance must be sought to ensure that both objectives are met.
- Grant funding is typically most effective when it is complemented by other funding mechanisms. In many cases, block funding from the public sector will still be needed to address core public goods.
- From the beginning, grant schemes should have a clear disengagement strategy. Proposals should include action steps that can be monitored, with milestones and targets indicating when objectives have been achieved. Generally grants should be for a fixed period, such as three years, and not renewable.

Example 45: ENVIRONMENTAL SERVICES AND CLIMATE CHANGE

The agriculture sector is expected to be heavily impacted by climate change requiring for adaptation measures to be taken. At the same time, the sector accounts for over 30 percent of greenhouse gas emissions and uses over 70 percent of available water resources. Even though countries must address these environmental issues, mainstreaming has been slow, given the complex scientific nature of climate change and the uncertainty associated with it and due to the fact that an international carbon trading system is not in place nor are natural resources properly priced.

The Mexico PER (World Bank 2009a) has the following technical note on payment for Environmental Services in Natural Resource Sectors: Managing natural assets well is difficult because the value of many—if not most—environmental services cannot be internalized by private actors; they are externalities and public goods. Individuals in society generally value natural assets, but the incentives guiding private action rarely reflect their value to society as a whole. The key to better managing natural assets is to design institutions that can measure the social benefits and costs of environmental services and translate that information into appropriate incentives for individual decision makers, such as farmers. The classic policy proposals for better management focused on reducing negative externalities are environmental taxes on emissions, mandated best practices, property rights allocation, and support for institutions for common property management.

In agriculture and forestry, environmental taxes are rarely used due to the high cost of monitoring emissions. Emissions permits outside agriculture tend to be pollutant specific. Better known in the natural resource sector are best management practices to reduce environmental damage. Such practices are now more common—for example, when managing native forests—and are often pushed by tourism-linked considerations and by consumer preferences in wealthier countries valuing not only the product but the environmental friendliness of production. In fact, there is a growing emphasis on private, third-party certification and voluntary implementation of standards, as with organic produce in fresh fruits and vegetables for exports. This is due in part to the normal slowness of governments as many developing countries adjust to the design and enforcement of best practices.

Recent policies have emphasized both market-oriented and government-supported subsidies of environmental goods and services. These policies, such as incentives for better land management, focus on Payments for Environment Services (PES) provided by those who benefit from such

services, including local, regional, and global beneficiaries. PES programs can be found increasingly in both developed and developing countries, ranging from contracts between farmers and local industries whose profits are sensitive to water availability, to contracts between one country's industry and groups in distant countries seeking carbon sequestration. According to the FAO, there are four main PES markets: climate change mitigation, watershed services, biodiversity conservation, and landscape aesthetics. In developing countries' markets for reducing carbon emission and conserving biodiversity are potential sources of new revenue for agriculture. The ultimate beneficiaries of environmental services are usually dispersed, so intermediaries such as governments and international public and private concerned entities are required. To date, PES programs have been pushed by governments and are geographically focused. They are usually direct payments in exchange for better land management, such as soil and water conservation measures, and tree plantations for carbon sequestration. Beneficiaries can pay via a surcharge to water bills or with fees for park visitors. There are two key steps for designing efficient PES programs. First is targeting farmers or other managers of natural assets whose adoption of better management practices can yield the highest environmental benefits for the lowest costs. Second is the structure of compensation, which not only induces better management but also is self-enforcing by reducing monitoring costs and assuring compliance.

Perhaps the most studied case of PES in Latin America is the Costa Rican National Forestry Financing Fund, which began in 1997 and has led to similar efforts in other countries. The fund officially recognizes that forest owners provide a bundle of environmental services, including watershed protection, biodiversity conservation, scenic beauty, and carbon fixation and sequestration. The PES system arose when the government was searching for sustainable funding for both forest conservation and aid to the forestry sector. A 2002 evaluation of the program found that the Costa Rica PES had contracted more than 280,000 hectares of private forests, with more than 800,000 hectares pending, spending US$57 million between 1997 and 2002. Forest conservation contracts paid over US$210 per hectare, and reforestation contracts paid US$538 per hectare. Funding came primarily from fuel taxes, complemented by international donors.

One special consideration is the potential role of the PES in alleviating poverty. Associated with poverty are low levels of education, ill-defined property rights over natural assets, and a lack of capital that could support households during long-term investments in natural assets (such as planting trees). Poverty often leads to environmental degradation. Being able to target poor farmers for PES would bring both environmental benefits and poverty reduction. Yet while targeting the poor on paper might be logical, implementing a PES plan would be constrained by the very structural characteristics that link poverty to environmental degradation in the first place: ill-defined property rights that make contracting and long-term projects uncertain for both buyer and seller of the service; small farm holdings that increase the transaction costs per unit of compensation and reduce the viability of better management (such as crop rotation) and thus increase the required compensation to entice farmers to better management practices; and lack of credit as a short-term backup makes farmers more risk averse to adopting a new system of management. Nevertheless, the Bank, while recognizing that PES is not in itself an antipoverty strategy, has suggested some pro-poor considerations in PES design. In particular, it suggests that one could devise specific mechanisms to counter high transaction costs, understand the social context in which a PES would be applied to avoid adverse impacts on the poor, and design appropriate remedial measures. Making PES programs pro-poor, however, might increase their costs, so funding must be found beyond the beneficiaries of environment services. Donors who are more directly concerned about poverty could finance these additional costs.

Example 46: DECOUPLING AGRICULTURAL SUBSIDIES

Decoupled payments are less distorting than output-linked forms of support such as tariff protection. The process on decoupling has varied significantly by commodity. The most common strategy that has been used by countries to phase out price supports is to provide farmers with direct cash transfers, shifting from production-based support to direct income support. Under a direct transfer program, payment reception is not at all tied to production. This means that farmers can follow market signals and produce goods for which there is demand but also earn a baseline living income in the form of a government transfer.

Key lessons learned from countries that have successfully eliminated crop price supports include (i) adequately compensate farmers for potential income loss, (ii) educate them about new support programs, and (iii) provide technical

assistance to help them adjust. Turkey and Mexico have both used direct payments to replace production subsidies: Turkey for several crops, one of the most important being tobacco, and Mexico for staple food crops. The transition process was made easier in Mexico, which offered technical assistance to help farmers invest their direct payments in productive activities with high rates of return.

The Turkey Agriculture PER (World Bank 2006e) noted that the government started in 2000 to change the system of agricultural support to promote fiscal stabilization and allocative efficiency. There was great concern that farmers would not be adequately compensated when subsidies were replaced with a direct income support (DIS) program, creating a major challenge for reform. By the end of 2002, the implementation of the reform of agricultural transfers had significantly reduced artificial incentives for inputs and particular crops and switched the main focus of agricultural transfers to the DIS Program. By 2004, the annual fiscal cost had been reduced from US$6.1 billion (3.1 percent of GDP) in 1999 to US$2.4 billion (0.8 percent of GDP). This has been achieved largely through the elimination of credit subsidies, reduction of debt write-offs, and substantial reduction in state-financed crop purchases and fiscal transfers to cover the losses of state agricultural enterprises. At the same time, the DIS Program expanded to become the main instrument of rural income support.

Simulations for Lebanon and Greece show that decoupling payments from production would likely lead to widespread abandonment of tobacco cultivation (IDRC 2008; Psaltopoulos and Eudokia 2005) and that the household level impacts of decoupling support programs from production will depend on what alternative economic activities are available and what requirements are attached to receiving direct payments. The Lebanon Agriculture PER (World Bank 2010c) noted that, although tobacco subsidy removal would undoubtedly cause friction; negative effects could be mitigated by tying receipt of uncoupled support to farmers remaining on their land by accompanying a DIS program with a wide-spread information campaign to ensure that eligible farmers understand how to receive payment and by providing technical assistance to help farmers invest in alternatives to tobacco production that stimulate investment and labor demand.

Example 47: THE CASE FOR AND AGAINST FERTILIZER SUBSIDIES

Fertilizer subsidies often comprise a significant share of public budgets, increasingly so in many African countries. In this context, it may be useful to understand the arguments for and against fertilizer subsidies to help dialogues with government counterparts. This section is from Morris et al. 2007.

Arguments in favor of fertilizer subsidies: Three main economic arguments are typically used to justify the use of fertilizer subsidies. First, they can kick-start innovation and stimulate greater demand for fertilizer. Second, they can help overcome missing or imperfect markets for fertilizer. Third, they can compensate farmers for positive externalities. A fourth argument is more political: Fertilizer subsidies are needed to level the playing field for farmers who must compete in global markets against competitors who benefit from subsidies and other forms of support in their own countries.

Common problems with fertilizer subsidy programs: Nigeria's fertilizer subsidy programs have not been rigorously evaluated, but anecdotal evidence suggests that these programs have experienced the same problems that have plagued fertilizer subsidy programs everywhere. Studies carried out in many countries have shown that fertilizer subsidies often: (i) crowd out the private sector by undermining incentives for firms to invest in production and marketing; (ii) encourage rent seeking, making them magnets for corruption and abuse; (iii) tend to be captured by wealthier farmers, leading to a regressive distribution of benefits; (iv) encourage inefficient use of fertilizer at the farm level; and (v) are difficult to target, resulting in a high level of leakage to neighboring countries.

High administrative and fiscal costs: In addition to these more practical problems, the larger issue—and perhaps the most relevant from a public expenditure point of view—is that fertilizer subsidy programs have extremely high administrative and fiscal costs. Most empirical studies that have assessed fertilizer subsidy programs have concluded that the costs outweigh the benefits. This is likely to be the case in Nigeria as well, where considerable portions of the federal and state agriculture budgets have been used to support fertilizer subsidy programs. Much of the fertilizer distributed through these programs seems to have gone to large-scale farmers who were capable of purchasing fertilizer

on commercial terms, rather than to the resource-constrained smallholders whom the schemes were intended to benefit. Meanwhile, there was public underinvestment in core public goods and services, including agricultural research and extension, market information systems, and rural infrastructure.

When subsidies may be justified: This is not to say that fertilizer subsidies should never be used. Although the long-term objective of policy makers must be to support the emergence of viable fertilizer markets led by the private sector, subsidies may be justifiable on a temporary basis to help overcome market failures. Yet, the first policy option should be to address the underlying cause of market failure/problem rather than trying to compensate for it with subsidies. If they are used, however, it should be in ways that encourage the efficient uptake of fertilizer as part of an integrated package of improved crop-production technologies. Fertilizer promotion programs therefore must be comprehensive and multifaceted, encompassing not only measures to improve the supply of fertilizer, but also measures to strengthen demand for fertilizer. For this reason, building fertilizer markets must go hand-in-hand with building output markets and linking farmers to those markets.

Guiding principles for design of "market-smart" subsidies: When used as part of a broader strategy to address the binding constraints on supply and demand, well-designed fertilizer subsidies can play a useful role. But fertilizer subsidies should always be "market smart," so that they contribute to the development of viable and competitive private-sector-led fertilizer markets. They should be targeted at resource-poor farmers to encourage incremental use of fertilizer by those who would otherwise not use it; otherwise commercial sales will be displaced. They should not distort relative prices of different inputs so as to encourage economically inefficient use. And they should always be temporary, introduced for a limited period, with a clear schedule for phasing out when they have achieved their purpose.

Example 48: ACCOUNTABILITY MECHANISMS

Experience shows that appropriate accountability mechanisms (applied at various levels and for diverse stakeholders) can play an important role in enhancing the efficiency and impact of expenditures. Up to now, relatively few countries consistently and effectively used sound accountability mechanisms. The Ghana Agriculture PEIR (Kolavalli et al. 2009) generated useful information and constructive suggestions related to accountability mechanisms. It was noted that MoFA was making some efforts to increase the accountability of various units in the organization. These included (i) the establishment of annual "performance review" workshops, to which donors and other stakeholders were also invited; and (ii) the development of plans, setting up of targets, and assessment of performance in relation to previously specified outcomes. The review found that MoFA's accountability to the top political leadership, especially the President's Office, was high. The budget processes also introduced accountability to parliamentarians, particularly for the fulfillment of targets in the budget statement. However, accountability to the District Assembly has not yet been established in any formal sense, even though field staff interact with elected District Assembly members. Food and Agriculture Budget support triggered accountability to donors as well. It was noted this process should be strengthened and strongly linked to outcomes. The review also showed that routine processes that could enhance responsibility (such as regular individual assessments and evaluation of the quality of the work performed) could have been improved and that acknowledgement of good performances would increase staff accountability.

Example 49: INSTITUTIONALIZING PERS

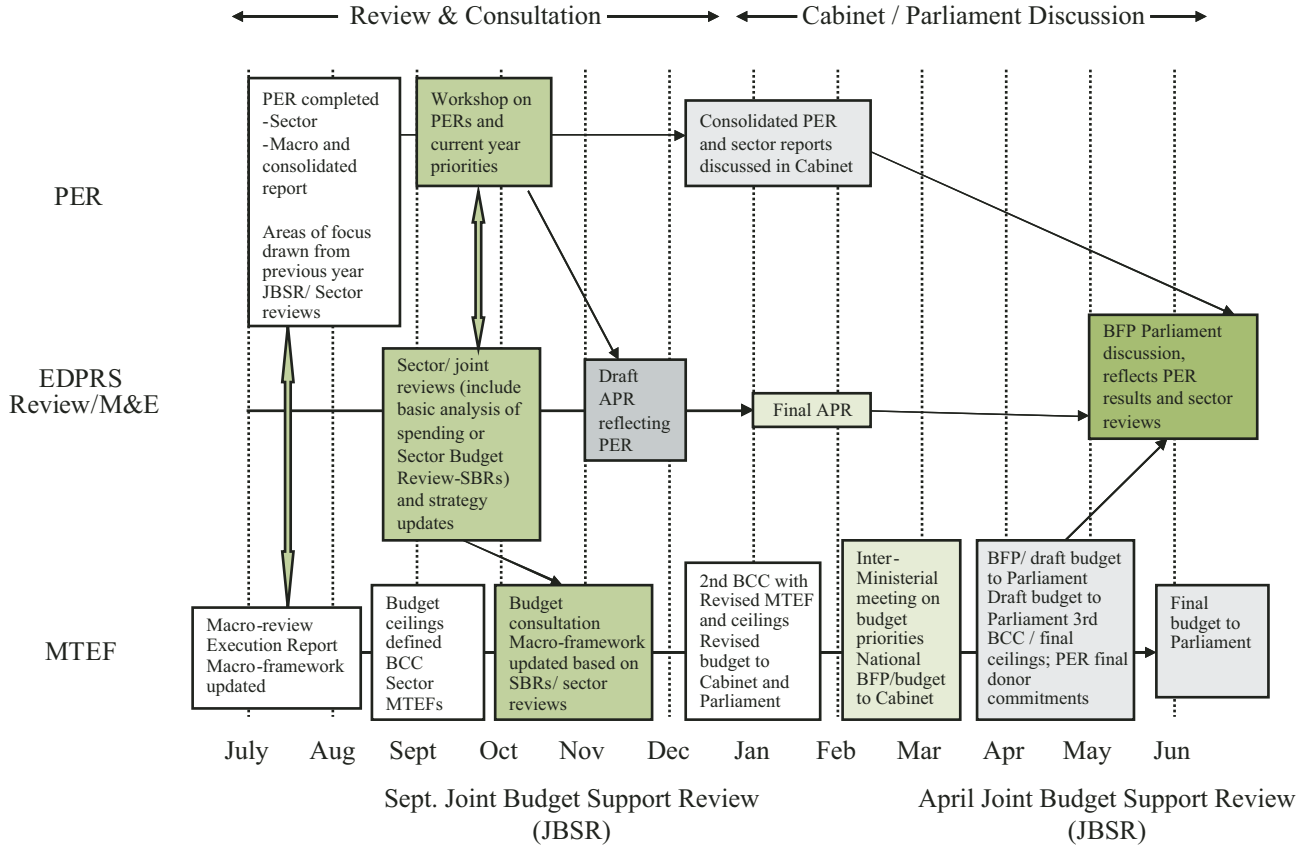
An emerging lesson on the sustainable impacts of PERs is the importance of encouraging governments to institutionalize PERs as part of their annual budgetary process. In addition, deeper analytical reviews are required periodically even in the countries where annual reviews are the norm because in-depth PERs cannot be carried every year. A core component of the World Bank's technical assistance in expenditure reviews to the Government of Rwanda is to institutionalize PERs in Rwanda (World Bank 2009d). It is important to recognize that these efforts need to be coordinated at the macro level, in close collaboration with the Ministry of Finance, and that they must ensure a strong macro-sectoral linkage and complementarity. In cases where there is strong commitment and leadership at the level of the ministry of

agriculture, some aspects of institutionalization could be initiated (as part of the annual budgetary process) and perhaps serve as a catalyst for the Ministry of Finance to take broader leadership.

Experience from countries that have institutionalized PERs shows that aligning these reviews to the budget calendar and ensuring results feed into budget preparation and policy discussions are critical for capacity development. The PER process in Tanzania, Ghana, and Uganda has, in general, informed policy discussions and prioritization for preparation of annual budgets and also for the medium-term expenditure plan. Rwanda is also planning to adopt a similar approach with sector budget reviews that would feed into sector working group meetings and in turn would feed into preparation of the sector Budget Framework Papers (BFPs) that rationalize areas of focus in the sector budget and review past performance. These sector BFPs would then feed into development of the macro-level BFP, as would the macro-level budget review and any related PERs conducted at the macro level. Figure 16 summarizes the associated proposed calendar.

Based on experience in institutionalizing PERs in various countries, the process appears to require that eight components and supporting processes are in place: (i) an overall framework and procedure with clearly articulated roles and responsibilities for the key stakeholders, (ii) a mechanism for coordinating quality assurance and dissemination, (iii) planning and budgeting for PERs, (iv) capacity development to ensure ongoing sustainability of the process, (v) M&E of the results to feed into ongoing strengthening of the process, (vi) a plan for the development of needed data and reference materials, (vii) a process of independent reviews of the reports, and (viii) partnership with donors.

FIGURE 16: Government of Rwanda Proposed Budget Calendar

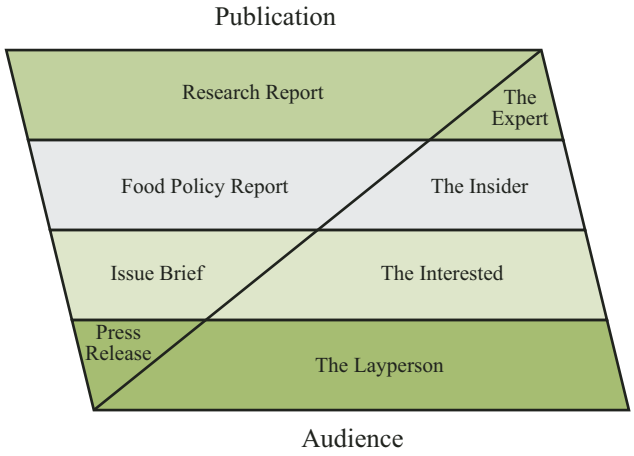


Source: World Bank 2009d.

Example 50: DISSEMINATION STRATEGY

The dissemination strategy for a PER will depend on the target audience to be reached. A dissemination strategy used by IFPRI is to (i) determine the target audience against the objectives of the work being undertaken, (ii) determine who could use this information (e.g., policy makers, donors, researchers, or other stakeholders), and (iii) determine who

FIGURE 17: Match Publication to Audience



Source: von Grebmer et al. 2005.

wants to receive the information, determining what type of policy dissemination activities are needed such as press interviews, research reports, and policy briefs (von Grebmer et al. 2005).

As an example, when IFPRI released its projections of the global food outlook for 2020, it created different communication products for different audiences. For the experts, a full report, 206 pages, containing complex, detailed information was published. This report is intended for an important but very limited scientific audience. For an interested, informed audience, IFPRI published a 16-page report, *2020 Global Food Outlook: Trends, Alternatives, and Choices*. It contained the essential findings, enhanced with color graphics aimed at policy makers and journalists. For the popular press and general public, it published a 2-page press release containing only the main messages through sound bites or bullet point-type information. This approach appeals to the mass media and high-level policy makers who don't have time to read longer reports (see Figure 17).

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