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DIRECTIONS IN DEVELOPMENT
Human Development

# Public Works as a Safety Net

## *Design, Evidence, and Implementation*

Kalanidhi Subbarao, Carlo del Ninno,
Colin Andrews, and Claudia Rodríguez-Alas

THE WORLD BANK

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**THE WORLD BANK**
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# Foreword

From the Victorian Poor Laws in nineteenth century Britain to the post-war recovery of the 1940s, public works programs have historically played an important role as countercyclical interventions to address seasonal and short-term unemployment. In recent times, the role of public works has broadened—because globalization and economic integration, while expanding opportunities for all, has also increased the exposure to and transmission of risk, especially to the poorest. Public works are now being used increasingly across the developing world as an essential part of the social protection toolkit to respond to risk and persistent poverty. And recent flagship public works programs in Argentina, Ethiopia, India, and elsewhere have sparked even greater interest in their effective use in other developing-country contexts.

The core issue addressed by the type of public works programs discussed in this volume is how to use them to provide flexible, cost-effective ways to help poor households cope with their vulnerabilities. Conceptually, of course, insurance markets or private precautionary savings could address household risks. But such insurance markets are seldom complete, are rarely available outside the richer countries of the world, and even there offer little or no access to the poor. And the poor have few or no savings or assets to tide them over bad spells. So when

shocks occur, in the absence of insurance or savings, the poor use informal coping mechanisms, such as borrowing under usurious terms, or resort to short-term measures, such as pulling children out of school or deferring healthcare, which damage their long-term prospects of escaping from poverty.

Public works programs offer one promising way for a country to protect its poor population from shocks—by transferring sufficient income in times of an income shock to help them cope, and to protect them from the irreversible long-term harm that comes from the sort of sub-optimal coping mechanisms that worsen their future well-being and that of their children. Governments in a broad range of contexts—be they low-income, middle-income, or high-income, or in the aftermath of conflict or disaster—have implemented public works programs. These have had various aims—from mitigation of shocks, consumption smoothing, and poverty relief to providing bridges to formal employment and creating community assets. And recently, some governments have turned to public works programs as an instrument of last resort in fighting chronic poverty.

Despite the rapid adoption of public works programs in diverse country settings, little attention has been focused on capturing evidence of success and on distilling the lessons learned. This volume aims to fill this knowledge gap, by presenting a synthesis of global experience over the past few decades with public works programs used as a safety net. One of the inspirations for this volume was the recent global Social Protection South-South Learning Forum on *Making Public Works Work*. This vibrant forum, held in Tanzania in 2010, brought together almost 300 policy makers, donors, and practitioners to brainstorm on a variety of issues bearing on the objectives, design, and implementation of public works programs. This volume distills, documents, and builds on the ideas that were aired at the forum. As such, it advances the current state of knowledge by offering, for the first time, a comprehensive treatment of this time-tested safety net instrument, pulling together evidence on targeting outcomes, implementation issues, impacts on poverty, and cost-effectiveness.

For the World Bank, social safety net programs—which protect the poor and the vulnerable from shocks and protect and preserve their human capital—is a central element of its 10-year Social Protection and Labor Strategy, launched in 2012. Public works are an essential element of the portfolio of such safety net programs. Therefore, we hope that this volume will prove to be valuable for governments, policy makers, donors, and the wider development community in planning and designing new

public works programs, modifying existing ones, and improving implementation of ongoing efforts—and thus in underpinning the strategy's fundamental goals of providing resilience for the vulnerable, equity for the poor, and opportunity for all.

Arup Banerji
Director, Social Protection and Labor
The World Bank

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# Abbreviations

| | |
|---|---|
| ADB | Asian Development Bank |
| ASNP | annual safety net plan |
| CARD | Council for Agricultural and Rural Development |
| CBPWD | community-based participatory watershed development |
| CFSNS | Comprehensive Food Security and Nutrition Survey |
| CfWTEP | Cash for Work Temporary Employment Project |
| CGH | Coady-Grosh-Hoddinot indicator |
| CSF | Commune/Sangkat Fund |
| CWT | community watershed team |
| DFID | Department for International Development |
| eFMS | Electronic Fund Management System |
| EIA | environmental impact assessment |
| eMMS | Electronic Muster and Measurement System |
| EPWP | Expanded Public Works Program |
| ESMF | environmental and social management framework |
| F/CFA | Food/Cash for Assets Program |
| FSP | Food Security Program |
| GDP | gross domestic product |
| GPS | global positioning system |
| HABP | Household Asset Building Program |

| | |
|---|---|
| HARITA | Horn of Africa Risk Transfer for Adaptation |
| ID | identification |
| IDA | International Development Association |
| ILO | International Labour Organization |
| IT | information technology |
| KfW | Kreditanstalt für Wiederaufbau |
| LACE | Liberia Agency for Community Empowerment |
| LBAT | labor-based appropriate technology |
| LIWP | Labor-Intensive Works Program |
| M&E | monitoring and evaluation |
| MASAF | Malawi Social Action Fund |
| MEGS | Maharashtra Employment Guarantee Scheme |
| MGNREGA | Mahatma Gandhi National Rural Employment Guarantee Act |
| MGNREGS | Mahatma Gandhi National Rural Employment Guarantee Scheme |
| MINALOC | Ministry of Local Government |
| MIS | management information system |
| MPDO | *mandal parishad* development officer |
| NGO | nongovernmental organization |
| NSPS | National Social Protection Strategy |
| OFSP | Other Food Security Program |
| PATI | Programa de Atención Temporal al Ingreso (Temporary Income Assistance Program) |
| PSNP | Productive Safety Net Program |
| SMS | short message service |
| SPIU | Strategy and Performance Innovation Unit (India) |
| SSAAT | Society for Social Audits Accountability and Transparency |
| TCS | Tata Consultancy Services |
| TLU | total livestock unit |
| VSA | village social auditor |
| VUP | Vision 2020 Umurenge Program |
| WB | World Bank |
| WDI | World Development Indicators, World Bank |
| WFP | World Food Programme |
| WWS | Workplaces with Stipends |
| YES | Youth Employment Skills |

*Note:* All dollar amounts are U.S. dollars unless otherwise indicated.

CHAPTER 1

# Introduction and Overview

In Ethiopia in 2004, a public works program known as the Productive Safety Net Program (PSNP) was introduced to improve the country's resilience to drought-induced shocks. An important innovation of the program was its dual objectives of temporary employment creation and infrastructural development. Within 5 years, the program had helped approximately 7.6 million households cope with chronic droughts and withstand the impacts of food crisis. PSNP had also created an impressive range of community assets promoting soil and water conservation and natural resource management. The program's impressive—and ongoing—accomplishments have catalyzed interest in public works in Africa, and have contributed to a significant shift in the portfolio of development assistance projects across the continent.

The African public works experience is mirrored on the Asian continent. Since 2006, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) has delivered the largest public works program in human history. The program provides 100 days of employment upon demand in rural India, for men and women alike. MGNREGS is currently available to almost 56 million households, making it the largest safety net scheme in the world. The program is notable—and

controversial—not only for its scale and cost but also for its rights-based approach in guaranteeing employment.

The experiences of PSNP and MGNREGS point to the increased prominence of public works as a safety net instrument and as a driver in shaping social protection systems globally. Recently, this has been seen in response to the triple wave of food, finance, and fuel crises of 2007–09, which drove a strong global push for public works programs. In most cases—including in Djibouti, Latvia, Liberia, Nepal, and Sierra Leone—these public works programs were established from scratch, often drawing on available capacity and related experiences in safety net operations. Elsewhere—as in Cambodia, Ethiopia, Rwanda, and Uganda—existing large-scale programs were recalibrated and scaled up. A striking feature of this response was the customization of public works programs to a variety of contexts, including low-income, middle-income, and fragile settings.

While this combination of past and emerging experiences demonstrates the potential of public works programs as an important safety net for addressing the poor's vulnerability to shocks, the overall record of achievement is uneven. Public works programs are beset by myriad challenges involving transparency and leakage, including in India's nationwide flagship program MGNREGS. Issues of governance and corruption have arisen in many programs across the globe, and threaten to rob public works instruments of their credibility and repute in achieving their stated objectives. Such experiences, negative as well as positive, form the backdrop for much of the discussion in this book—and go a long way toward explaining the reason for this book.

For policy makers and practitioners alike, the last decade of public work experiences brings a broad range of questions and areas of inquiry into focus, including the following:

- What are public works programs?
- What are their main objectives?
- What is the relevance and role of these programs with regard to development in general and in the context of the current global economic crisis, particularly as reflected in high rates of unemployment?
- What variations and approaches exist across countries?
- What lies behind their success where they have succeeded, and why have they been the object of both praise and criticism?
- What explains the variation in program performance across countries and over time in the same country?

This book aims to address the existing knowledge gap that these questions point out. Armed with this knowledge, countries will be able to make informed decisions about whether to launch public works programs, and—if so—how to design and implement them to maximize success.

## Definition and Evolution of Public Works Programs

Broadly speaking, public works programs are social protection instruments used in diverse country circumstances in both low- and middle-income countries with the dual objectives of providing temporary employment and generating and/or maintaining some labor-intensive infrastructural projects and social services.

Public works programs have a long history. A section of road between Islamabad and Peshawar, today a noted Pakistan tourist attraction, was constructed in a 12th century public works relief program. Similarly, England's 18th century Poor Employment Act was used to hire surplus labor to build canals and roads and to drain marshes, thereby laying the foundations for the industrial revolution. Public works programs were launched in much of Africa and South Asia at the turn of the 20th century. One such initiative in British India began around 1870 and expanded during the 1950s in the form of several food-for-work programs. Germany introduced a public works program to support postwar reconstruction during 1946–48.

Much of the current momentum for introducing and scaling up public works programs derives from India's experience in the 1970s, when the state of Maharashtra was hit by a massive drought that forced 70 percent of its rural population into poverty. In response, an innovative public works program that offered a guarantee of employment for the first time in India—the Maharashtra Employment Guarantee Scheme (MEGS)—was introduced. MEGS made a striking impact in reducing rural poverty while improving the state's irrigation infrastructure and rural roads network, and enhancing its resilience to shocks. Similarly, following Asia's severe financial crisis, which dramatically increased the unemployment rate from 2 to 9 percent, the Republic of Korea in 1997 introduced a public works program that provided employment to over 140,000 workers for 18 months.

In the last decade, public works programs have become one of the primary instruments to fight poverty and address temporary work shortages brought on by a slack agricultural season or after a shock, providing assistance in both postdisaster and postconflict situations. Among the

most notable poverty reduction programs is India's aforementioned MGNREGS. Several countries have introduced public works programs to respond to a variety of financial, natural, and human crises. The Jefes de Hogar (Head of Household) program in Argentina and Latvia's Workplaces with Stipend Emergency Public Works Program are examples of initiatives introduced to address macroeconomic shocks adversely affecting growth and precipitating a drop in employment. Rwanda's Vision 2020 Umurenge Program was implemented in 2007 as a flagship effort to tackle chronic poverty; its aim was to lower the country's rate of extreme poverty to 24 percent by 2012, and to eradicate it by 2020. In Sri Lanka, the Cash for Work Component of the Emergency Northern Recovery Project was introduced to rebuild essential infrastructure by providing short-term income to people in the process of resettlement after a decades-long conflict.

More recent public works programs have incorporated a number of important design and operational innovations that have made for smarter, more efficient, and more comprehensive approaches. In Djibouti and South Africa, public works programs are being used to create a pathway out of poverty through programmatic linkages with employment and community services—an example of the so-called public works plus model. Advances in information technology have helped to promote greater governance and accountability in programs. In low-administrative capacity contexts, smart technology applications are helping to overcome challenges in beneficiary selection, payment processing, and program monitoring. Andhra Pradesh, India, has been a leader in this regard; its experience is explored in later chapters. Other innovations, also explored in the book, include the use of community networks in social audits and an emphasis on female-friendly planning to promote gender empowerment.

## Approaches of Public Works Programs

At this point, it is useful to step back and look at why a public works approach may be desirable instead of or in combination with other safety net options such as cash or food transfers, school feeding programs, or even general subsidies. Recent country experiences highlight several unique features of public works interventions as compared with other safety net instruments. Notably, public works provide income support while maintaining worker dignity; they can also improve the status of vulnerable populations, including women and the marginalized. They

tend to garner strong public and political support, because they are seen as contributing to a productive economy as well as to reinforcing a community's capacity to manage its own affairs.

Public works programs also achieve important *secondary outcomes* in terms of the creation of public goods such as different types of physical infrastructure, the implementation of projects that enhance farm productivity or address climate change through land management, and the repair of social assets such as clinics and schools. By generating or maintaining these public goods, public works programs allow communities to reap a set of second-round benefits. For example, a new irrigation structure created by labor employed in a public works project can enable farmers to grow another planting after the main winter crop; this in turn generates second-round employment opportunities in farm labor. Finally, public works programs may have important spillover benefits, including the promotion of social cohesion. While hard evidence is limited, operations in some postconflict countries point to the potential of public works programs to mitigate social tension and conflict by bringing community groups together across gender and ethnic lines.

It is important to distinguish between two broad approaches in the use of public works programs. The first approach is primarily *safety net oriented*. Programs implemented under this approach perform a critical safety net function by providing poor and vulnerable households with a source of income when they need it most—that is, when they experience sudden shortfalls in income—through temporary employment projects so they are able to smooth consumption. Apart from the primary outcome of generating income to participants, this approach also results in the creation of physical assets of value to communities such as feeder roads, small-scale irrigation infrastructure, and/or the maintenance of existing infrastructure. Because they perform a safety net function, these programs are often an integral part of national social protection strategies.

The second approach is primarily *infrastructure oriented*. Programs launched under this approach aim to create and maintain assets for economic and social development while creating as much employment as is allowed by chosen physical assets and technology. The emphasis here is on the creation of high-quality, long-lasting, sustainable infrastructure. In this way, these programs can create employment and may enhance participant skills. Such programs are often integral to an investment strategy implemented with the support of a technical ministry, such as the ministry of public works.

The public works programs covered in this book include only those programs implemented with the first approach in mind—that is, those that primarily perform a safety net function and address the vulnerability of the poor and near-poor to income disruptions. However, some of the design features analyzed in this book may be of relevance to infrastructure-oriented public works programs as well.

## Aim and Key Messages of This Book

This book provides a comprehensive overview of public works programs as a safety net instrument and their impacts. It also provides a practical review of program design features and implementation methods, and a compendium of operational and how-to knowledge, combining technical expertise with ongoing country experiences. The book thus fills a major knowledge gap in this field. To date, much attention has been devoted to making the case for improved public works, with less attention paid to the how-to aspects.

The target audience of the book includes policy makers and practitioners in national and subnational governments, donors and international organizations, and nongovernmental organizations—particularly those working in countries where a new wave of social protection interventions has been seen in recent years (e.g., Ethiopia, Ghana, Rwanda) or is likely to emerge in the future (e.g., countries emerging from the Arab Spring in the Middle East, like the Arab Republic of Egypt).

The book's key messages include the following:

- *Public works programs have emerged as a critical social protection and safety net response, not only in low-income countries and fragile states but also in middle-income countries hit by high unemployment rates in the wake of the global economic crisis.* This book documents the increasing use of public works programs as a safety net instrument in diverse country situations. The potential for public works programs to promote gender empowerment is also discussed.

- *Besides providing income support, public works programs can promote higher labor participation and create pathways out of poverty.* In particular, programs of the public works plus model highlight the potential to create a path out of poverty by linking a public works program to employment and community services.

- *The success of public works programs depends on careful design and establishing the relevant implementation structure.* Even though the level of efficiency and impact of the public works programs covered in this book varies, it is clear that well-designed and -implemented programs can help mitigate income shocks and might be used to reduce poverty. Programs need clear objectives and an efficient institutional structure to support smooth implementation.

- *Ensuring transparency and accountability is a particular concern for public works programs; these programs need strong checks and balances against possible error, fraud, and corruption.* The book explores the particular governance and political economy challenges surrounding public works programs, and looks at mechanisms to promote smooth implementation by involving communities. A credible monitoring and evaluation system designed prior to program launch can allow for midcourse corrections and can respond to sudden changes inhibiting effective implementation. Technological innovation can help leapfrog many implementation bottlenecks and obstacles encountered, especially in facilitating beneficiary identification, tracking, and linkages to financial services.

The book provides examples of program innovation and evolution in regard to these parameters through selected country case studies.

## Roadmap for This Book

The book is divided into two parts. Part 1 comprises analytical and empirical aspects including cross-country experience on a range of issues bearing on the program. The second part comprises country case studies on specific design issues.

The next chapter elaborates on the primary and secondary objectives of public works and the commonly used models for public works programs. Chapter 3 offers a discussion of country contexts and cross-country patterns regarding public works programs. Program design aspects are discussed in chapter 4, which covers a range of *conceptual* issues bearing on the design of public works programs, including institutional setup and funding mechanisms, project selection criteria, beneficiary targeting, and political economy considerations. Program implementation aspects are addressed in chapter 5, which looks at the *operational* issues and procedures

entailed in program setup, selection of projects and beneficiaries, the role of various agencies in collecting data for program monitoring, management and supervision of worksites, the flow of funds and financial reporting, and the procurement of goods and services. Chapter 6 focuses on governance and corruption in public works programs. Issues pertaining to monitoring and evaluation of public works programs are delineated in chapter 7.

The chapters in part 2 consist of country case studies, the majority of which have been authored by country practitioners. Each country case highlights a particular design feature or implementation aspect of public works programs, thus showcasing firsthand country experiences as well as challenges in program implementation. Chapter 8 on Rwanda looks at the evolution of wage-setting policies across time and space, and how these have been adapted as the country's public works program has evolved. Chapter 9, the first of two chapters that present experiences in Ethiopia, focuses on project selection, providing one of the very few documented analyses of a critical process that can make or break a program. Two separate case studies from the state of Andhra Pradesh, India, explore innovations in overcoming operational bottlenecks and in addressing governance and corruption issues. Chapter 10 examines the use of Web-based management information systems to smooth overall program implementation. Chapter 11 looks at community participation in social audits as a mechanism for promoting control and accountability through bottom-up, as well as top-down, processes.

Chapter 12, the second chapter on Ethiopia's PSNP, looks at the evidence of impact from what is perhaps one of the world's most intensely evaluated public works programs. Chapters 13 and 14 look at, respectively, public works evolution as part of a long-term postconflict strategy (Cambodia), and in response to a sudden-onset food crisis (Liberia). Useful country-specific data underlying much of the empirical analysis presented in the publication is provided in appendix A.

PART I

# Design, Evidence, and Implementation

CHAPTER 2

# Public Works Programs: Objectives and Models

This book, as explained in chapter 1, focuses on safety net–oriented public works programs. These are social protection instruments used mainly in low- and middle-income countries in response to a variety of circumstances in order to create temporary jobs. They are typically financed and/or implemented by a federal or provincial government, or by a donor agency.[1] The output of such programs is twofold: temporary jobs that provide wage income to participants; and the creation of public goods, including new physical infrastructure, environmental rehabilitation, or access to social services

Though all public works programs taking a safety net approach generate income for participants while creating assets, they are flexible program instruments that can respond to specific country situations by prioritizing program objectives and adjusting program design elements. To better understand their utility, this chapter analyzes these public works programs in two ways: first, in terms of the various objectives—primary and secondary—they can be used to achieve, as well as the spillover benefits they can convey; and second, in terms of three basic models of program design: short term, longer term, and public works plus.

## Primary Objectives of Public Works

The primary objectives of safety net–oriented public works programs are as follows:

- Mitigation of covariate shocks (both unexpected and seasonal)[2]
- Mitigation of idiosyncratic shocks in response to a temporary or structural job crisis[3]
- Poverty relief
- As a bridge to more permanent employment.

These objectives, which are delineated below, are not mutually exclusive.

### *Mitigation of Covariate Shocks*

Many public works programs have been designed to provide temporary income via wages to smooth the consumption of poor households in response to a covariate shock. This shock can be a one-time occurrence due to an unexpected event such as an economic crisis or a natural disaster; it could also be a recurring, generally seasonal, shortfall in the demand for employment. Typically, programs implemented to mitigate covariate shocks run intensively in the immediate aftermath of the crisis/shock, and are scaled down in better times. The public works programs launched in response to the macroeconomic crisis in East Asia in 1997 and in Latin America in 2002, and those established after the 2005 tsunami that affected many Asian countries, are all examples of programs set up to mitigate the negative effects of a shock among the most vulnerable populations, but scaled down after the crisis ended and the economy recovered. More recently, a wave of countries introduced public works programs after the food, finance, and fuel crises of 2007–09. The World Bank alone supported at least 24 countries in mobilizing public works programs as a response to these crises.[4]

Preexisting safety nets and administrative capacity have been proven to enable a timely response to sudden covariate shocks in many countries. India and Morocco are among the few countries in the developing world to have implemented public works programs shortly after gaining their independence—India in the 1950s and Morocco in the 1960s—in order to provide temporary employment during the agricultural slack season. Fifty-one years of implementation makes Promotion Nationale the oldest and most important public works program in Morocco. One of the

program's main goals is to mitigate external shocks of droughts through the improvement of local income availability and living conditions. For example, in rural zones, the program places labor in construction and development sites, working on well digging, rural roads, water supply channels and cisterns, reforestation projects, and so on. In urban areas, employment is provided in the service sector as well as in construction and maintenance. In 2005, the program provided nearly 14 million workdays of employment (Jalal 2007).

Over time, both India and Morocco developed in-house capacity to implement their respective programs; this enabled India to promptly expand its program when the country was hit by a massive drought in 1987. The program protected poor people from severe consumption shortfall during what has often been called the drought of the century (Rao, Ray, and Subbarao 1988). Bangladesh's Food for Work program is a similar example of a long-term initiative designed for flexibility in response to crisis. Operating since 1975 as a countercyclical public works program, it provides rural poor people with employment opportunities during the dry season, mostly in the construction and maintenance of rural roads, river embankments, and irrigation channels. The program was quickly scaled up when a major flood occurred in 1998.

The objectives of a public works program may change over time and in response to crisis. In India, an existing nationwide seasonally targeted program was repurposed and expanded during a crisis. Bolivia's Plan Nacional de Empleo de Emergencia (National Plan for Emergency Employment) shifted in a converse manner. Launched as a temporary intervention aimed at generating employment for poor families in urban and rural areas during the economic crisis in 2000, it was extended and incorporated as a permanent antipoverty instrument in the Red de Protección Social (Social Protection Network) created by the government in 2004. Similarly, the Mexican government launched the Programa de Empleo Temporal (Temporary Employment Program) in 1995 in response to a severe economic crisis. Originally designed to support the income of the most vulnerable, the program today addresses structural problems that inhibit income and employment generation. In the Republic of Yemen, a public works program was implemented by the Social Fund for Development, adopting an approach of quickly developing infrastructure (mostly school and health clinic related). The main objective of the Social Fund for Development was to mitigate the adverse effects of the economic adjustment through poverty-alleviating measures targeted to the country's poor communities.

### *Mitigation of Idiosyncratic Shocks*

Public works programs can also be designed to provide a job of last resort for a given number of days to help households cope with an idiosyncratic shock. India's Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), for example, guarantees a certain number of days of employment for anyone needing a job; those hit by an idiosyncratic shock can join the program as needed. Such programs also serve as a poverty relief intervention, to the extent that beneficiaries belong disproportionally to poor families even when the program is not specifically targeted to the poor.

In countries with no formal unemployment insurance, public works programs essentially perform an insurance function. These public works programs addressing idiosyncratic shocks guarantee employment on demand at the statutorily fixed minimum wage. Workers are free to move in (when the market wage is low or work is not available) and out (when the market wage is better than the program wage) of the program at will. These programs prevent the exploitation of workers, who are often denied the minimum wage in the labor market, by providing them a guaranteed "option price" to be used when needed. A case in point is MGNREGS, India's much-lauded, large-scale public works program, which was initiated by act of Parliament in 2005. The program represents a major philosophic innovation in taking a rights-based and demand-driven approach, guaranteeing all rural households up to 100 days public works employment per year at the going agricultural minimum wage (Dutta et al. 2012). The program is expected to act as a surrogate unemployment insurance scheme.

Creative ways have been devised to make effective use of public works programs for specific types of idiosyncratic shocks. In Southern and Eastern Africa, for example, public works programs have been adapted to meet the challenges posed by HIV/AIDS. Specifically, the programs support delivery of social services in areas with high prevalence of HIV/AIDS by providing home-based care and early childhood care and development. Examples include the Red Cross's Home Based Care Programs in Malawi and Zimbabwe, and the Working for Water Early Childhood Development program in South Africa (McCord 2005).

### *Poverty Relief*

In contrast to programs such as MGNREGS in which poverty status is not a requirement for participation, some public works programs are designed for major poverty relief and specifically targeted to poor families

to provide substantive income support (Subbarao 1997). Typically, these programs are launched and implemented throughout the year and are likely to hire people for periods of time longer than programs that are seasonally targeted. They use explicit targeting mechanisms such as geographic targeting or households with "below poverty-line" income thresholds, in addition to or instead of self-selection driven by wages set at levels below prevailing market wages.

If a program disproportionately benefits the poor, it is financed out of general tax revenue, and if the structure of taxation in the country is strongly progressive, the program can also perform a redistributive function. In addition, if the program leads to the creation of public goods in regions disproportionately inhabited by the poor, the redistributive effect is strengthened—provided access is not biased against the poor.

One of the most notable poverty relief–focused public works programs is Ethiopia's Productive Safety Net Program (PSNP). In a context of high food insecurity and poverty in both rural and urban areas—and particularly in drought-prone districts, the program has used combined and harmonized donors' funding to support predictable poverty relief efforts since 2004. Since then, the scale of the program has steadily increased. By 2009, PSNP supported 7.6 million people in 290 chronically food-insecure municipalities (referred to as *woredas*) in 8 of the country's 10 regions—roughly 10 percent of the national population in over 40 percent of the country's municipalities.[5]

In Bangladesh, two initiatives, the Rural Maintenance Program and the World Food Programme's Food for Assets (both implemented by the government of Bangladesh), select beneficiaries using poverty criteria. The Rural Maintenance Program provides year-round employment to approximately 42,000 destitute rural women for a period of up to 4 years; their task is to maintain 84,000 kilometers of earthen rural roads around their villages across the country.[6] The Food for Assets program provides a combination of food, cash wages, and skills training for the extreme poor who participate from January to June in a variety of asset creation activities, including the building of such community infrastructure and physical assets as fish ponds, tree plantations, raised homesteads and central community areas (to prevent their being swept away by flood waters), small drainage canals, irrigation systems, community shelters, village-connecting rural roads, river embankments, and dikes. Overall, the program employed 245,000 beneficiaries between 2001 and 2005. Each participant received 2 kilograms of wheat and Tk 20 (US$0.25) per day during the working months, and 20 kilograms of

wheat and Tk 100 (US$1.25) per month to participate in the training activities (Roy 2006).

Public works programs aimed at alleviating poverty are used not only in low-income countries, but also in higher-income contexts where structural unemployment problems exist. In South Africa, for example, the Expanded Public Works Program (EPWP) is one of the government's programs aimed at confronting structural unemployment and for providing work opportunities for the unemployed.[7] It provides work and training opportunities to more than 1 million people each year in the following areas: infrastructure for labor-intensive construction and maintenance of low-volume roads, storm water drains, and trenching for pipelines and sidewalks; environmental land rehabilitation, coastline clean-up, and recycling; social care for AIDS patients and early childhood development; and a microenterprises learnership (how to begin a microenterprise) program. The average length of participation ranges from 4 months in the infrastructure sector to over 1 year for caring for AIDS patients, thus providing a prolonged, steady income for beneficiaries.

### *As a Bridge to Employment*

Some recent public works programs include training as a core component to encourage workers—particularly women and youth—to acquire the skills needed to gain permanent employment or become self-employed. One such program is Bangladesh's Rural Maintenance Program, which requires the women participating in the program to attend income-generation and skills training. In addition, they must save Tk 10 (US$0.12) of the Tk 51 (US$0.63) they are paid each day to participate. The objective is to create new microentrepreneurs who have the requisite skills and seed capital to take up self-employment in the informal sector (Hashemi and Rosenberg 2006). Malawi started a similar program in 1999 in two districts of its central region; this Central Region Infrastructure Maintenance Program was sponsored by the U.K. Department for International Development and CARE and employed 1,600 poor women in rural roads maintenance.

Other programs have a training component as a core design of the program that enables workers to gain needed skills to transition into more regular employment. The Jefes de Hogar (Head of Household) program in Argentina included an option for participants to work or participate in training or education activities for 4–6 hours a day (and no less than 20 hours a week) in exchange for payment. In some cases, the additional requirements for workers may include (or encourage) saving some of their wage earnings, which may facilitate their ability to obtain credit and

begin an informal self-employment activity (see Rwanda case study, chapter 8). However, cross-country experience and documented evidence on the success or lack thereof is rather limited for this type of public works program.

In the wake of the recent food and financial crises in many countries, unemployment among youth has emerged as a serious problem, and policy makers are increasingly relying on public works programs to engage youth. For instance, the Programa de Atención Temporal al Ingreso (PATI, or Temporary Income Assistance Program) launched in El Salvador in 2010 includes job training to help beneficiary youth find employment or become self-employed after exiting the program. As the Sierra Leone Cash for Work Project was implemented, project rollout was marked by an increased focus on youth. In addition to targeting unemployed youth, one innovation was the identification of youth groups to implement worksites and form small contractor groups (Andrews et al. 2012). The program has now evolved as the Youth Employment Project, which includes a component addressing supply-side labor market constraints for very low-skill unemployed or underemployed poor youth and providing skills training to a limited number of individuals interested in pursuing careers as a small works contractor. This new feature partially addresses the concerns raised by beneficiaries about the short-term nature of the program and its inability to link beneficiaries to future employment opportunities.

Finally, a more established example is the EPWP in South Africa, which provides training opportunities beyond the skills acquired on the job to prepare participants for possible longer-term employment, self-employment, or further education and/or training. For example, youth employed as manual laborers on a labor-intensive road project may be offered training in building skills such as bricklaying, if there is demand for such skills in the labor market. The number of average training days varies from 10 in the environmental sector to 30 for those participating in social activities. All training activity may result in some type of accredited certification.

## Secondary Objectives and Spillover Benefits

### *Global Public Goods: Infrastructure, Land Management, and Social Services*

Although the provision of public goods is not the primary objective of a safety net public works program, it is indeed crucial.[8] There is no reason to do public works if the public goods generated do not have a positive

impact on the community and are not built at a cost similar to that charged by contractors. Therefore, the success of a project depends, among other items, on the quality of the public goods produced. The list of actual goods and services created by public works programs is long and varies depending on the needs of the countries and communities involved and on the level of income and gaps in public infrastructure and services. In general, however, these goods and services can be categorized as follows:

- Infrastructure, which includes the creation, maintenance, or reconstruction (e.g., after natural disasters) of existing infrastructure such as roads, bridges, schools, and health clinics; and sanitation improvements
- Land management, which includes environmental and agricultural projects involving irrigation, afforestation, soil conservation, and watershed development
- Social services, including day care and food preparation.

Chapter 5 provides an in-depth discussion on the types of activities undertaken by safety net–oriented public works programs. Below are illustrative examples to give a sense of the range of activities undertaken in various countries.

***Infrastructure.*** Infrastructure projects can be grouped into three main areas: economic, sanitary, and social infrastructure. The decision to implement one type of project over another depends on country needs, community preferences, and program location (rural or urban).

- *Economic infrastructure.* These encompass traditional projects in the road sector such as the construction and rehabilitation of rural and urban roads and trails; and the construction and maintenance of pedestrian bridges, sidewalks, retaining walls, and so on. Economic infrastructure projects could also address the improvement of marketplaces and of basic services infrastructure such as the gas network systems and electricity cables. Irrigation infrastructure is also considered in this group, as it helps enhance land productivity. In Madagascar, for example, the public works performed mainly involve the reconstruction and/or repair of damaged basic infrastructure (roads, irrigation canals, small dams, and bridges), and clean-up of canals following natural disasters, such as cyclones. The projects are implemented by the Development Intervention Fund as small-scale high-labor-intensive projects in areas most affected by cyclones and other disasters.

- *Sanitary infrastructure.* These include projects addressing the water supply (construction and maintenance of water supply systems, wells, dam or spring development, etc.), storm water infrastructure (drainage systems, infiltration pits, installation of pipes and arches, etc.), and wastewater and solid waste management infrastructure (construction or rehabilitation of sewerage networks, preparation of dumping sites, etc.).

- *Social infrastructure.* These projects typically develop infrastructure for the educational, health, or recreational sectors. Examples of social infrastructure projects are the construction or maintenance of school classrooms, community clinics and health centers, nursing homes, community centers and libraries, and low-income housing. In the Republic of Yemen, such public works projects are undertaken to provide much-needed basic social service infrastructure for poor and deprived communities, especially in remote rural areas.[9]

Argentina's Jefes program has implemented projects in all three infrastructural areas, as shown in table 2.1 (note that the table shows only those projects for which the program provided funds for materials as well as covering labor costs).

***Land management.*** The assets created through public works programs can play an important role in reducing and mitigating the risk of climate change. Specifically, the generation of environmentally sound assets, such as water storage and river embankments, can increase community resilience.

Many countries that suffer environmental degradation are increasingly introducing public works programs with the complementary objectives of environmental restoration and risk prevention. Soil and

**Table 2.1 Jefes Program Infrastructure Projects by Type, 2003–06**

| *Project type* | *Number of projects* |
|---|---|
| Educational infrastructure | 1,834 |
| Health infrastructure | 1,636 |
| Sanitary infrastructure | 80 |
| Social infrastructure | 883 |
| Productive and development infrastructure | 251 |
| Improvement of neighborhood conditions | 169 |
| Community vegetable gardens | 65 |

*Source:* World Bank 2007.

water conservation (afforestation, construction of terraces and flood control structures, renovation of traditional water bodies, etc.) and land productivity and soil fertility (agroforestry, debris removal, gully control, compost generation, etc.) are some examples of land management and environmental projects that are being implemented through public works programs.

Afforestation and soil conservation projects can help protect the environment from the adverse impacts of climate change. Soil conservation projects carried out in semiarid areas have been effective in slowing desertification and erosion and in generating new forest areas. This is the case for projects carried out several years ago in Tunisia and Maharashtra, India, where their impact is still visible. Ongoing projects in Ethiopia, Haiti, and Rwanda look to yield positive environmental benefits as well.

Most of the activities undertaken by Ethiopia's PSNP are focused on soil and water conservation activities (table 2.2), reflecting the needs of poor agricultural communities.

These and similar works have already brought demonstrable benefits to communities. For example, improved water conservation has led to increased agricultural productivity and an increase in groundwater recharge such that dry springs have started to flow again. In addition, communities have enhanced income generation and improved access to markets, education, and health facilities (Grosh et al. 2008). They have also catalyzed interest in similar work activities in contexts such as Ghana and Rwanda.

Roads and development of irrigation infrastructure were the main activities undertaken by India's notable Maharashtra Employment Guarantee

**Table 2.2 Results of Agricultural Activities Undertaken by Ethiopia's PSNP, 2007–09**

| *Project type* | *Result* |
|---|---|
| Land rehabilitated through area closure | 167,150 ha |
| Soil embankment construction | 91,454 km |
| Stone embankment construction | 184,730 km |
| Seedlings produced | 1,321,938,020 |
| Seedlings planted | 883,321,700 |
| Nursery sites established and managed | 1,114 |
| Ponds constructed or rehabilitated | 133,927 |
| Water springs developed | 3,684 |
| Hand-dug wells constructed | 1,262 |
| Small-scale irrigation canal control or rehabilitation | 5,746 km |

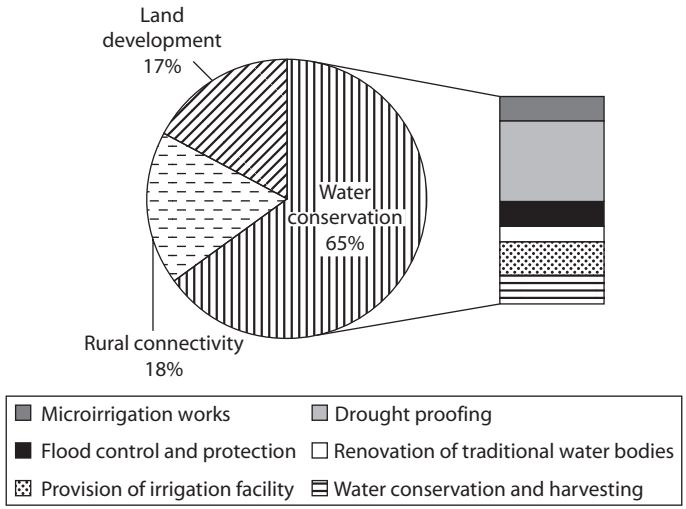
*Source:* World Bank 2010.
PSNP = Productive Safety Net Program

Scheme. Maharashtra has a huge dry and arid zone. Focusing on all types of irrigation structures substantially increased the areas under irrigation for a second crop, thus enhancing the scope for greater second-round employment effects (Subbarao 2003).

India's MGNREGS emphasizes activities that enhance agricultural productivity and generate long-term dynamic income and employment gains (Dutta et al. 2012). Available data show that during fiscal year 2010/11, more than 60 percent of the works planned under MGNREGS involved water conservation aimed at enhancing the growth potential of the farm sector (figure 2.1).

***Social services.*** Besides focusing on infrastructure, some public works programs also include an array of social services such as running child care centers, nursing homes, school kitchens, and the like. South Africa's EPWP, for instance, offers "public social programmes" such as community-based health, care of AIDS patients, social welfare, and early childhood development. The Jefes program in Argentina includes child and elderly care, health program support, and community and school kitchens (Kostzer 2008). The PATI program in El Salvador includes cultural, sports, and health projects; urban agriculture; and educational programs to raise awareness about the environment, health, and sanitation.[10]

**Figure 2.1 Water Conservation Works under MGNREGS, Financial Year 2010–11**




*Source:* Government of India 2011.
MGNREGS = Mahatma Gandhi National Rural Employment Guarantee Scheme

The East and South Africa home-based care and early childhood care and development programs mentioned above are further examples of social services provided through public works programs. Although such programs may not be public works initiatives in the strict sense defined in chapter 1, they do respond to specific vulnerabilities of poor households and are thus worth noting.

### *Spillover Benefits*

Public works programs can also have some notable spillover effects above and beyond the intended objectives. Several of these are explored below.

***Promotion of social cohesion.*** As interventions targeted at the most poor and vulnerable, public works programs include design features that by their nature promote social cohesion—the inclusion of the most vulnerable and poor, participation of beneficiaries in program processes, and so on. While hard evidence is limited, international experience suggests a number of important pathways through which programs are being leveraged to create, preserve, or repair social cohesion.[11]

For example, while Ethiopia's PSNP does not have a specific mechanism for evaluating its impacts on social cohesion, several studies and assessments indicate linkages related to the program's targeting process, public works planning, and civic engagement (see chapters 9 and 12 for further information). As another example, one of the most striking features of MGNREGS is the degree to which it has contributed to a narrowing of the gender wage gap and the implications this has for social cohesion. Because of the program, wages for female casual laborers have increased 8 percent in participating districts as compared to nonparticipating districts; this increase has pushed up overall average real wages in participating districts (Azam and Dasgupta 2011).

In response to short-term idiosyncratic or covariate shocks, public works programs may promote social inclusion by inferring a sense of dignity and value in an individual through temporary employment. For example, in Argentina, social inclusion is enshrined as a constitutional right. Respecting this right, in response to an economic, social, and governance crisis that brought the country to the brink of collapse in 2002, Argentina's Jefes program aimed to provide direct income support for families. The program, whose beneficiaries were spread over the country's 28 provinces and 2,300 municipalities, was successful in reaching the poor and mitigating the impact of Argentina's economic and social crisis (Ravallion and Galasso 2004).[12] With an eye to promoting social

cohesion, the government placed special emphasis on the program's transparency and accountability, establishing consultative councils at both the local and national levels. These councils were created to enable municipalities to play a significant role in national program implementation; their main objective was to control the allocation of benefits and provide transparency to this activity, which had been tainted by a long tradition of political patronage. Overall, through its consultative councils, the program proved to be instrumental in the government's efforts at promoting social cohesion, thus helping the country avoid further deterioration of social conditions.

***Environmental benefits.*** The land management projects discussed above—addressing afforestation, soil conservation, flood control, and solid waste management, among others—can have significant positive environmental benefits such as prevention of soil erosion, recycling of waste, and so on. These potential benefits are increasingly being recognized as important mechanisms to help poor households respond to and build resilience against the impacts of climate change (Kuriakose et al. 2012). For example, PSNP is sometimes dubbed Africa's largest climate change adaptation program. In the longer term, public works programs may have their greatest potential to contribute to climate change adaptation by helping communities diversify risk, enhance incomes, and build skills and assets. A growing body of literature is starting to focus on these themes and the potential toward climate-sensitive programs—that is, those combining public works with climate-resilient infrastructure, and aligning geographic targeting with climate change hotspots (also see Kuriakose et al. 2012)

***Maternal and child health benefits.*** Public works programs in some countries have exploited the presence of women and children at worksites by providing immunization services, micronutrient supplements, and other health-related services to pregnant women and young children, who typically are looked after in day care settings on site. These programs thus provide an innovative vehicle for educating women on the benefits of preventive services.

***Postconflict resettlement activities.*** Public works programs can enhance prospects for restarting lives and livelihoods after the conclusion of a major and long-standing conflict. In fragile and postconflict settings, where threats of violence and instability can undermine peace-building

efforts, public works programs can be an important stabilizing force, as recent experiences in Rwanda, Sri Lanka, and the Republic of Yemen have shown. In Rwanda, public works programs brought all ethnic groups together to begin a major terracing activity that has the potential for enhancing farm productivity and augmenting the incomes of small holders. In Sri Lanka, public works programs enabled rehabilitation of homesteads and agricultural farms seriously damaged during the conflict, and facilitated the return of families to their original residences (to Jaffna in northern Sri Lanka). Public works programs can also be a vehicle to move beyond temporary income-generation activities to provide skills training and temporary employment, especially for youth and at-risk populations, as the previous discussion on El Salvador and Sierra Leone highlighted in the "Primary Objectives of Public Works" section.

## Models of Safety Net–Oriented Public Works Programs

Three models of safety net–oriented public works programs addressing the above-described objectives can be distinguished:

- Short-term safety net
- Longer-term safety net
- Public works plus, aimed at graduating participants from safety net coverage.

Table 2.3 shows how these models correlate to the primary objectives discussed in the "Primary Objectives of Public Works" section; the remainder of this section delineates the three models.

**Table 2.3 Correlation of Public Works Program Models and Objectives**

| | *Model* | | |
|---|---|---|---|
| *Primary objective* | *Short-term safety net* | *Longer-term safety net* | *Public works plus* |
| Mitigation of covariate shocks | X | — | — |
| Mitigation of idiosyncratic shocks | X | X | — |
| Poverty relief and food security | — | X | X |
| Bridge to more permanent employment | — | X | X |

*Note:* — = not likely.

### *Short-Term Model*

Short-term public works programs are designed to provide cash income to self-selected participants in times of need—for example, to augment seasonal income shortages or to respond to nation- or regionwide shocks such as floods, droughts, or macroeconomic downturns. Because these programs tend to be designed and implemented at short notice in response to a crisis or sudden shock, they might typically focus on the maintenance of existing community infrastructure assets or the provision of basic new infrastructure, such as restoring/maintaining rural roads, soil conservation, afforestation, and social services. Similarly, temporary employment during slack seasons will contribute mainly to income and consumption smoothing, serving as a safety net for households affected by covariate and idiosyncratic shocks.

Existing scalable public works programs can be modified in the event of a global economic crisis or severe macroeconomic shock that threatens to push marginally poor households below the poverty line. Such households could join the program, thus preventing an increase in overall poverty.

It is worth stressing that short-term programs are not likely to pull participating households above the poverty threshold, although this may occur for some households. Moreover, short-term programs do not typically assign other developmental roles to public works, such as including a training component.

### *Longer-Term Model*

The second model is exemplified by safety net programs that provide the poorest with a reliable source of income on a labor-intensive activity for a longer period, typically for at least 75–100 days. Some such programs run all year round, as in South Africa; others guarantee a minimum number of working days, as in the case of employment guarantee programs such as India's MGNREGS, which provides guaranteed employment for 100 days, and Bangladesh's Employment Generation Program for the Poorest, which aims to provide employment for 100 days, but without a guarantee.

The fundamental motive driving such longer-term public works programs is to provide an income that is sufficient for the reduction of chronic poverty. Thus, their outcome is not only temporary employment creation and infrastructural development, but also poverty reduction—helping participating households cross the poverty line. These programs are also very useful in reducing inequalities in societies in the wake of

high economic growth, promoting the basic right to work of the poor, who typically do not have a voice in influencing policy decisions. Programs in the longer-term model also can have positive labor market outcomes by exerting pressure to raise the free market wage rate for unskilled labor (see the chapter 8 case study on wage implementation in Rwanda as an example).

### *Public Works Plus Model*

Public works programs that go beyond temporary income-generation activities by offering links to employment (e.g., through skills training) or access to community and health services (e.g., through existing social assistance programs, such as health care or nutrition programs) are in the public works plus model. The aim of such programs is to help beneficiaries not only in the short term, but also to enable them to actually graduate from poverty. While the effectiveness of public works programs as a safety net has been well established, the international evidence on public works programs as an effective active labor market program is quite limited, and experience with linkages to service provision is only just emerging. Thus, the long-term effects of programs in this model, while interesting and innovative, largely remain to be seen.

Although many countries have been reluctant to experiment with the public works plus model because of its complexity and potential for problems in implementation, several different strategies are being tested globally. Several Organisation for Economic Co-operation and Development countries, where public works programs are sometimes used as employment of last resort, have set quite ambitious goals for public works plus initiatives. For example, in South Africa, participant training and certification are being incorporated into public works programs. In Argentina and El Salvador, program beneficiaries are being linked with sectors that may be creating jobs in the future. In these programs, participants, while working on public works, receive training in areas/sectors where the scope for hiring new entrants is high so they could graduate and move out of the program to pick up employment in growing sectors.

Elsewhere, programs are linked to various community services, such as education and health provision for children. The recently designed Social Assistance Pilot Program on Labor and Human Capital in Djibouti links the creation of employment opportunities to improvement of nutritional practices through behavioral change. It adds a nutrition and growth promotion component to the traditional cash-for-work system to leverage the effect of the additional income on the family's nutritional status. The program targets poor and vulnerable households with children aged 0–2

and/or pregnant women. The public works component aims to create income and assets that improve nutrition and hygiene in the community. The nutrition component targets vulnerable nonworking household members (children and pregnant/lactating women); it encompasses activities such as communication aimed at improving child care practices (including the promotion of breastfeeding), weekly visits by a community health worker to the household, and provision of food supplements during the lean season. Linking the program's two components reinforces overall goals of employment creation and nutritional improvement and behavioral change. If successful, it will provide the basis for a national safety net for Djibouti.

## Notes

1. The entity that finances the program does not necessarily need to be the one that implements it. A variety of financing and implementation arrangements exist in countries' public-private-donor partnerships; these are explored in the section on "Institutional and Financing Arrangements" in chapter 5.
2. Covariate shock is an uncertain event (in terms of realization, timing, or magnitude) that affects many or all members of a group or community. Drought, earthquake, and macroeconomic crisis are examples of covariate shock.
3. Idiosyncratic shock is an uncertain event (in terms of realization, timing, or magnitude) that affects one individual or household, such as illness or the loss of a job.
4. Calculations based on fiscal year 2008/09 data for Bangladesh, Botswana, Burkina Faso, Cambodia, Côte d'Ivoire, Djibouti, El Salvador, Ethiopia, Haiti, Kenya, Latvia, Liberia, the former Yugoslav Republic of Macedonia, Madagascar, Malawi, Mali, Nepal, Niger, Rwanda, Sierra Leone, Sri Lanka, Uganda, the Republic of Yemen, and Zimbabwe.
5. PSNP consists of a labor-intensive public works component; and a direct support component providing cash or food to labor-constrained households that have no other means of support and are chronically food insecure (Government of Ethiopia 2004).
6. For more details on the Rural Maintenance Program, see the CARE Bangladesh website, http://www.carebd.org/projects.html.
7. For details on the program, see the government's website, http://www.epwp.gov.za/.
8. Note that some of the goods provided through these public works programs are not really "public" goods benefiting the entire community. Rather, program implementers focus on goods used predominantly by the poor who are the target group for the public works program, even if such goods do not qualify as genuine public goods.

9. Geographically, the Republic of Yemen is distinguished by its dispersed communities, which greatly complicates the delivery of cost-efficient, quality infrastructure services—particularly in light of the fact that public works program investments are mainly in small-scale projects (some 88 percent of these projects cost less than $60,000 each).
10. For more information about PATI, see the program website, http://www.fisdl.gob.sv/temas/programa-de-apoyo-temporal-al-ingreso-pati.html.
11. Easterly, Ritzen, and Woolcock (2006) define social cohesion as "the nature and extent of social and economic divisions within society," which offers a broad entry point for addressing issues ranging from inequality and trust to voice and participation in civil society.
12. According to the results of the impact evaluation by Ravallion and Galasso (2004), the program prevented an estimated additional 10 percent of participants from falling below the food poverty line.

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CHAPTER 3

# Country Contexts and Patterns in Public Works Programs

One of the advantages of public works programs is that they are adaptable and can easily be tailored to a particular country's context and needs, taking into account that country's capacities and constraints. Elements of program design, such as the labor (wages) share of total cost, targeting methods, type of works to be done, or payment modalities, can all be adapted to best suit each context. In this sense, public works should be considered a flexible program, one that is able to be transformed over time, even within a country, to respond to changing realities and varying objectives.

This chapter illustrates how public works programs with a safety net orientation have been implemented in different ways depending on the country context and specific objectives. Table 3.1 offers a snapshot of the scale and main characteristics—such as number of beneficiaries, timing of activities, payment modalities, and female participation—of various flagship public works programs from around the world.

This chapter is divided into two sections. The first covers country context, identifying four general country circumstances in which public works can be implemented. This section emphasizes how public works models vary by context given their specific objectives. The "Cross-Country Patterns" section looks at cross-country patterns in objectives and program design elements.

**Table 3.1 Scale and Attributes of Selected Public Works Programs**

| *Country, program* | *Status* | *Number of beneficiaries* | *Timing* | *Payment modality* | *Female participation (%)* |
|---|---|---|---|---|---|
| Argentina, Jefes de Hogar | Closed (2002–09) | 2 million households (2003) | Year-round | Cash | 71 |
| Ethiopia, Productive Safety Net Program | Active since 2005 | 7.6 million people (2009) | Year-round | Cash and food | 41[a] |
| Bangladesh, Employment Generation Program for the Poorest | Active since 2009 | 120,000 people (2009) | Seasonal, 4 months | Cash | 33 |
| India, Mahatma Gandhi National Rural Employment Guarantee Scheme | Active since 2006 | 54.9 million households (2011) | Year-round | Cash | 49 |
| Latvia, Workplaces with Stipend Emergency Public Works Program | Active since 2009 | 67,800 people (2010) | Year-round | Cash | 50 |

a. This average was derived from data from five regions from Berhane et al. (2011).

The data for this chapter were obtained from a review of the existing research on specific public works programs implemented over the past 20 years. These data have been complemented with a survey of public works program implementation conducted at the South-South Learning Forum: Making Public Works Work, held in Arusha, Tanzania, in 2010. Overall, the chapter draws on information from 77 programs implemented in 62 countries. Unfortunately, the information across countries and programs is neither consistent nor standardized; therefore, the figures and tables in this chapter (and throughout the book) use different sample sizes and so are not strictly comparable. Despite these limitations, the data enable some interesting insights regarding the objectives and features of public works programs around the world and their impact as social safety nets. For a full description of data sources and additional references, see appendix A.

## Country Context

Across the globe, countries experience great variation with respect to the nature and periodicity of covariate shocks, whether of human or natural origin; the degree of uninsured risk households face; and other country circumstances. Some developing countries such as Ethiopia are subjected to periodic and often repetitive weather-induced shocks. Some countries experience shocks only once in a while, such as the macroeconomic shocks that were felt in Argentina in 1995, in Mexico in 1995, and in the Republic of Korea in 1997–98. Some experience sudden emergency situations following an earthquake or tsunami. To identify the country circumstances in which a public works program could potentially play a role, this variation can be categorized into four scenarios:

- High- and middle-income countries subject to covariate shocks, typically macroeconomic in nature
- Low-income agrarian countries subject to periodic weather shocks and seasonal variation affecting well-being and labor demand
- Countries emerging from long-term conflict or those otherwise considered to be a fragile setting
- Countries in an emergency situation following a natural disaster.

While public works programs can be launched in all of these scenarios, the nature and objectives of such programs will vary with country circumstances. Table 3.2 depicts these four scenarios against the three public works models introduced in chapter 2 to illustrate typical applications.

**Table 3.2 Correlation of Public Works Program Models and Country Circumstances**

| | *Model* | | |
|---|---|---|---|
| *Circumstance* | *Short-term safety net* | *Longer-term safety net* | *Public works plus* |
| High- and middle-income countries subject to covariate shocks | X | — | — |
| Low-income agrarian countries subject to periodic weather shock and seasonal variation | X | X | X |
| Postconflict or fragile countries | X | X | — |
| Countries in an emergency situation following a natural disaster | X | — | — |

*Note:* — = not likely.

The following highlights some notable trends and issues associated with public works programs as applied in these four sets of country circumstances.

### *High- and Middle-Income Countries Subject to Covariate Shocks*

In high- and middle-income countries, the predominant use of public works programs is generally in response to short-term shocks, typically macroeconomic in nature (table 3.3). Because these countries do not have the fiscal and administrative constraints of low-income countries, they can easily develop the institutional capacity needed to implement a program quickly.

Public works programs in high- and middle-income countries are as likely to be implemented in urban settings as rural. Thus, they usually involve social infrastructure and services such as the construction and maintenance of recreational, health, and educational facilities; street sweeping; and day care center operation. These activities are often coordinated at the municipal level.

Argentina is a good example of an upper-middle-income country that has implemented a flagship public works program. Argentina went through a severe economic crisis during the 1990s that caused high unemployment and rising poverty levels. In response, the government implemented the Trabajar (To Work) program in 1997 to cushion the decline in household income for workers not covered by any other safety net program. The deepening of the financial crisis in 2002 aggravated the unemployment situation and generated social unrest. The government

**Table 3.3 Selected Public Works Programs in High- and Middle-Income Countries**

| *Country, program* | *Starting year* | *Objective* |
|---|---|---|
| Argentina, Jefes de Hogar | 2002 | One-time shock |
| Argentina, Trabajar | 1996 | One-time shock |
| Botswana, Labour Intensive Public Works Project | 1978 | Seasonal |
| Chile, Direct Employment Program | 1993 | One-time shock |
| El Salvador, Programa de Atención Temporal al Ingreso | 2009 | Antipoverty |
| Latvia, Workplaces with Stipend Emergency Public Works Program | 2009 | One-time shock |
| Mexico, Programa de Empleo Temporal | 1995 | One-time shock |
| Poland, Public Works | 1992 | Active labor market intervention |
| Sri Lanka, Emergency Northern Recovery Project | 2009 | Antipoverty |
| South Africa, Expanded Public Works Program | 2004 | Antipoverty |
| Uruguay, Programa de Actividades Comunitarias | 2003 | One-time shock |

then began the Jefes de Hogar (Head of Household) program, designed to supplement the income of unemployed heads of households with dependent children or disabled members.

High- and middle-income countries are more likely than their lower-income counterparts to have the resources needed to scale up a program if and as necessary or to use it as an instrument of longer-term antipoverty policy. Argentina shifted the original objective of its Jefes program from short-term emergency response to a medium-term safety net. The scaled-up program quickly reached over 2 million workers (Ravallion and Galasso 2004). South Africa's Expanded Public Works Program has a similar long-term antipoverty objective.

More recently, Latvia was one of the hardest-hit countries in the world during the global financial crisis. Between 2008 and 2010, Latvia's gross domestic product (GDP) contracted by 21 percent, poverty rates increased by 8 percentage points from 10.1 percent in 2008 to 18.1 percent in 2009, and employment fell by 11.2 percent (Ajwad, Haimovich, and Azam 2012). In response to the crisis, the government of Latvia spent about $80 million between 2009 and 2011 on the

Workplaces with Stipend Emergency Public Works Program; this was about 0.25 percent of GDP, or 2.5 times its expenditures on poverty-targeted safety nets. The main purpose of the program was to create temporary employment for individuals who had lost their jobs but were not receiving unemployment benefits, and to enrich communities with maintenance activities.

### *Low-Income Agrarian Countries Subject to Periodic Weather Shocks and Seasonal Variation*

In low-income agrarian countries, public works programs can be tailored to meet a variety of short- and long-term objectives (table 3.4). Unlike their higher-income counterparts, these countries usually face serious constraints regarding the availability of information, administrative capacity, and fiscal affordability (Smith and Subbarao 2003). However, the design features of public works programs can be adapted to manage within these constraints. For example, allowing the poor to use a wage rate less than the prevailing market wage to self-qualify for entry into the program reduces the information and administrative constraints of identifying the poor.

**Table 3.4 Selected Public Works Programs in Low-Income Agrarian Countries**

| *Country, program* | *Starting year* | *Objective* |
|---|---|---|
| Afghanistan, Labor Intensive Works Program | 2002 | Antipoverty |
| Bangladesh, Rural Maintenance Program | 1983 | Bridge to permanent employment |
| Ethiopia, Productive Safety Net Program | 2005 | Antipoverty |
| India, Mahatma Gandhi National Rural Employment Guarantee Scheme | 2006 | Employment guarantee |
| Kenya, Kazi Kwa Viajana Program | 2009 | Antipoverty |
| Madagascar, HIMO (Fond d'Intervention pour le Développement) | 2000 | Seasonal |
| Malawi, Central Region Infrastructure Maintenance Program | 1999 | Bridge to self-employment |
| Malawi, Malawi Social Action Fund—Public Works Program | 2009 | Seasonal |
| Rwanda, Vision 2020 Umurenge Program—Public Works Program | 2008 | Antipoverty |
| Tanzania, Tanzania Social Action Fund Public Works Component | 2000 | Seasonal |
| Yemen, Rep., Public Works Programs | 1996 | One-time shock |
| Zambia, Public Works Program | 2002 | Antipoverty |

***Note:*** HIMO = Haute Intensité de Main d'oeuvre (Highly Intensive Manual Labor).

Self-targeting is often complemented with community targeting methods to minimize administrative and financial constraints. It also can be undertaken by village leaders, internalizing the cost of targeting and reducing the administrative burden of other methods.

Other program components can also be adapted to reduce administrative and informational constraints. For instance, many programs have switched their payment mechanisms from food to cash. Ethiopia uses a combination of food and cash payments, depending on the availability of food in the market and beneficiary preferences (see chapter 12). An array of electronic payment systems that make use of mobile phone and debit and biometric smart cards have been developed to reduce the cost of transactions. These methods also reduce the cost of monitoring while greatly increasing transparency and accountability.

Fiscal feasibility remains a challenge for low-income agrarian countries. Most of the programs in these countries are financed by donors or a combination of donors and government. And, given their low capacity, many governments rely heavily on nongovernmental organizations or development partners to carry out program implementation. The experiences of a large-scale program like the Productive Safety Net Program (PSNP) are instructive in this regard, as the program has managed to work with donors to pool financial and technical resources. This approach makes it possible to harmonize all donor efforts in Ethiopia and enhances supervision and monitoring of the program, while avoiding excessive transaction costs for the government and donor agencies. The rights, obligations, and coordination arrangements of this government-donor partnership are spelled out in a memorandum of understanding. Several joint bodies administer the program, which minimizes costs. The Joint Coordination Committee oversees program implementation by monitoring progress toward its goals and providing technical guidance on specific components or cross-cutting issues (World Bank 2010).

Similarly, the experiences of India's Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) program illustrate the potential of scaling up public works interventions addressing seasonal poverty for rural populations dependent on agricultural wages by enhancing their livelihood security. Since its operationalization in 2006, MGNREGS has reached more than 50 million rural wage worker households in the country, providing over 9 billion days of employment. The implementing legislation applies to all 28 Indian states; 90 percent of the program's funding is provided by the national government, with the remaining 10 percent contributed by state governments (Dutta et al. 2012).

### *Postconflict or Fragile Countries*

Fragile states coming out of years of conflict face severe development challenges such as weak institutional capacity, poor governance, political instability, and frequent ongoing violence. Public works programs have proven to be a highly suitable intervention in such states. For example, soon after the conflict in Sierra Leone ended, a public works program was launched, which helped rebuild the infrastructure damaged during the conflict; it also provided immediate short-term employment opportunities to poor households, which had suffered immensely during the conflict, and to ex-combatants. Public works programs have been quickly launched and scaled up following conflicts in Guinea-Bissau, Liberia, Rwanda, and Sudan. In Nepal, which recently emerged from a decade-long internal conflict, a national public works program is now being designed. Chapter 13 provides a case study on Cambodia, and how a public works program was introduced postconflict to promote recovery, especially through rural infrastructure development.

The 2007–08 food crisis saw a scale-up of public works schemes in fragile situations. The experiences of Liberia and Sierra Leone, in particular, confirmed the attractiveness of public works programs in a context of ongoing fragility. In both countries, the productive potential of public works programs was realized as a mechanism to promote temporary employment in a situation of limited labor opportunities. While complex to initiate, they demonstrated the importance of existing institutional mechanisms to support the introduction of public works operations in a context of crisis. Flexibility at the community level proved vital in terms of rationing program participation and correctly allocating beneficiaries. Third-party involvement was also key, whether for payments (EcoBank in Liberia) or in community-level facilitation (in Sierra Leone). While these experiences have laid the foundation for follow-up programs, they have also pointed out the need for evolution in order to meet the local context. This includes improved targeting mechanisms and tailoring programs toward most-vulnerable groups such as youth and women (see Andrews et al. 2011, 2012).

### *Countries in an Emergency Situation Following a Natural Disaster*

Natural disasters such as earthquakes, floods, hurricanes, and droughts wreak significant physical destruction and loss of life and can also lead to regional health, harvest, and food price shocks. In the aftermath of a disaster, public works programs can provide unskilled manual employment for affected households that have lost access to labor opportunities.

Bangladesh and India have a long history of operating continuing cash and/or food-for-work programs that act as important countercyclical tools in response to disasters. These countries have a number of safety net mechanisms prepared in the event of disaster. Bangladesh's Vulnerable Group Development, Vulnerable Group Feeding, Food-for-Work, Test Relief, and Gratuitous Relief are well-established programs that can be expanded and contracted as required (see Heltberg 2007; Heltberg and Lund 2009). In these contexts, experience suggests that public works programs do not detract from other livelihood opportunities, and that vulnerable groups should continue to gain direct support (Pelham, Clay, and Braunholz 2011).

Experience also suggests that public works programs can be useful after a high-impact disaster (e.g., cyclone, earthquake, tsunami) in aiding postdisaster clean-up. However, the appropriateness of a public works program vis-à-vis other interventions will depend on a range of factors including accessibility, strength of local markets, and availability of materials. A limitation of the public works response to the tsunami-affected households in Aceh, Indonesia, was the use of contractors outside of beneficiary communities, which tended to dissuade communities from being directly involved in the rehabilitation process (Pelham, Clay, and Braunholz 2011).

Public works programs are most useful as a form of support during disasters provided that the interventions have been preplanned and screened in advance for their social, environmental, and engineering feasibility. For example, where seasonal public works programs have been used for many years—as in Bangladesh and India—they have been scaled up after a natural disaster (Dorosh, del Ninno, and Shahabaddin 2004; Subbarao 1993, 2003). This makes implementation and scale-up more effective once a disaster strikes, because the infrastructure contributes to development objectives that reduce a community's climate vulnerability over the longer term. This approach requires a strong emphasis on scenario and contingency planning, and a degree of redundant capacity that can quickly be drawn upon if the need to scale up arises. Ensuring participation of communities in the planning and prioritization of these postcrisis public works programs is as important as doing so during normal, noncrisis times (Kuriakose et al. 2012).

Given the need for flexibility, early warning, and timeliness in disaster response, there is a growing trend toward program innovation in this particular area. For example, under its public works component, PSNP has incorporated the Horn of Africa Risk Transfer for Adaptation

(HARITA) Program. HARITA makes insurance available to beneficiaries already participating in the public works component, in exchange for additional labor. Under this scheme, beneficiaries receive a payout if the local rainfall averages, as determined by local weather stations and satellite images of vegetation cover, fall under a certain predetermined level, based on careful historical analysis of rainfall patterns and volumes for the region. Because the demand-driven insurance system is a complex scheme that requires private sector participation and a clear understanding of the insurance options by the beneficiaries—especially as it scales up in coverage—HARITA was initially implemented as a small pilot in the Tigray region of Ethiopia in 2007, beginning with one village and currently covering 15,000 beneficiaries, with plans for nationwide expansion.

## Cross-Country Patterns

This section presents cross-county patterns of prevalence of public works program characteristics such as number of beneficiaries, objectives, and other design features by region and income level. The analysis presented here draws on the database compiled by the authors, which includes all the available information collected from several sources (see details of the characteristics of the database above, and in appendix A). However, as mentioned above, the small sample of countries for which detailed information exists renders delineation of patterns somewhat difficult and represents one of the limitations of this analysis.

### *Distribution of Public Works Programs by Country*

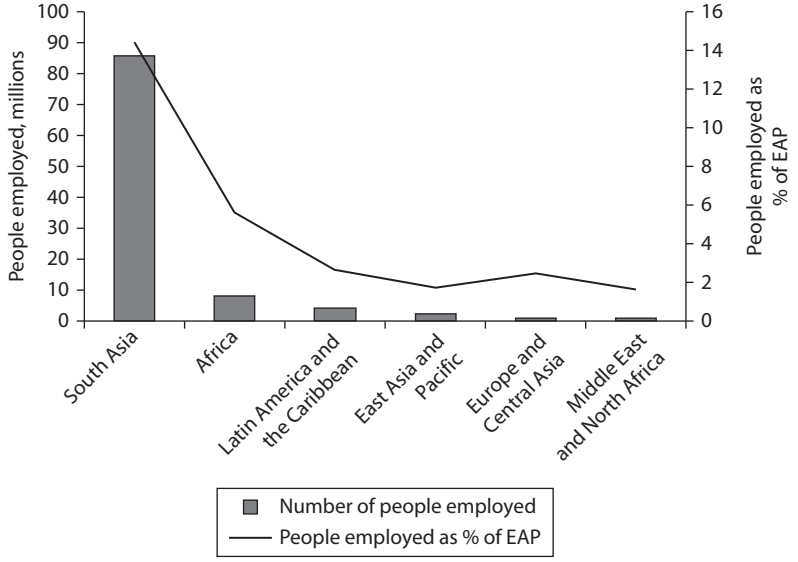
Public works programs exist in many countries across all regions, with South Asia and Sub-Saharan Africa being the dominant regions implementing this type of program. A larger proportion of the low-income countries included in the sample implement public works programs than do the higher-income countries.[1]

### *Number of Participants*

Looking at the distribution of public works programs by number of participants, two classifications were considered (figure 3.1):

- Absolute number of participants by region
- Number of participants as a percentage of the region's total active labor force.[2]

**Figure 3.1 Annual Participation in Public Works Programs by Region**



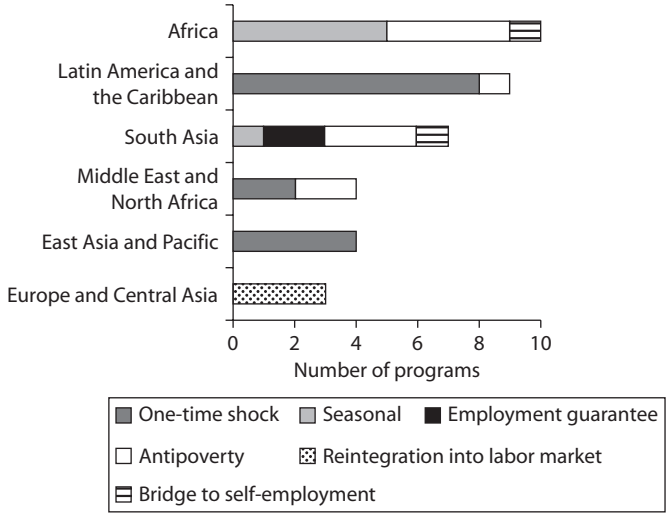

*Source:* World Bank.
*Note:* The share was calculated dividing the sum of all participants by the sum of the economically active population (EAP) in each region.

Data on participation, available for 50 countries and 66 public works programs, show that the largest absolute number of participants is in South Asia, a region that pioneered the programs' use several decades ago and that houses the largest number of poor persons—as well as the world's largest public works program (MGNREGS). The second largest number of participants is found in Sub-Saharan Africa (where Ethiopia's PSNP provided work to over 7 million beneficiaries in 2006), followed by Latin America and the Caribbean.

### *Program Objectives*

Of 37 public works programs in 30 countries for which information on program objectives are available, about 40 percent were initiated to counteract the negative effects of covariate shocks, and about 25 percent were envisioned as an antipoverty instrument. No other motives predominate. Figure 3.2 presents a summary of the regional patterns for objectives of public works programs. In Latin America and the Caribbean, a one-time large-scale shock (such as a macroeconomic crisis) is the sole motivation

**Figure 3.2 Distribution of Public Works Program Objectives by Region**

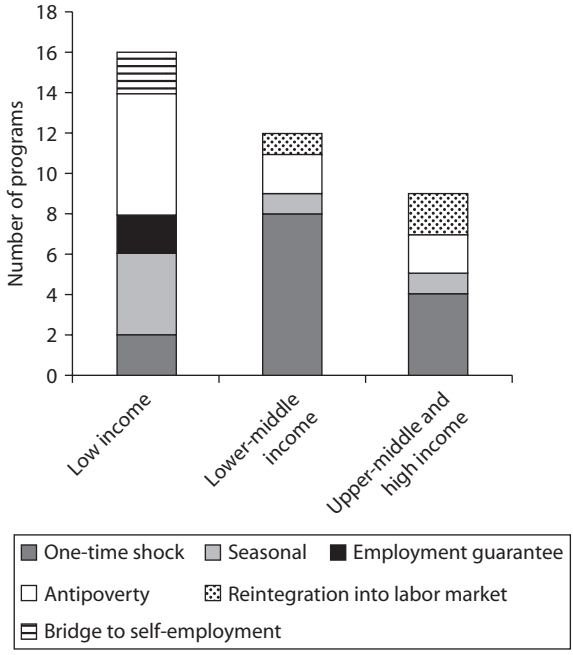



*Note:* This analysis is based on 30 countries implementing a total of 37 public works programs.

for launching a public works program. In Sub-Saharan Africa, the main motivation is to counter seasonal unemployment and for poverty relief; in South Asia, the motivation is largely poverty relief. In the Middle East and East Asia, the programs aim to either mitigate the impacts of a one-time covariate shock or to transfer income to the unemployed; in Eastern and Central Europe, public works programs serve as an active labor market intervention in the economy to facilitate labor market integration for unemployed workers. It is interesting to note that program objectives seem to exhibit such a marked regional pattern; on the other hand, this is understandable, given that countries in a region have somewhat similar histories and circumstances.

Figure 3.3 shows distribution of public works program objectives by country income group. The antipoverty objective seems to motivate the launch of a public works program mainly in low-income countries. A one-time covariate shock largely motivated middle-income countries. A few countries in the low-income group initiated public works programs to serve as a bridge to more regular employment and as a form of insurance; these objectives are not pursued by countries in other income groups. Similarly, public works programs operate as an active labor market intervention only in upper-middle and high-income countries.

**Figure 3.3 Distribution of Public Works Program Objectives by Country Income Level**




*Note:* This analysis is based on 30 countries implementing a total of 37 public works programs.

### *Cluster Analysis: Objectives and Country Circumstances*

Correlating the main objectives and features of public works programs such as share of labor cost, targeting method, and wage rate with country characteristics such as level of income can provide some insights as to which public works interventions might be beneficial under given country circumstances. More specifically, the patterns that emerge from a cluster analysis provide some useful indications in setting the right objectives and design features for countries with a similar level of income interested in using public works programs. Chapters 4 and 5 provide additional information on key program design features and how to implement them.

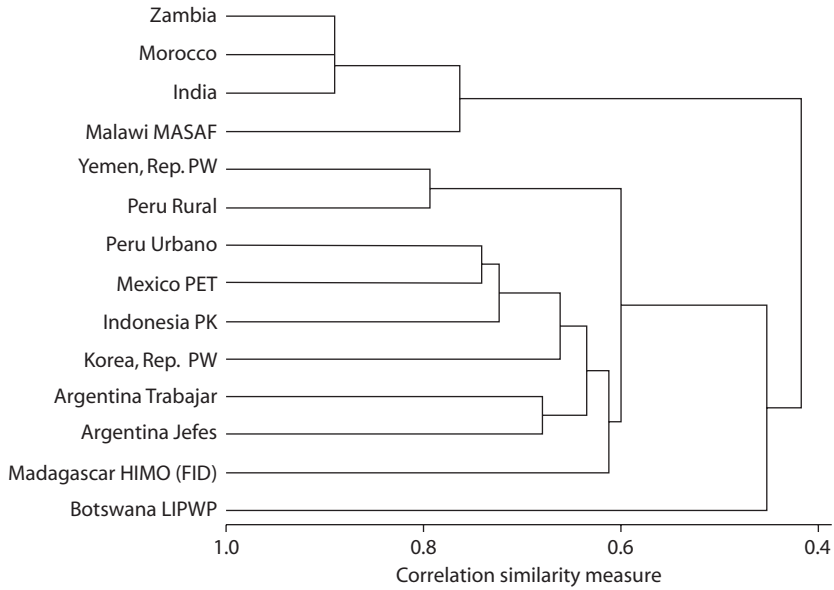
The cluster analysis shows some interesting associations between program objectives, labor share of total cost, and country income level. Programs in low-income countries seem to present similarities with

respect to five design features: share of labor cost, targeting, wage level, project identification, and the program's role in poverty reduction. Programs in middle-income countries seem to focus much less on share of labor cost, but more on the program's objective in addressing large one-time covariate shocks.

Of the 32 programs in the sample, data on income level, project identification, wage level, objective, funding agency, share of labor cost, and targeting are available only for 14. Two analyses are performed. The first cluster analysis, including 14 programs, yields two large clusters of countries (figure 3.4).

- The first cluster includes mostly low-income countries—India,[3] Malawi, Morocco, and Zambia—that have programs with a high level of share of labor cost with antipoverty objectives and offering a guaranteed income.
- The second cluster includes the programs of low- and middle-income countries that use public works primarily to respond to covariate shocks and feature a medium-level share of labor cost. Within this second

**Figure 3.4 Cluster Analysis of 14 Public Works Programs**

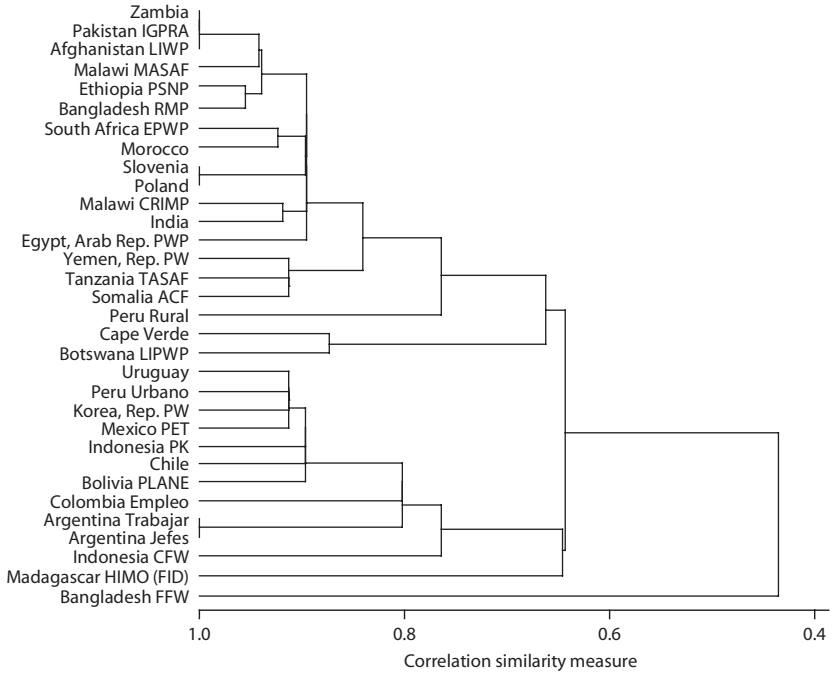



*Source:* del Ninno, Subbarao, and Milazzo 2009.
*Note:* MASAF = Malawi Social Action Fund, PET = Programa de Empleo Temporal, PK = Padat Karya, PW = Public Works, HIMO = Haute Intensité de Main d'oeuvre, FID = Fond d'Intervention pour le Développement, LIPWP = Labor Intensive Public Works Program.

cluster, Peru (urban and rural programs) and the Republic of Yemen form a small subgroup not directly associated with the other countries; this is mainly because these programs are implemented at the local level with many inputs from the communities.

The second cluster analysis, performed using the larger sample with 32 public works programs but fewer program characteristics, shows that the structure of the main clusters remains essentially unchanged (figure 3.5). This time, though, the additional programs considered allow smaller additional clusters to form within the two main clusters identified in figure 3.4. The two main clusters go from Zambia to the

**Figure 3.5 Cluster Analysis of 32 Public Works Programs**




*Source:* del Ninno, Subbarao, and Milazzo 2009.
*Note:* IGPRA = Income Generating Project for Refugee Areas, LIWP = Labor Intensive Works Programme, MASAF = Malawi Social Action Fund, PSNP = Productive Safety Net Program, RMP = Rural Maintenance Program, CRIMP = Region Infrastructure Maintenance Programme, PWP = Public Works Program, TASAF = Tanzania Social Action Fund, ACF = Action Contre la Faim, LIPWP = Labor Intensive Public Works Program, PW = Public Works, PET = Programa de Empleo Temporal, PK = Padat Karya, PLANE = Plan Nacional de Empleo de Emergencia, CFW = Cash for Work, HIMO = Haute Intensité de Main d'oeuvre, FID = Fond d'Intervention pour le Développement, FFW = Food for work.

Arab Republic of Egypt and from the Republic of Yemen to Indonesia. As before, countries that feature programs with antipoverty objectives, combining self-targeting with other methods, are together in the first cluster. As with many antipoverty programs, government served as the implementing agency. The exceptions here are Slovenia and Poland; these are upper middle-income countries that had implemented programs to help populations be reintegrated into the labor market.

The second cluster covers programs in middle-income countries from Uruguay to Indonesia; these countries are more likely to implement public works programs to respond to covariate shocks. The exceptions are Madagascar and Bangladesh; these stand alone in the diagram mainly because they have special features that are not shared by the other countries in the cluster.

## Conclusions

The dominant motivations for public works programs in low-income countries appear to be antipoverty and coping with largely weather-induced shocks. These two motivations are not mutually exclusive, since addressing a shock actually prevents the emergence of poverty traps. As for middle-income countries, a large covariate shock—mostly induced by a macroeconomic or financial crisis leading to a sharp rise in the unemployment rate—seems to precipitate introduction of a public works program.

## Notes

1. This analysis uses the World Bank classification of countries by income group, for 153 countries (high-income countries excluded).
2. Labor force data are from ILO Laborsta database from 2003; available at: http://laborsta.ilo.org/
3. Note that in the case of India, the Jawahar Rozgar Yojana, MGNREGS, and Maharashtra Employment Guarantee Scheme programs were combined as a single program because they were clustered very close to each other when treated individually.

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CHAPTER 4

# Program Design

Much of the success and quality of a public works program depends on solid program design. A successful design includes several features that reflect the program's objectives and are adapted to the country's circumstances and constraints. These design features boil down to the following:

- *Role of institutions and delivery models.* The first design feature covers the organizational structure of the implementing institutions and the program's funding at the central and local levels. At the central level, the key issue involves the choice of institutions selected for oversight and management of funds. At the local level, the selection of implementing institutions and the role of communities are the most crucial issues.

- *Selection of the type of activities to be carried out, the program's share of labor cost to total cost, and the program's timing and duration.* This set of design features defines the characteristics that reflect the objectives of the program. These features are critical in determining the number of people who can be covered by the program, the number of days allocated to each project, and the outcomes for the community.

- *Targeting methods for beneficiary selection*. A combination of targeting mechanisms is generally used to select the areas of project implementation and the criteria for selecting individual beneficiaries. The focus here revolves around the setting of the wage rate, which must be low enough to attract only those in need of temporary work, but high enough to provide a meaningful level of transfer. When the number of potential beneficiaries exceeds the demand, additional categorical or community targeting mechanisms can be used to aid in final selection.

- *Determination of benefit levels*. Benefit levels are influenced by the wage rate (both in cash or in kind) and the daily hours of work performed, among other factors.

- *The incorporation of additional features and graduation strategies*. The incorporation of graduation strategies, training activities, and so on improve participants' chances of obtaining permanent employment or of becoming self-employed once they exit the program.

Decisions leading to a program's design do not occur in a vacuum. Political economy considerations—that is, how political forces affect the choice of policies, especially in relation to distributional choices and political institutions—matter, and they may influence the design and have positive or negative effects on the outcomes postulated in the program objectives.

This chapter analyzes these design features and considerations, and presents evidence on how they have been used around the world. In so doing, it describes the theoretical background that informs a public works program and determines its success as an effective safety net instrument. How a country goes about the implementation of a program, tailoring those design features to its specific circumstances, is detailed in chapter 5. Data presented in this analysis is summarized in appendix A.

## Implementing Institutions and Funding Mechanisms

A wide array of institutional/organizational stakeholders can—and do—undertake the implementation and funding of public works programs. The choice largely depends on program objectives, the capacity of available institutions, and available financial resources. The institutions typically involved are governments (including central, regional, and local), international donors, social funds, nongovernmental organizations

(NGOs), communities, and private contractors. The sources of funds include governments and donors.

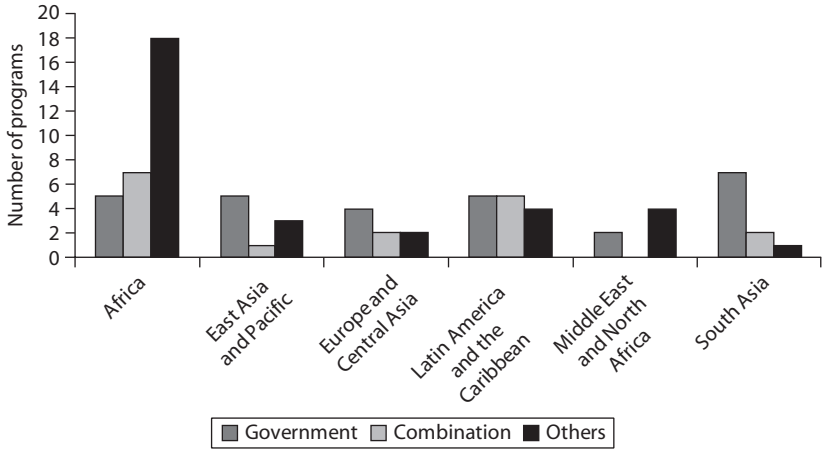
There is no one institutional setup that could be considered the best for all public works programs, and country circumstances determine in large measure which setup is followed. Understandably, there is much variation across countries regarding who finances and who implements (executes) programs. In many countries, a public-private-donor partnership finances and runs the program. The various models adopted for implementation and funding of public works programs around the world are discussed below.

### *Models of Program Implementation*

Implementing institutions for public works programs vary across the world. Public works programs in South Asia are mostly run by the government as part of an overall poverty reduction strategy; in Africa, other entities—such as bilateral donors, NGOs, social funds, and private contractors—are responsible for program execution. In Latin America, implementation is primarily accomplished either by governments alone or in collaboration with donors (figure 4.1).

Governments can implement programs through agencies at different levels. The available data identify four government levels at which public

**Figure 4.1 Type of Institution Implementing Public Works Programs by Region**




*Note:* This analysis is based on data from 62 countries implementing a total of 77 public works programs; see appendix A.

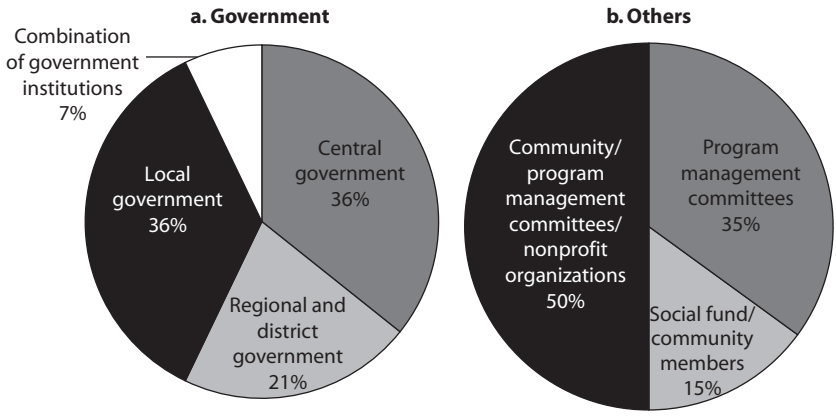
works are implemented: central government, regional and district government, local government, and a combination of government entities from those three levels. When government implements a public works program, it usually does so through the central government or at the local level (figure 4.2a).

When other entities implement the program—whether social funds, community members, program management committees representing the various stakeholders, NGOs, contractors, and so on—they most commonly do so through a combination of agents such as NGOs, community members, and program management committees. Public works programs are implemented with less frequency by social funds (figure 4.2b).

### *Models of Program Funding*

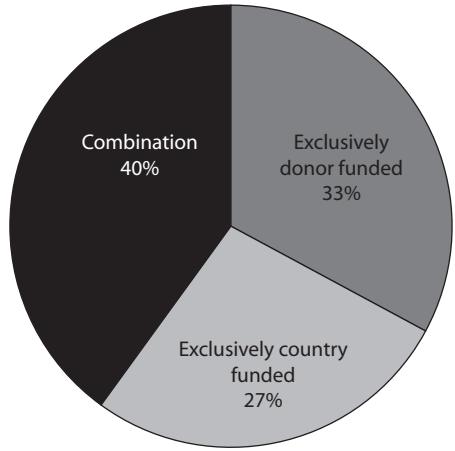
Analyzing program funding across all country income levels reveals that the most typical arrangement is a combination of government-donor funding (40 percent), followed by donor-only funding (33 percent) (figure 4.3). The predominance of donor funding may contribute to a lack of ownership by governments and/or a lack of accountability. The management of public works programs is often housed in a special agency or project implementation unit rather than within line ministries. This can raise issues of sustainability in the longer term since project implementation units tend to rely on international staff and draw available talent away from government agencies. At handover time, the line ministries

**Figure 4.2 Breakdown of Implementing Institutions**




*Note:* This analysis is based on data from 32 countries implementing a total of 40 public works programs; see appendix A.

**Figure 4.3 Sources of Public Works Program Funding**




*Note:* This analysis is based on data from 62 countries implementing a total of 77 public works programs; see appendix A.

often lack the finances, staff, skills, or will to continue the public works programs, thus jeopardizing their sustainability after the donor leaves.

The share of government expenditure in total funding available to the program, including funds from other sources (donors, NGOs, etc.) varies substantially, but in most cases, donors are still the predominant financiers of program budgets in many countries. Data for 20 public works programs for which detailed financial information are available reveal that governments contributed less than 11 percent of the total budget in 55 percent of the cases, and between 0.5 and 5.0 percent in 35 percent. Half of the program budget was funded by governments in only 15 percent of the cases (table 4.1). Notable exceptions to this trend include large-scale programs in Bangladesh and India that rely solely on domestic resources.

### *Models of Delivery and Funding*

Subbarao et al. (1997) examined the characteristics of alternative delivery methods of social assistance programs, focusing on public works programs. They identified two general approaches with regard to the entity that handles the funding and management of a program (service provision) and the actual creation of the infrastructure (production): a traditional delivery model in which government takes on both provision and production, and delivery models in which provision and production are

**Table 4.1 Share of Domestic Contribution to Public Works Program Funding**

| *Share of funding contribution (%)* | *Number of countries* |
|---|---|
| 0.5–5.0 | 7 |
| 6–10 | 4 |
| 11–20 | 1 |
| 21–30 | 1 |
| 31–40 | 0 |
| 41–50 | 1 |
| 50 | 3 |
| 51–75 | 3 |
| Total | 20 |

***Note:*** Data from 32 countries implementing a total of 40 public works programs; see appendix A.

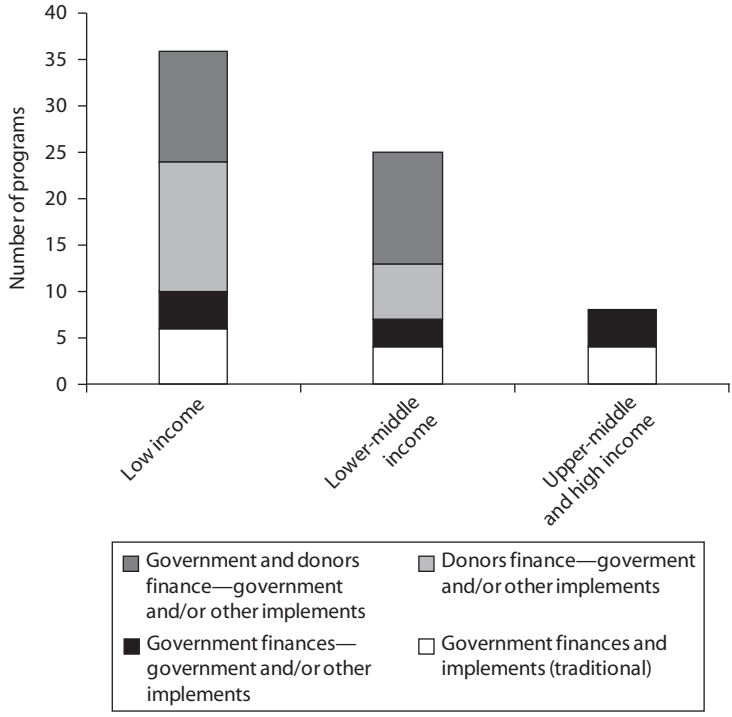
carried out by a combination of government, private contractors, and donors. Four separate delivery mechanisms in all were identified:

- Traditional model financed and implemented by government
- Government financed, implemented by government or others
- Government and donor financed, implemented by government or others
- Donor financed, implemented by government or others.

Broad cross-country analysis of these models reveals some interesting patterns by country income group (figure 4.4). The data from 62 countries show that delivery models in almost one-third of programs have joint government and donor financing and are implemented by government or other local partners. In 29 percent of cases programs were exclusively donor financed, with government and/or others implementing. The former model is found more typically in lower-middle-income countries, and the latter in low-income countries. One reason for this pattern is that lower-middle-income countries such as Bangladesh, India, and Sri Lanka have their own resources to combine with donor finance; most very low-income countries, especially in Sub-Saharan Africa, rely almost exclusively on donor finance.

Neither model is observed among upper-middle and high-income countries. These findings confirm that, broadly speaking, as the level of income increases, governments are more inclined to fund and implement their own programs. Low-income countries depend heavily on donors to

**Figure 4.4 Distribution of Public Works Program Funding and Implementing Arrangements by Country Income Level**




*Note:* This analysis is based on data from 62 countries implementing a total of 77 public works programs; see appendix A.

fund and implement their programs, as they often lack not only public taxpayer resources but also technical and managerial capacities. Between these two extremes are lower-middle-income countries, where the funding and implementation of public works programs is mostly handled by a combination of governments and donors.

Reliance on donor financing is accentuated in lower-income countries (particularly Sub-Saharan countries) that are vulnerable to some type of nationwide shocks such as droughts or floods. Such shocks tend to deplete public financing capacity too, forcing reliance on donors for financing or NGOs for implementation, with consequent loss of public accountability and ownership—as demonstrated by experiences in Ethiopia and Niger. Only in larger and agro-climatically diverse countries may public funding be available to supplement donor finance.

### *Role of Communities*

The data show that communities are increasingly participating in various aspects of program implementation—a trend that brings both opportunities and challenges. The increasing involvement of communities is consistent with increasing decentralization of, and the use of bottom-up approaches in, safety net program implementation. Rwanda's public works program reflects this finding. Community participation has many advantages. Armed with better access to information, community residents are better able to select, design, implement, and monitor projects (Conning and Kevane 2000); community participation also reduces administrative and coordination costs (Hoddinott 1996). Community involvement in program implementation has other benefits as well:

- It allows communities to take ownership of the program.
- It may promote the execution of activities that genuinely respond to the needs of the poor.
- It may contribute to better-quality works and may lead to better maintenance of the assets created.
- It may increase the program's public accountability and transparency (see the "Program Objectives, Models, and Scope" section of chapter 5).

Community engagement can therefore make a difference in how effectively a program meets its objectives. Conning and Kevane (2000) note other spillover benefits such as strengthening social capital and social organizations.

There are several ways in which communities can be involved in program implementation. They can determine eligibility criteria for beneficiary selection and/or identify beneficiaries, select projects, monitor activities, or even help fund projects. The degree of involvement and scope of activities in which communities are involved vary greatly across countries. The success of their involvement depends on how their participation is built into program design. A case study of Ethiopia shows how communities were involved in project selection (chapter 9).

As with all other design features, experience with community involvement varies greatly across countries. Table 4.2 shows the frequency of reported community involvement for various components of program implementation for 40 public works programs in 32 countries. Community participation is more frequently enlisted in project and beneficiary selection than in monitoring and evaluation.

**Table 4.2 Percentage of Countries Reporting Community Involvement by Program Component**

| *Component* | *% of countries reporting community involvement* |
|---|---|
| Project selection | 58 |
| Beneficiary selection | 52 |
| Monitoring | 38 |
| Evaluation | 23 |

***Note:*** Data from 32 countries implementing a total of 40 public works programs; see appendix A.

The Republic of Yemen's experience is of particular interest in this regard. The country's public works program was established in 1996 to help mitigate the adverse effects of the economic adjustment on the poor population—especially in rural areas—through the creation of jobs and the provision of needed infrastructure. Since its inception, the program has benefited poor communities mainly through indirect benefits derived from the creation of quality assets. The program's level of direct benefits was not very large, because contractors could hire workers from other areas.

In the program's second phase (between 1999 and 2003), the active participation of poor communities became the cornerstone of the success of delivered services. Their involvement encompassed identifying, prioritizing, and selecting projects according to their needs; providing contributions (in cash or in kind) as a prerequisite to implementation; and implementation, operation, and maintenance of projects. This process increased community awareness of the program's development aspects and community understanding of implementation issues. Moreover, it promoted a strong sense of ownership—which was evidenced by community contributions, which reached 11 percent of total project cost—and improved community members' abilities to assume responsibility of completed projects, thus guaranteeing sustainability.

In Malawi, project selection is, in principle, made at the district level in consultation with traditional leaders using participatory rural appraisal methodologies. Practical application has varied, however, with some communities claiming that they were not consulted on the type of project to be initiated, and others reporting that the projects were already requested by the communities even before being informed of the Malawi Social Action Fund (MASAF) funding. The sites that participated in project

selection had few implementation problems compared with the other communities, which is directly attributable to the procedure used for project selection. Once the poverty-stricken extension planning areas had been identified, projects were selected through district assembly structures. If the areas identified did not have projects on the assembly's approved list of qualifying for funding under MASAF, a request for such projects was made to the assembly via the area development committee and the village development committee. This procedure was adopted as a means of ensuring adequate consultation between communities and their traditional leaders.

In India, where community involvement had not been a notable feature in any previous public works program, the country's most recent 100-day employment guarantee scheme introduced in 2006—the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS)—actively seeks community involvement in project selection, as well as social audits. In the Republic of Korea, 50 percent of the public works program's projects were to be selected by communities (demand driven), and the balance by line departments (supply driven). These examples reveal an interesting mix of approaches to community participation (Subbarao 1999).

Community participation has not always been positive. The same informational advantages it provides can lead to corruption and to program capture by local elites, with program benefits diverted from the poor to serve the better-off. Evidence suggests that this is a potential issue in countries with highly non-egalitarian societies in which communities are not accountable to their members as government institutions are likely to be (Platteau and Abraham 2002). In addition, community-based targeting may yield inconsistent results across communities and affect access to or level of interventions (Hoddinott 1996).

The feasibility of community participation should be analyzed based on the specific context, taking into account the community structure and social dynamics. Additional mechanisms can be put in place to support community involvement and improve process outcomes. For example, in Cambodia's public works programs, communities select the beneficiaries using a set of criteria provided by program managers to guide them through the process. Even though eligibility criteria were well documented, there was room for discretion as no formal ranking of beneficiaries was done. To improve targeting outcomes, the program began to use a national household targeting system (ID Poor). Where data are available, a proxy means test is used in combination with community targeting. The community

selects the eligible households, which are then ranked based on income (Giannozzi and Khan 2011). Even in countries where community participation leads to a generally fair selection of participants (see box 4.4), some additional objective criteria or guidance might further improve targeting outcomes (Kakwani and Subbarao 2010).

## Establishing Project Selection Criteria

The selection of the type of projects to be implemented within public works programs depends on program objectives; desired share of labor cost; program timing and duration; and the potential for participation of women, youth, and people with disabilities. The infrastructural needs of the country also play a role on which works to undertake. Table 4.3 offers

**Table 4.3 Projects Initiated under Public Works Programs**

| *Type of project* | *Project/activities* |
|---|---|
| Economic infrastructure | *Transport sector*: rural and urban roads, feeder roads, pedestrian bridges, bus stops, sidewalks, culverts, etc.<br>*Marketplace*: public market places including facilities, parking lots, latrines, helipads, and market yards<br>*Gas and electricity*: installation of electricity cables, gas network systems, etc.<br>*Irrigation systems*: irrigation canals and drains, etc.<br>Other productive infrastructure |
| Sanitary infrastructure | *Drinking water*: community water supply networks, etc.<br>*Storm water*: erosion control structures (e.g., gabions, reno mattresses), infiltration pits, etc.<br>*Wastewater and solid waste*: sewerage networks, latrines, disposal pits, etc. |
| Social infrastructure | *Health infrastructure*: community clinics, hospitals, etc.<br>*Educational infrastructure*: schools, libraries, training facilities, etc.<br>*Recreational infrastructure*: theaters, parks, playgrounds, etc.<br>*Other services infrastructure*: public showers, housing, etc. |
| Land management and environmental | *Land productivity and availability and soil fertility restoration*: gully control, hillside terracing, harmful tree removal, etc.<br>*Soil and water conservation projects*: afforestation, tree nurseries, flood control structures, etc.<br>*Fodder availability*: vegetative fencing and fodder belts, fodder seed collection, etc. |
| Social services | Operation of child care centers and nursing homes, training, garbage collection, street sweeping, etc. |

a summary of the types of projects and works that tend to be implemented under public works programs. Appendix B provides a full list of such projects.

The basic mechanisms for project selection should be determined early on. Projects can, for example, be selected based on community wishes, driven by government agencies, or some combination of both. Whichever projects are selected, program managers should ensure that needed nonlabor inputs, including technical and managerial help, are readily available. Program managers should have a clear sense of eligibility criteria.

### *Eligibility/Ineligibility Criteria*

Most countries establish, from the design stage, general guidelines for project eligibility. Stakeholders can then select from among various types of works so long as these criteria are met. Examples of eligibility criteria taken from various program manuals are listed below:

- Have a clearly specified share of labor cost, for example in the range of 50–70 percent, in order to maximize the level of funds going to workers without jeopardizing the quality of the work done
- Be demand driven and meet the infrastructural needs of the poor
- Be technically, socially, and economically viable
- Avoid adverse environmental impacts
- Enable participation of women (be located more closely to homes so as to require less travel; have sanitary facilities, day care, and drinking water)
- Create opportunities for participation by people with disabilities.

Other public works programs establish ineligibility criteria for projects to be undertaken under their rubric. Some examples of criteria for rejection follow:

- Potentially benefit private plots or individuals
- Take a very long time to complete
- Are hazardous to human health
- Contain complex components that are too difficult to execute in a rural village or community setting
- Maintenance cannot be handled by the surrounding communities
- Are harmful to the environment.

The above sets of criteria are illustrative and can—and should—be adjusted to suit individual country circumstances. Box 4.1 presents examples of such tailored eligibility/rejection criteria for public works programs in, respectively, Liberia and Rwanda. Criteria for eligibility or exclusion should be agreed upon and communicated to implementing agencies at all levels.

### *Share of Labor Cost*

Public works programs implemented for safety net purposes put particular emphasis on selecting labor-intensive projects so as to maximize the number of people benefiting from the wages provided by the program. In

**Box 4.1**

## Eligibility and Rejection Criteria for Projects in Liberia and Rwanda

**Eligibility Criteria for Liberia's Cash for Work Projects**

- At least 75 percent of the project cost should be allocated to labor, which includes 10 percent for basic tools and materials.
- The project should provide a public good or service; this also implies that all works should be done on public, state, or community-owned land but not on private land.
- The project should benefit the wider local community, and not just a few individuals or families.
- The project should not negatively affect the environment or have negative social consequences.
- The project should be able to be completed in the time period allotted.

**Selected Rejection Criteria for Rwanda's Vision 2020 Umurenge Program's Projects**

- Activities aimed at developing private household assets
- Activities benefiting private institutions
- Activities pursuing military or defense ends.

*Source:* Project implementation manuals.

**Table 4.4 Share of Labor Cost in Public Works Programs of Selected Countries**

| *Country, program* | *Labor cost share (%)* |
|---|---|
| Korea, Rep., Public Works Project | 70 |
| Bangladesh, Food for Work | 60–70 |
| India, Mahatma Gandhi National Rural Employment Guarantee Scheme | 60 |
| Ethiopia, Productive Safety Net Program | 80 |
| Liberia, Cash for Work Temporary Employment Project | 75 |
| Argentina, Trabajar | ~60 |

***Source:*** del Ninno, Subbarao, and Milazzo 2009.

other words, the program aims to implement projects with a high share of labor cost without compromising the quality of the assets created. Large infrastructural projects are less prevalent in public works programs since they tend to be more capital intensive. Table 4.4 illustrates the share of labor costs in various public works programs.

In general, the type of works that are most relevant to rural communities are already labor intensive, such as fixing a road to the market, shelters and facilities for animals, minor repairs to school buildings and clinics, and so on. These activities often take from 70 to 80 percent of the total cost of a project. For instance, the works selected under Ethiopia's and Rwanda's public works programs and India's MGNREGS included soil conservation, rural road maintenance, terracing, small earthen dams, water harvesting structures, afforestation, and waste disposal, among others. All of these projects required a high percentage of labor cost and enhanced farm productivity and food security.

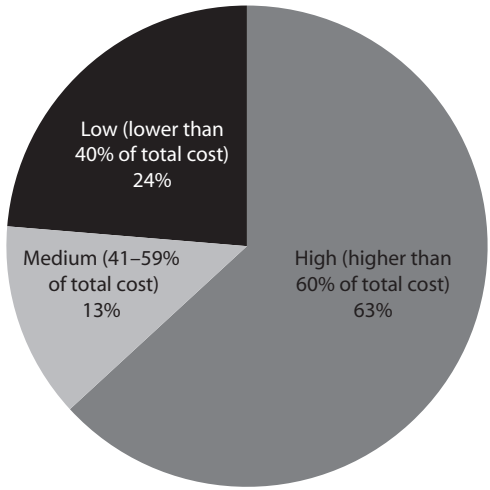
There exists the possibility that too great a focus on labor use and very high labor intensity might compromise the quality of the works executed. There is thus a trade-off between quality and the high share of labor cost. Once projects are selected, considerable attention must be exercised in determining the optimal share of labor cost without compromising work quality.

The share of labor cost depends not only on the type of project but also on the wage rate and the ability of the agency implementing the program to budget adequately for nonwage costs. For example, in the wake of the financial crisis of 1997–98, both the Republic of Korea and Thailand implemented a public works program. In Thailand, the share of labor cost was less than 20 percent; the Republic of Korea's was over 70 percent. The main reason for this large difference between two similar East Asian economies is their approach to the minimum wage. In

Thailand, the minimum wage was hiked periodically over a 20-year period prior to 1997 that witnessed the dramatic expansion of Bangkok City, attracting workers from the less-developed eastern part of the country. When the crisis hit, the statutory minimum wage was high, and the country was unable to adjust the program wage downwards. With a high wage, it could not implement a higher share of labor. By contrast, in the Republic of Korea, the minimum wage was never raised; in fact, during the boom period preceding the crisis, market wages there rose so sharply that the minimum wage became almost irrelevant. When the crisis hit, the country was able to quickly adjust its market wage downwards (and yet keep it above the very low minimum wage), thus enabling it to run a public works program of high labor intensity (Subbarao 1999). As these examples illustrate, the degree of labor cost greatly depends on the wage rate and its historical evolution.

Information on labor cost share is difficult to obtain; such information was available for only 38 countries implementing 38 public works programs (figure 4.5). In more than two-thirds of the projects, the labor cost share is greater than 60 percent, clearly reflecting the fact that public works activity provides significant benefits by way of short-term employment to workers. The labor cost share is low (below 40 percent of total cost) in less than a quarter of the projects.

**Figure 4.5 Labor Share of Total Cost in Public Works Programs**




*Note:* This analysis is based on data from 62 countries implementing a total of 77 public works programs; see appendix A.

### *Project Duration and Timing*

Project duration and timing have an impact on people's availability to participate in a public works program. Ideally, the best time to run a public works program is when the opportunity cost of labor is low and more people are in need of a temporary source of income. In most agrarian economies, the opportunity cost of labor is low during the agricultural slack season after the harvest and before the new planting has begun. However, even during the peak season, some workers may not be able to find work in normal economic activities and might be interested in participating in temporary public work activities. In such instances, the impact on the revenue of the workers might be reduced and the local labor markets affected.

The types of assets to be created will greatly depend on the season and length for which the program will be implemented. Earthworks for building small feeder roads in rural areas in Bangladesh, for example, are suited for the dry season and can be implemented in a seasonal program that would not last more than 4 months. Programs in areas that are not affected by weather can select other projects to carry out.

Country experiences differ a great deal with respect to the seasonality of works activity; however, two design options can be identified:

- *During the slack season, for 3 or 4 months a year only, or after a natural disaster.* Even in this case, consumption-smoothing through the slack season can be accomplished, though the program may not serve an insurance function or provide sufficient income to raise the income level of the beneficiaries above the poverty line.
- *Through the year, with intensity varying between seasons.* In this case, public works will act as a surrogate unemployment insurance program, inasmuch as unemployed workers can seek work under the program, while at the same time aiding consumption-smoothing through a slack season.

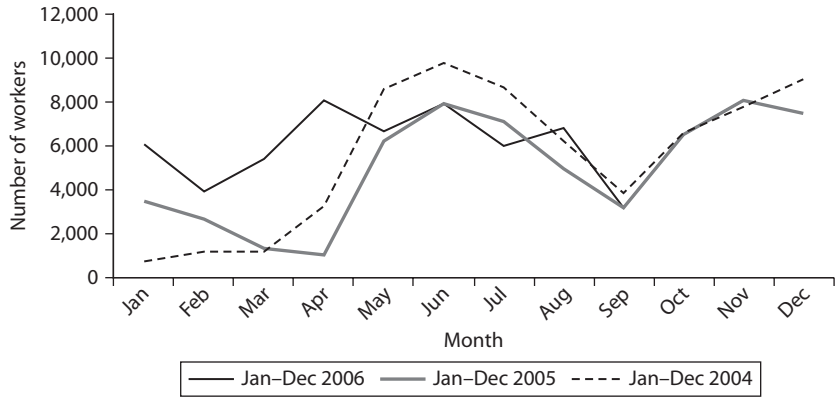
The Bangladesh Food for Works program is a good example of a seasonal program. The program has been operating since 1975. It aims to create wage employment in exchange for food during the slack season, mostly through the construction and maintenance of rural roads, river embankments, and irrigation channels. A major objective of the program is to provide income to the rural poor during the slack period when the unemployment rate in rural areas increases. Wage payments are made in kind (in wheat or rice) rather than in cash. Such a practice is thought to

stabilize food grain prices in the market and to improve food consumption and nutrition of participating households before the following spring harvest. Over 85 percent of the Food for Works resources are used during January–May, which was the traditional slack season for agricultural activities during the early stages of the planting season for *boro* rice. Moreover, labor-intensive earth-moving projects cannot be conducted during the rainy season, when part of the country is under water or the ground is too wet to allow any work. However, with the rapid expansion of cultivation of irrigated *boro* rice and wheat crops, employment opportunities in the agricultural sector in many areas have increased to substantial levels during this season in recent years, thus creating the need for alternative activities and times of implementation for public works programs.

Strong seasonal patterns are evident even in countries that operate programs throughout the year. Figure 4.6 provides some examples of seasonality of operation in a Peruvian public works program. The figure shows greater intensity during the agricultural slack season. This represents a good practice example where the program serves the functions of insurance, consumption-smoothing, and poverty reduction.

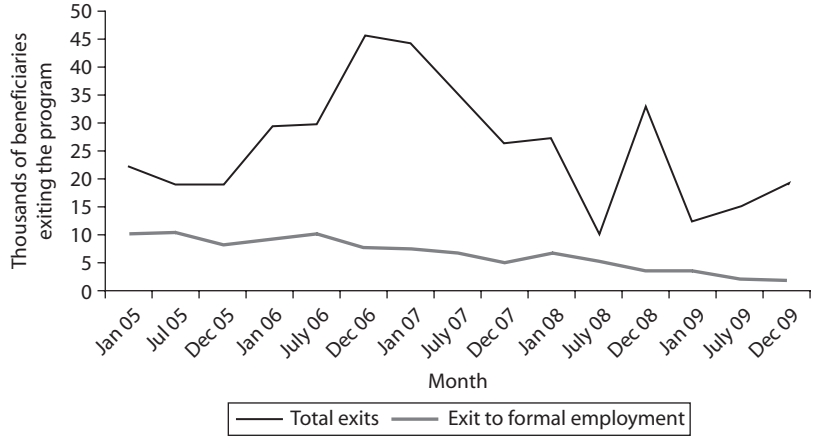
In Argentina, program participation was spread more evenly throughout the year, while the total number of beneficiaries exited the program as time went by (figure 4.7). This distinction reflects the objective of the

**Figure 4.6 Example of Seasonal Public Works Program Operation: Peru's Trabajar Urbano, Employment Generated, 2004–06**




*Source:* Ministerio de Trabajo y Promoción de Empleo, various years, http://www.atrabajarurbano.gob.pe/empleos.htm.

**Figure 4.7 Beneficiary Exits from Argentina's Jefes de Hogar Program, 2005–09**




*Source:* Program administrative data.

program, as it was designed to help the country respond to the financial crisis in rural and urban areas.

When countries implement public works to respond to regional crisis, seasonal consideration might not be taken into account. For example, in Morocco, the country quickly launched a public works program to address a regional crisis that arose in one region of the country. Other times, financial constraints or implementation delays may prevent the preferred seasonal allocation of projects. In Tanzania, for example, public works program projects were to be carried out in the dry seasons so as to minimize disruptions of agricultural activities and enlist beneficiaries for the program, thus helping participants smooth consumption. Delays caused by project preparation disrupted this arrangement.

There are also cases when year-round operation created problems inasmuch as it clashed with normal economic activities. For example, in Zambia, tension was created between the employment offered under a public works program and the need for labor for regular farming activities. Farmers chose to work for public works and consequently may have spent less time on their own farms. Scheme operators tried to solve the problem by imposing a regulation that public works activity be confined to 4–5 hours a day, but found it difficult to implement the regulation, and raised the implicit daily wage rate. While there is no concrete evidence on the extent to which public works activity may have adversely affected farm output, the potential conflict between public works program activity

and normal economic activity needs to be addressed, preferably by adjusting the wage rate according to seasons. A slight lowering of the wage rate during the peak season might have avoided the flight of labor away from normal economic activities. On the other hand, Afghanistan also ran its program during peak agricultural season and found it difficult to recruit persons for public works, probably because the wage rate was (correctly) set below the current agricultural wage rate.

### *Environmental Issues*

To ensure that the activities of public works programs do not adversely affect the environment and human well-being, environmental and social safeguard requirements already in force in many countries will need to be met. It is a good practice to conduct an environmental assessment of proposed projects before they are approved for implementation. In general, an environmental assessment should be part of the project appraisal; then, during the screening process, the assessment can facilitate identification of potential undesirable environmental impacts and planning for remedial actions. Some of the considerations existing programs take into account in the initial environmental assessment include the following:

- Objective, size, and nature of the project
- Location of the project (proximity to protected areas, historical sites, wetlands, etc.)
- Existing applicable laws (regulations on construction, storm water, drinking water, sanitation, etc.)
- Potential environmental impacts (effects on soil and water quality, farmland, watersheds, biodiversity, etc.)
- Possible mitigation measures if impacts have been identified
- Other information useful in assessing impact.

This list, which is by no means exhaustive, helps identify the extent of potential impact a project may have and the next steps to be taken: *no action*, if the project does not have an impact or if the impact is minimum and easily resolved with mitigation measures; an *in-depth environmental review*, if the project has some environmental impact, in which case a site evaluation might be necessary; or a *full environmental analysis*, in cases where the project potentially has significant adverse environmental effects.

Environmental assessments should be conducted in accordance with country-specific environmental regulations and concerns. A project that is not environmentally suitable should not be approved for execution.

The actual issues covered in the assessments, if needed, vary by country depending on its specific regulations and institutional arrangements. Where there are multiple small, community-implemented projects (as in Ethiopia), for example, it may not be practical to do an extensive environmental assessment for each. In this case, the government could provide the community and local authorities with initial criteria for project selection and a short list of mitigation measures that can be implemented. In practice, the environmental assessments are conducted in two ways:

- For each potential project, the implementing agencies (community, contractors, or local governments) submit a form that describes possible environmental effects. This information is analyzed by local or district authorities, who decide what actions to take in terms of further environmental studies or field appraisals.
- Projects are assessed directly by a national environmental agency in accordance with country regulations.

Once a project has been approved after this environmental screening, adequate monitoring is needed to ensure compliance with environmental regulations and mitigation measures. Appendix C illustrates how environmental assessments are done in Ethiopia and Rwanda. Box 4.2 explains the use of public works for an environmental restoration in Ethiopia.

Particular attention needs to be given to local capacity. Even if the environmental framework is robust at the national level, local institutions and communities may not have adequate capacity to implement it. Resources should be devoted to build local capacity through training, supervision, sensitization, and incentives. Guidelines and regulations are needed to clearly delineate the role stakeholders are to play in the implementation and supervision of environmental standards.

## Selecting Beneficiaries

Program objectives generally define the population the program aims to benefit. If a program seeks to provide guaranteed employment for a certain number of days, it is imperative to *select beneficiaries* first, and then determine in which projects they will participate. If, on the other hand, the program looks to provide short-term employment immediately after a shock such as a drought, then the *target group* and its *location* must first be determined, followed by establishing the appropriate targeting mechanism for selecting the actual beneficiaries. Such a program may include

**Box 4.2**

### Using Public Works for Environmental Restoration: Ethiopia

Agro-ecological shocks can be reversed through a variety of public works to promote environmental rehabilitation; such projects include soil conservation initiatives, development of irrigation infrastructure, and reforestation. In Ethiopia, land degradation and increased climatic variability have led to recurrent famine shocks. Ethiopia's Productive Safety Net Program (PSNP) uses public works to create sustainable community assets to promote environmental restoration. In recent years, public works watershed development projects have led to reduced soil loss, reduced sedimentation, and improved biomass.

The program protects the environment in another important way as well. In some cases, public works efforts that seek to improve the environment have the potential to harm it. For example, irrigation projects can change soil chemistry due to an accumulation of minerals from the water, or a poorly designed water project can spread waterborne diseases. To avoid such outcomes, PSNP has strengthened its environmental and social management framework, which specifies criteria for the types of works eligible under the program. Local and regional administrative units are trained in framework application and monitoring. Thus, PSNP's cumulative impact on the environment has been positive, featuring well-designed projects with predictable and guaranteed funding, community ownership, and adequate labor.

*Source:* Michael and Getahn 2010.

people who do not have access to employment in some regions of the country during some months of the year and people affected by adverse shocks such as drought, flooding, adverse economic activities, and so on.

To reach its intended population and ensure that everyone who should be included in the program has a chance of participating, a program may employ one or more targeting methods. Public works programs have used numerous such methods of varying complexity. The cornerstone of these methods is the use of wages as a self-selecting mechanism. The basic concept is that if the wage is low enough, it will attract only people who have no other employment opportunities. A range of complementary methods has also been employed and combined, including geographic targeting, means testing, and community-based approaches.

The type, sophistication, and precision of the targeting method(s) selected—including the use of universal access without any targeting—will depend on relative costs and benefits, the local setting, and the scope for (or lack of) flexibility in redesigning targeting schemes over time. This section describes the most commonly used methods to target groups and individual beneficiaries of public works programs.

### *Geographic Targeting*

Geographic targeting is most appropriate when the poor are disproportionately located in a specific region, and/or when a specific region in a country is hit by a major shock such as a drought or a flood. If the region includes the poor disproportionately, then it would be appropriate to combine geographic targeting with other targeting methods. For example, in Malawi, targeting for participation in MASAF occurs at two levels. The process starts with the identification of geographic areas based on vulnerability assessment mapping system data, which takes into account factors such as food availability at the household level, the availability of coping mechanisms, and access to land. Next, the fund's management unit, in conjunction with the poverty monitoring unit, develops a suitable index and cutoff point for eligible areas. Within the targeted areas, wages are set at the community level below the minimum wage rate, thereby achieving self-selection (Mvula et al. 2000).

Like the MASAF public works program, Argentina's Trabajar (To Work) program adopted a combination of geographic targeting and self-selection through a work requirement offering a wage rate that was initially set at the minimum wage (lower than the market wage); in 2000, this was lowered to below the minimum wage.

The implementation of geographic targeting is not without problems. Sometimes it is politically difficult to exclude poor people in a region with low poverty incidence while including even nonpoor people in a region where the poor are disproportionately located. Much depends on political feasibility in the adoption and implementation of this approach.

### *Self-Selection Using the Wage Rate*

The level of the wage rate, if set below the ruling market wage, can render a public works program pro-poor in that it discourages the nonpoor from participation, thus reducing *inclusion* errors. It does not necessarily ensure that all of the poor participate, however, and thus does not totally eliminate *exclusion* errors.

A high public works wage is most likely to attract the nonpoor to a program, often crowding out the very poor from participation—especially if the resources available for the program are limited, and the nonpoor enjoy significant political clout and can influence program managers (Beasley and Coate 1992; Beasley and Kanbur 1993). Also, a higher wage rate may decrease the net income earned by beneficiaries. Usually people are not idle and they leave other income-earning opportunities to join a higher-wage public works program, resulting in what is referred to as "foregone earnings." The actual increase in income for participants is usually in the range of 35–39 percent of the wage received in India's poorest state of Bihar (see Dutta et al. 2012). Thus, when higher wages displace people who already have another source of revenue, the value of the marginal transfer to participants is reduced, and distortions in the labor market can be created. Setting the level of the wage rate is thus an important design feature of a public works program that can determine the extent to which the poor can participate.

***Types of wage rates and beneficiary selection.*** Four wage rates can be distinguished within a program:

- Program wage—what the public works program pays to hired workers.
- Minimum wage—the statutorily fixed wage for unskilled labor.
- Market wage—typically, what an unskilled worker would earn in the marketplace; this may be either above or below the statutorily fixed minimum wage.
- Task-based piece wage rate—specific remuneration set for a particular task, such as digging a cubic meter of earth, which are set forth in implementation manuals of different countries.

In countries where the *program wage is kept lower than the market wage*, a certain degree of self-selection of the poor into the program takes place, reducing the pressure on administrators to select individuals for participation. This was the case in India's Maharashtra Employment Guarantee Scheme (MEGS) prior to 1988, when the minimum and program wages doubled (Subbarao 1997). Following the wage hike, the MEGS average monthly expenditures fell, as did the number of person-days of employment, leading to rationing of the program and, consequently, the erosion of the employment guarantee (Dev 1995; Gaiha 2000; Ravallion, Datt, and Chaudhuri 1993; Subbarao 1993, 1997, 2003; Subbarao et al. 1997).

Where the *market wage is higher than the minimum wage*, publicly funded program wages aimed at self-selection of the poor can be set at or slightly higher than the minimum wage, but lower than the prevailing market wage. In the public works program introduced by the Republic of Korea following the 1998 financial crisis, the program wage was set at a level slightly below the prevailing market wage for unskilled labor to ensure that only those most in need would participate. During the crisis, the average market wage rate fell both before and during the operation of the public works program, and the public works wage was adjusted downward to ensure it was lower than the (declining) average market wage, thus enabling self-targeting to the poorest (Hur 2001; Subbarao 1999).

In some countries and for a variety of reasons (including weak enforcement of minimum wage legislation), the market wage is below the minimum wage, and/or restrictive employment laws prevent setting a public works program wage below the minimum wage. In such cases, the scope for self-selection is ruled out because the program wage, now higher than the ruling market wage, is most likely to attract the nonpoor to the program. Colombia's Empleo en Acción (Employment in Action) is unable to self-select its beneficiaries due to a legal obligation to pay the minimum wage (and possibly benefits).[1] One way to overcome this barrier is to enforce strict targeting rules for participation. The program thus limits eligibility to workers classified as categories 1 or 2 (the lowest income quintiles) in its System for Selecting Beneficiaries of Social Programs, which is a proxy means testing system that classifies people based on an assessment of the living conditions of individual families.[2]

Table 4.5 shows that there is much variation across countries in the relationship between program wage, market wage, and the minimum wage, although the limited information available makes delineation of any pattern quite difficult. In general, most of the countries in the sample did succeed in keeping the program wage relatively low, with some countries faring better than others in this regard.

Within a country, it is also possible to have large variations in wages (as the Rwanda case study in chapter 8 highlights). Table 4.6 shows the variation in minimum wages of unskilled casual (daily) labor across Indian states in 1999; on average, 75 percent of these workers worked for less than the minimum wage. This evidence suggests that an employment guarantee scheme in which the wage is set at the level of the minimum wage (which, in many countries, is higher than the market wage) would be extremely expensive for the government and likely to result in poor targeting by attracting the nonpoor to the program (discussed by O'Keefe 2005).

**Table 4.5 Relationship between Program Wage, Minimum Wage, and Market Wage in Selected Public Works Programs**

| *Wage relationship* | *Country, program* | *Start date* |
|---|---|---|
| Program wage = minimum wage ≥ market wage | Botswana, Labour Intensive Public Works Project | 1992 (program wage after 1998) |
| | India, Jawahar Rozgar Yojana | 1989 |
| | India, Maharashtra Employment Guarantee Scheme | 1975 (Program wage after 1988) |
| Program wage = minimum wage ≤ market wage | Argentina, Trabajar | 1996 (program wage before 2000) |
| | India, Maharashtra Employment Guarantee Scheme | 1975 (program wage before 1988) |
| | Colombia, Empleo en Acción | 2001 |
| | Uruguay, Programa de Actividades Comunitarias | 2003 |
| Minimum wage ≤ program wage ≤ market wage | Korea, Rep., Public Works Projects | 1998 |
| Program wage = minimum wage | South Africa, Expanded Public Works Program | 2004 |
| | Indonesia, Padat Karya | 1998 |
| | Thailand, Social Investment Project | 1998 |
| | Morocco, Promotion Nationale | 1960s |
| | Zambia, Public Works | 2002 |
| Program wage = market wage | Egypt, Arab Rep., Public Works | 1993 |
| | Indonesia, Merci Corps' Cash for Work | 2005 |
| | Somalia, Action Contre la Faim's Cash for Work | 2004 |
| Program wage ≤ minimum wage ≤ market wage | Argentina, Trabajar | 1996 (program wage after 2000) |
| | Argentina, Jefes de Hogar | 2002 |
| Program wage ≤ market wage | Bolivia, Plan Nacional de Empleo de Emergencia | 2001 |
| | Cape Verde, Frente de Alta Intensidade de Mão de Obra | 1980s |
| | Ethiopia, Food for Works | 1980 |
| | Ethiopia, Productive Safety Net Program | 2005 |
| | Tanzania, Tanzania Social Action Fund (Public Works Component) | 2000 |
| | Afghanistan, Labor Intensive Works Programme | 2002 |
| | Bangladesh, Food for Work | 1974 |
| | Pakistan, Income Generating Project for Refugee Areas | 1984 |

*(continued next page)*

**Table 4.5** *(continued)*

| *Wage relationship* | *Country, program* | *Start date* |
|---|---|---|
| Program wage ≤ minimum wage | Mexico, Programa de Empleo Temporal | 1995 |
| | Peru, A Trabajar Urbano and Rural | 2002 |
| | Malawi, Malawi Social Action Fund | 1995 |
| | Algeria, l'Indemnité pour Activité d'Intérêt Général | 1994 |
| | Yemen, Rep., Public Works | 1996 |
| Market wage ≤ program wage ≤ minimum wage | Botswana, Labour Intensive Public Works Project | 1992 (program wage before 1998) |
| | Madagascar, Haute Intensité de Main-d'oeuvre of the Development Intervention | 2000 |
| Program wage = minimum wage + social contributions | Bulgaria, Public Works | 2002 |
| | Chile, Direct Employment Programme | 1993 |

***Sources:*** del Ninno, Subbarao, and Milazzo 2009; Subbarao 2003.

**Table 4.6 State Agricultural Minimum Wage, Average Casual Wage, and Share of Casual Labor Days in India**

| *State* | *State minimum wage for agriculture labor (Rs/day)* | *Average casual wage (Rs/day) in 1999–2000* | *% of casual labor days worked at less than state minimum wage* |
|---|---|---|---|
| Andhra Pradesh | 80 | 35 | 96.5 |
| Assam | 46 | 47 | 31.9 |
| Bihar | 59 | 36 | 93 |
| Gujarat | 60 | 40 | 73.4 |
| Haryana | 80 | 63 | 60.7 |
| Karnataka | 46 | 37 | 59.2 |
| Kerala | 91 | 91 | 40.1 |
| Madhya Pradesh | 53 | 29 | 91.5 |
| Maharashtra | 45 | 34 | 63.9 |
| Orissa | 50 | 29 | 93.3 |
| Punjab | 82 | 68 | 58.5 |
| Rajasthan | 60 | 53 | 60.8 |
| Tamil Nadu | 54 | 45 | 51.5 |
| Uttar Pradesh | 58 | 41 | 66.4 |
| West Bengal | 62 | 44 | 83.9 |
| All India | — | 40 | 75.2 |

***Source:*** O'Keefe 2005.
***Note:*** — = not available.

***Effective wage rate and number of hours worked.*** The number of hours worked has an impact on the actual wage rate and therefore on participation in the program. It is not unusual for countries in Africa to allow people to work 4 or 5 hours a day and get paid a full day's wage. The rationale is to allow people to attend to other duties such as farm labor. Unfortunately, this policy dramatically increases the actual wage rate, thus attracting a large number of nonpoor people to the program. In those situations, it is common to let all those willing to work participate in the program and ration the number of days worked. This happened in Madagascar, where, for example, workers are required to work 5 hours a day in labor intensive projects for an average duration of 20 days, receiving a wage higher than the market wage for unskilled labor. Because of the high wages and the demand for employment that exceeds the opportunities created, a rotation system was applied almost everywhere to give the largest number of poor people a chance to work. A possible way to address this issue is to convert the actual wage into the effective wage for 8 hours of work, and then compare it with the legal minimum wage and the prevailing market wage for 8 hours of work.

### *Other Targeting Methods*

Sometimes geographic selection and wage-rate setting are not sufficient to identify the desired number of beneficiaries. For example, if a program is designed to employ a given number of workers for a certain number of days and twice as many people are willing to work at the given wage, a decision needs to be made regarding who should participate. Thus, supplementary targeting methods are needed. The use of multiple targeting methods has been shown to make identification of the neediest more accurate and comprehensive, thereby improving a program's ability to reach the intended population (Coady, Grosh, and Hoddinott 2004[3]). Some additional targeting methods commonly used in public works programs are administrative and categorical targeting, community targeting, and proxy means testing.

***Administrative and categorical targeting.*** Administrative targeting is based on the use of a set of criteria for eligibility. These criteria can be poverty based (households whose total income falls under the national poverty line) or categorical. In the Trabajar program in Argentina, for example, the government established two mutually exclusive criteria for eligibility: urban unemployed population living below the poverty line, or rural population whose basic needs have not been met.

Some public works programs have a primary or secondary objective of benefiting specific population groups to address particular vulnerabilities. Such programs use identifiable group characteristics or traits beyond poverty to target youth, women, ex-combatants, refugees, and so on (Conning and Kevane 2002). For instance, El Salvador's Programa de Atención Temporal al Ingreso (Temporary Income Support Program) targets unemployed female heads of households and youth from urban slums (box 4.3). The Emergency Northern Recovery Project in Sri Lanka targets populations in the process of resettlement. Kenya's Kazi Kwa Viajana Program targets unemployed youth between 18 and 35 years of age.

***Community targeting.*** This method involves the community in the task of selecting program beneficiaries. According to this method, communities agree on criteria to define poverty and vulnerability, and then rank households in the community to determine their eligibility. Evidence suggests

**Box 4.3**

## El Salvador: Combination of Targeting Approaches Used in the Temporary Income Assistance Program

El Salvador's Temporary Income Assistance Program provides cash assistance to unemployed female heads of household and youth from precarious urban settlements conditioned to their participation in community projects and skill training. To select beneficiaries, the program uses a combination of targeting methods:

- Precarious urban settlements are identified in 25 municipalities using an urban poverty and social exclusion map. These are areas of extreme poverty and high rates of social and gender violence.
- Eligibility criteria are applied: to reside in the precarious urban settlement, to be at least 16 years old, to be unemployed, to be a female head of household.
- Self-selection takes place based on a $100 monthly transfer; this is lower than the minimum wage.

Prioritization criteria are applied based on socioeconomic conditions (age, household status, dwelling conditions, index scoring, etc.). On-site verification of these conditions is done by community leaders and a municipal liaison committee.

***Source:*** Subbarao et al. 2010.

that community involvement increases targeting accuracy, given the community's advantages regarding access to information (Conning and Kevane 2002; Platteau and Abraham 2002; Subbarao 1997). Communities tend to know their members, their living conditions, and the particularities of their environment, and are thus more efficient at identifying households that are in need. Community participation has the potential of reducing administrative costs compared to alternative targeting mechanisms.

On the other hand, community targeting may have disadvantages that can negatively affect a program, such as rent-seeking and capture by local elites, risk of community conflict, and lack of accountability. Box 4.4 presents an overview of beneficiary selection using community mechanisms in Rwanda.

***Proxy means testing.*** Proxy means tests use fairly easy-to-observe household characteristics (location and quality of dwelling, ownership of durable goods, demographic structure, level of education, etc.) as proxies

**Box 4.4**

## Community Approach to Targeting in Rwanda

Selection of beneficiaries for the Vision 2020 Umurenge Program is based on participatory approaches. This approach involves three steps:

- Communities identify poor households based on the traditional *ubudehe* (local collective action) approach, which classifies six states of well-being, ranging from extreme poor to food rich.
- Communities identify households in the bottom two classifications: *umutindi nyakujya* (extreme poverty) and *umutindi* (very poor). Within these two categories, households that are landless (have less than 0.25 hectares of land) and have at least one adult (aged 18 or older) who is capable of manual labor are identified and assigned to the public works program eligibility list.
- Eligible households are then ranked according to their poverty and vulnerability levels.

The social map of each community is periodically updated and used at meetings of village members.

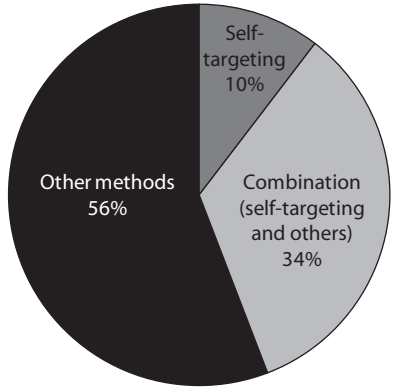
***Source:*** Government of Rwanda 2009.

to predict household welfare. The indicators are used in calculating a score; their weights are derived from a statistical analysis of detailed household survey data. Eligibility is determined by ranking a household's score and selecting all those below a predetermined cutoff. This method is apparently only rarely used in public works programs. Only 1 of the 42 programs surveyed reported using proxy means testing; this was used in combination with administrative and community-based targeting. Several factors limit the use of this method: proxy means testing is costly compared to other methods, it can take a long time to design and implement,[4] and it requires an adequate institutional setup to collect the information and manage the targeting process (Sharif 2009).

### *Summary: Multiple Methods*

According to the experiences of 76 public works programs, most used multiple targeting methods in addition to self-selection. Figure 4.8 shows that only 10 percent of the programs used self-selection alone. About 34 percent used self-selection in combination with other methods; 56 percent used other targeting methods. In a subset of 42 active programs for which more detailed information was available, the most common method used (in almost one-third of the cases) was geographic targeting, using poverty maps to identify the most vulnerable communities in combination with community-based poverty ranking.

**Figure 4.8 Distribution of Public Works Programs by Targeting Method**




*Note:* This analysis is based on data from 62 countries implementing a total of 77 public works programs; see appendix A.

Combining multiple targeting methods is a common practice in countries with public works programs. Only 24 percent of the programs reported using only a single method of targeting—the most popular being community-based poverty ranking—while 76 percent reported a combination of two or more methods.

In the sample of 42 programs, 83 percent used community-based poverty ranking as a targeting method, either alone or in combination with another method. Geographic targeting ranks as the second most popular method, used by 60 percent of the programs. Not surprisingly, the combination of these two was the most used in the countries surveyed. As mentioned earlier, only one country reported having used proxy means testing (in combination with administrative and community-based methods), making it the least used method.

## Determining Benefit Levels

The determination of benefit levels using the wage rate not only has an important impact on targeting outcomes, but also on the efficiency of the program and on the welfare of the beneficiaries. As discussed above, the wage rate selected can allow the self-selection of the poor into the program while discouraging the nonpoor from participation. Also, it can significantly influence the overall cost of the program, with consequential implications for its efficiency as a safety net. But first and foremost, the wage rate determines the benefits accruing to program participants, for a given number of days of work.

Because the wage rate determines the benefit level, sometimes it is set in relation to the particular needs of the beneficiaries as specified by the program goals. In those cases, when one of the objectives of the program is to alleviate food insecurity and increase food consumption the remuneration may be also be in-kind (e.g., a food transfer). This has been done in Bangladesh for many years in its Food for Work program and in Ethiopia's PSNP, for example. A sample of 44 public works programs implemented in 38 countries shows that cash is the most common payment modality, used in 79 percent of the programs, while food payments were used in only 7 percent. Some programs paid a combination of cash and food (14 percent; see appendix A). The same data show that about 37 percent of the programs pay wages biweekly or every 15 days; 30 percent pay them monthly. Daily and weekly frequencies of payments were less favored, in 11 percent and 22 percent of programs, respectively. In-kind transfers are generally more expensive to manage than cash

payments. However, there are some cases in which in-kind payments may be more effective than cash payment. The criteria for selecting cash and in-kind payments, described in box 4.5, often include the situation of food markets, the preferences of beneficiaries, the form and size of transfers, and the level of transaction costs for remunerating the beneficiaries. Chapter 12 explores this issue further by presenting impact evaluation findings on the use of cash and food transfers under Ethiopia's PSNP.

In the context of Somalia, for example, a country afflicted by seasonal droughts and displacement of its population, migration and destocking

**Box 4.5**

## Cash or Food Payments?

There are four general criteria that are often used for deciding whether to pay wages under public works programs either in food or in cash:

- *The functioning of food markets, including access, transport, and storage, and how this is reflected in the prices of staples*. The general conclusion is that when food markets are functioning properly and within reach of households, cash is preferred.
- *The preferences of beneficiaries, which may vary depending on circumstances.* Even though beneficiaries may prefer cash simply because it is more flexible, in some circumstances, women in particular might prefer in-kind transfers to maximize the level of the transfer (especially in an inflationary situation) and their control over the transfer.
- *The form and size of the transfer.* These factors might have an impact in determining the level of food consumption. Poor households are more likely to consume food and to eat good food if they receive a regular but small in-kind transfer.
- *The level of transaction costs for the program and for beneficiaries.* Sometime the cost of delivering food is very high and not worth it. Other times, when markets are distant, receiving in-kind transfers reduces beneficiary transaction costs. In the case of public works, payments are often relatively large and concentrated in a few disbursements. This means that beneficiaries might have to deal with large bulky amounts of food. Therefore, unless there is a general lack of staple foods in the market following a production and market disruption, cash would be the preferred payment mechanism. It is not unusual, in fact, that participants of food-for-work programs sell some of the in-kind payment even before receiving it.

are the most reliable and common coping mechanisms in the area, traditionally serving as a buffer against crop failure (Mattinen and Ogden 2006). The salary offered by Action Contre la Faim in southern Somalia was set for the most part to take into account the restocking objective among the poorest households, at a level slightly above the daily going rate for casual labor.[5]

When the wage is set on needs criteria, targeting cannot be carried out using self-selection. In Ethiopia's PSNP, for example, where the wage rate is based on food security considerations and the wage rate level is based on the number of people in the household, the selection of beneficiaries is done at the community level (Government of Ethiopia 2006).

This also means that the wage rate offered by public works programs should not be set below an individual's reservation wage (i.e., opportunity cost of labor) because, apart from not making a dent in seasonal malnutrition, it would exclude poor households that have a higher reservation wage because of existing constraints and stigma. Barrett and Clay (2003) show that in the Ethiopia Food for Works program, imperfect market factors caused poorer households to have a higher opportunity cost of labor, leading to inaccurate targeting outcomes. As a solution, they proposed adding simple categorical variables to be used in combination with a variety of wage rates to exclude better-off people with a high reservation wage: such as too much land, some forms of capital, too many people in the household, and so on.

Another alternative method of remuneration involves the use of piece wage rates to maintain critical minimum productivity norms. However, piece wage rates typically rest on an assumption that specific public work activities are standardized in terms of required labor input. Even digging a cubic meter of earth may not be sufficiently standardized, if the stone or water content of the earth varies greatly within or between project sites. The choice of the remuneration method—daily rate or piece rate—can also affect the targeting and outcomes of public works programs. Task-based payment provides flexibility and may attract more women to worksites (Dev 1995; Subbarao et al. 1997), or allow several members of a family to share the work. However, task-based payments can be confusing and difficult to administer, and might be exploited by the worksite leader to cause delays in implementation (Pellissery 2006). On the other hand, daily wages may be preferable where significant technical/managerial supervision is needed. Information available from 44 public works programs in 37 countries shows that 77 percent of the programs paid daily wages while only 14 percent paid piece rates. (See appendix A.)

## Integrating Additional Objectives through Public Works Plus

Public works programs can be designed to achieve objectives beyond the traditional ones of income smoothing/poverty reduction and asset creation.[6] An increasing number of countries are implementing a public works plus model, providing training or access to credit to improve participants' chances of obtaining permanent employment or of becoming self-employed once they exit the program. Graduation strategies are at the core of these models. The strategies aim to increase household income, individual skills, or human capital so as to promote better long-term welfare and poverty reduction.

The additional components of a public works plus program need to be thought through in the design stage as another design feature. This integrated planning will ensure coherence across all program objectives and facilitate coordination among the institutions managing the different program components.

Various approaches can be used to achieve these additional objectives. The main graduation strategies that have been used in public works programs are briefly summarized here.

- *Training for labor market participation*. A training component can be added into a public works plus program to prepare participants for the job market. This training can include vocational training, literacy, or microenterprise development, among others. This type of intervention is most appropriate where formal labor market opportunities and gaps exist. For example, the Expanded Public Works Program in South Africa assumes that the market is able to absorb about 10 percent of program participants, since the skills and experience they gain are relevant to the country's labor demand. Appendix D highlights this initiative along with similar interventions in Argentina, Ethiopia, Kenya, and Rwanda. In lower-income countries with low capacity, training opportunities may be more simplified. For example, Liberia is currently preparing noncognitive life learning components to promote good work and social habits among workers, addressing such topics as attendance, punctuality, and sanitation, among others.

- *Ensuring financial inclusion*. Some public works plus programs include services such as setting up bank accounts, enhancing financial literacy, or linking programs to microfinance services. Rwanda's Vision 2020 Umurenge Program, for instance, provides financial education

to participants to promote the use of savings and credit. Bank accounts are opened for beneficiaries to enable them to deposit their wages and encourage saving.

- *Linkages with intermediate services.* Some programs emphasize linkages with other social protection services, notably social safety nets (in cash or in kind transfers), as a means of program exit. This approach recognizes the need for integrated social protection instruments—and the reality that public works programs may not necessarily graduate beneficiaries out of poverty. For example, beneficiary households that reach a certain food security threshold in Ethiopia's PSNP are linked to the country's Household Asset Building Program, which aims to diversify income sources and increase productive assets.

Graduation strategies are highly contextual, and depend on resources and technical and administrative capacity not all countries may have. Moreover, there is still insufficient evidence to establish the impact these strategies have had on graduating beneficiaries. Consequently, the design of graduation strategies in a public works plus model should take a back seat to basic design features such as targeting, project selection, and so on.

## Addressing Political Economy Considerations

As with any other safety net program, political economy factors affect selection and design of public works programs and must be taken into account from the earliest design stage. Unchecked, these factors may influence the objectives of the program, its scope and beneficiaries, its budget, and its design and implementation. Rather than ignore political factors, program managers should preempt them by building a strong and sensible design and using this to influence political decision making, rather than allowing political considerations to influence the design. The following discusses how these political elements enter into play regarding various design aspects and how to take them into account. To further defuse and deflect political influences, accountability should be strengthened at all stages of the implementation process. This reinforcement can be achieved with clear governance arrangements, and strong monitoring and evaluation systems—issues that are taken up again in chapters 6 and 7.

Box 4.6 presents some measures for avoiding political capture of public works programs.

**Box 4.6**

### Five Strategies to Avoid Political Capture

1. Exercise complete clarity and transparency in selecting
   - areas/districts, by establishing criteria such as food insecurity on poverty incidence that can be supported by data;
   - beneficiaries, by establishing ground rules such as self-selection, community selection, or other criteria; and
   - projects, by establishing eligibility/rejection criteria.
2. Strictly adhere to procurement guidelines in the bidding process for acquiring materials.
3. Ensure that the wage-setting principle is clear and transparent.
4. Put a complaints-handling process in place.
5. Arrange for external oversight of the program, preferably including social audits.

#### *Project Implementers*

To avoid issues of political patronage or oversight with regard to projects that will be implemented by contractors, care should be taken to ensure that bid processes, procurement guidelines, and so on, are scrupulously followed so the agreed design of the project is not compromised. It is also important to ensure that political factors do not influence contractor selection and related matters. Checks and balances must be put in place to avoid problems in contractor hiring such as flawed and biased recruitment, artificial cost escalation, and unfair wage practices.

If project implementation has been delegated to local elected governments, their accountability must be strengthened and their capacity for monitoring and supervision built. In India, for example, program decentralization means that implementation responsibility for public works programs now rests with the locally elected village-level bodies known as *panchayat raj* institutions. Because most of these bodies lack the capacity to implement programs, line department officials continue to have a strong influence on program implementation—which often creates opportunities for corruption. To avoid such problems, India has enlisted civil society oversight of public works programs through social audits to

improve monitoring of resource use and the salaries paid (see case study on social audits in India, chapter 11).

### *Program Location*

Politicians want their constituencies to be represented when areas/districts are selected for public works programs—regardless of whether those locations would otherwise qualify for program intervention. In fact, one typical consequence of political lobbying vis-à-vis public works program introduction is to implement a nationwide program rather than a geographically targeted one, thus decreasing the concentration of resources in the poorest and neediest regions. The only way to counter such political pressures is to build a strong case for geographic targeting, as is done in northern Ghana, in an ongoing public works program focused largely in the poor areas of the savannah.

It could be argued that a geographically targeted program could also entail horizontal inequity, in that it puts poor people in the better-off region at a disadvantage. To avoid this problem, and the pressures of political lobbying, sound analytical work is needed to make the case for geographic targeting, using available data on such factors as poverty incidence, repetitive natural shocks, and food insecurity to show that it is much more efficient to locate programs in areas with a higher concentration of poverty.

### *Project Selection*

The choice of projects occasionally leads to political jockeying. For example, political pressures may influence the location of water harvesting units, often placing them closer to large farms than small. Diversion of canals and rivulets and/or the location of irrigation structures, village road repairs, and the length and location of feeder roads are all examples of public works projects that could be subjected to political pressure.

To avoid political manipulation, programs must establish financial and procurement guidelines specifying how projects are to be selected and contractors hired (where applicable: some countries, such as India, avoid contractors altogether), establishing penalties for fraud and corruption, and coordinating with civil society to hold governments accountable. An optimal solution is to strengthen community decision making for project selection, agreeing up front to select projects in collaboration with local administration units and community committees. In societies where communities are heterogenous and segmented by factors such as caste, community decision making may not be immune to political influence, and

decisions may reflect the interests of the local elite. In such cases, it is useful to develop lists of projects that are more likely to benefit the poor, or at least the community as a whole, rather than particular sections (caste groups, for example) of the local population.

### *Beneficiary Selection*

Beneficiary selection can also be influenced by political factors. Should all those who need work be selected for public works projects by adopting a rotation principle, or should only the poorest households be selected, also using a rotation principle where necessary? Should a self-selection policy be adopted, or should communities be allowed to select individuals for participation? These various approaches to targeting need to be made as apolitical as possible from the outset of program design. A point often expressed in this context is to deliberately allow for some leakage of benefits to households above the poverty threshold so as to win political support for the program (Sen 1995). This measure may be practicable in some countries, provided the extension of benefits beyond the poor is kept within limits.

### *Wage Rate*

Raising the wage rate can win votes and guarantee local patronage, so this is an issue that could easily attract political interest. But, as discussed above, high wages typically attract the nonpoor to a program. India's MEGS serves as a classic example in this regard. The program wage was kept equal to the then-low minimum wage, which was in turn close to the market wage from 1973 to 1987–88. The program reached the poorest households, and self-selection was highly successful. Politicians, believing the minimum wage was too low, passed legislation to double it. As a government program, MEGS was forced to raise the program wage to the new minimum wage. This action jeopardized self-selection, allowing nonpoor to enter the program, and even led to job rationing and erosion of the employment guarantee. There are no easy ways to prevent such developments, although a communication strategy that clearly states the reasons behind wage fixation could help, provided a conflict of interest with union workers can be avoided.

The Liberia case study (chapter 14) explores wage-setting challenges in the context of a food crisis, highlighting the real-life complexities of balancing social, political, and economic factors during program design. In this context, pressure to maintain consistency with established wage precedents came from the government and other implementing partners,

leading to a higher wage level than initially anticipated. Despite clear indications that the final project wage rate was higher than the local market wage, the traditional economic reasons for lowering the rate were not as compelling in the Liberian context. The issue of wage setting is also explored further in the Rwanda case study (chapter 10).

## Notes

1. For more information on Colombia's social safety net system, see World Bank (2002)
2. For details on this system, see Castañeda (2005).
3. In their review of 128 social assistance programs implemented in 48 countries, Coady, Grosh, and Hoddinott (2004) found that there was no clearly preferred targeting method. In fact, 80 percent of the variability in targeting performance was due to differences *within* targeting methods; only 20 percent was due to differences *across* methods.
4. According to Castañeda and Lindbert (2005), it can take at least 18 months to design, pilot, and implement a large-scale proxy means test.
5. During the first phase, each household received So. Sh. 330,000 for 10 days of work. The amount was increased to So. Sh. 400,000 for 12 days of work in the second phase, to take into account the depreciation of the shilling against the U.S. dollar—the amount remained the same in U.S. dollars ($29.90). The Somali shilling payment was augmented so as not to decrease purchasing power due to devaluation. During the third phase, the overall amount was increased to So. Sh. 700,000 ($47.60) for the completion of 20 days of work, enough to cover the purchase of three goats and basic items (Mattinen and Ogden 2006).
6. The following information is drawn from Andrews et al. (2010).

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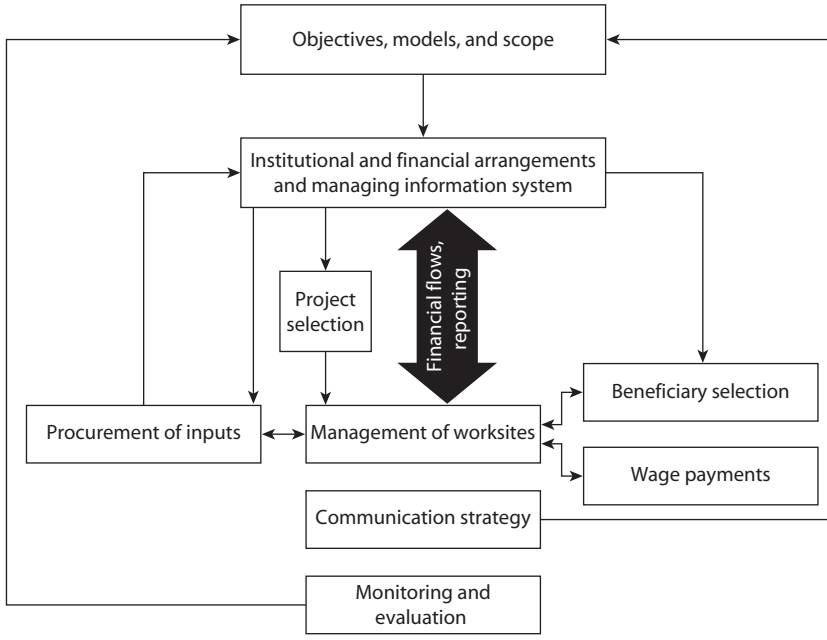
CHAPTER 5

# Program Implementation

Chapter 4 focused on key *design* features of public works programs and discussed cross-country patterns in the tailoring of those design features to take into account the particular needs of individual programs. This chapter looks at program *implementation*, reviewing the operational steps program managers need to take in order to implement a specific country program incorporating the design elements discussed in chapter 4. Several sections in this chapter parallel those in the previous chapter, especially those with reference to institutional setup and the selection of projects and beneficiaries; to enhance this parallelism, these topics are presented in the same order in both chapters. The country experiences documented in this chapter aim to enrich readers' understanding of how critical design elements are implemented to achieve a successful public works program.

Figure 5.1 presents an overview of the steps required to design and implement a public works program. The first step is to determine the objectives, models, and scope of the public works program ("Program Objectives, Models, and Scope" section). The decisions in this step should take into account specific country circumstances—particularly the availability of funds—based on a sound background analysis (feasibility assessment). Next, the institutional and financial arrangements and flows need

**Figure 5.1 Steps in Program Implementation Processes**




to be decided on ("Institutional and Financing Arrangements" section); these decisions will address such questions as, is the implementation going to be centralized or decentralized? Who are the main stakeholders and what is their role in program implementation? Is the program going to be funded solely by the government, by donors or private investors, or a mix? How do the funds flow between central management and local implementing institutions?

Once the institutional arrangements have been established, attention should be given to the setup of a suitable management information system (MIS) ("Program Management Information System" section), proper financial information ("Financial Reporting and Auditing" section), and project selection and maintenance ("Project Selection Process and Maintenance" section). Actual execution of the program revolves around the supervision of worksites ("Worksite Management" section) including arrangements for the management and supervision of workers ("Beneficiary Selection and Organization" section), the process for ensuring timely payment of wages to beneficiaries ("Managing Wage Payments" section), and

the provision of goods and services ("Procurement of Goods and Services" section) needed to execute the projects.

Finally, a communication strategy should be developed to inform the public about program objectives and other design aspects ("Program Communications" section). The communication strategy will help establish reasonable expectations about the program as well as help potential beneficiaries access it.

As figure 5.1 shows, implementation is, in practice, an iterative process. Most functions of program implementation are interconnected, feeding each other important information to guarantee that the program works successfully. Success will depend too on the consistency of these functions with the program objectives. To help ensure this consistency, public works programs typically have an implementation manual that outlines the above steps in some detail. The manual—typically prepared at the outset of the program by implementation staff—is used to guide officials through the process of program implementation. It should be revised and updated frequently to incorporate lessons learned along the way.

Another important part of the implementation process outlined in figure 5.1 is monitoring and evaluation. Monitoring helps assess program performance and aids in early identification of potential problems. Evaluation sheds light on how effective the program is in terms of meeting its objectives and realizing its intended impact. Given the centrality of monitoring and evaluation to the success or failure of a program, this topic is treated on its own in chapter 7.

In addition to the information provided in this chapter and subsidiary appendixes, the reader may also refer to Subbarao et al. (2010). This reference provides a series of useful templates covering different aspects of program implementation including muster rolls, attendance sheets, budget, and progress reports.

## Program Objectives, Models, and Scope

Countries vary widely with respect to vulnerable target groups, the availability of safety net programs, the extent of seasonal unemployment and underemployment, and the degree and type of uninsured risk poor households face. Clearly, not all country situations need or will respond to a public works program, while such programs may be extremely useful and highly relevant in other country circumstances. The discussion in this section is intended to avoid the pitfalls of introducing a public works program where it is not needed, adopting the wrong type of program, or launching

a program too quickly without first clarifying its objectives. The suggested analysis is also useful in strengthening or expanding existing programs.

### *Objectives and Models*

The identification of the right public works program in a country is an important political process. In order to identify the objectives and models of possible public works programs, policy makers and their partners should begin by asking the following questions: What is the need for a public works program? What should be the objectives of such a program? What has been the experience of existing or past public works programs, if any, in the country?

A feasibility analysis can help address the above questions, thereby enabling determination of the main objectives and key features of a public works program, as well as its possible coverage and cost. A feasibility analysis can provide information on the following aspects:

- *Nature of the problem*. A background analysis of poverty and vulnerability can provide information on the country context including the nature of an emergency, if any, that in turn will determine the need for the program and define its objective and role within a specific country context. Information should cover who the poor are, what their main sources of revenue are, the time of the year during which they are unemployed, the people who are directly adversely affected by the ongoing crisis (if any) and those who are indirectly affected, and so on.

- *Current need for infrastructure*. The assessment will also shed light on the type of projects to be carried out and their duration, and an estimate of the number of persons who can be employed. Such infrastructural needs assessment, both for rural and urban areas, is best done up front in consultation with communities. Some infrastructural gaps may require low skills and management (such as maintenance of rural roads) and can be executed with a public works program; some others may require substantial technical inputs and so may or may not be suitable for a public works program.

- *Labor market conditions*. The feasibility assessment needs to include a short overview of the labor market, looking in particular at such questions as, are there seasonal variations in labor demand in rural and urban areas? Is there legislation on minimum wages, and if so, is it one national minimum wage, or do these minimum wages differ across states/

regions? Are these regulations generally enforced? Are there significant differences in market wages between men and women? Is there labor market segmentation that prevents women from taking on jobs in the labor market? The assessment needs to collect (via a small survey, if necessary) and present market wage rates in select activities (such as farming, construction, etc.), disaggregated by sex, by rural/urban location, by season, and by skill level (skilled, semiskilled, and unskilled).

- *Assessment of fiscal space.* Information about the availability of fiscal space and what can be achieved with a given amount of resources will help determine program scope. Cost estimates can be derived from various simulations (see below, and the illustrative examples in box 5.1); these should give an idea of how much the country can afford, bearing in mind other critical needs for tax revenues.

**Box 5.1**

### Simulations to Assess Program Scope: An Illustration

Policy makers in a small country (Country X) with a total population of 400,000 would like to implement a program that covers at least 10 percent of the poor, or 40,000 households. Country X officials use a simulation exercise to understand the different cost implications for the following program design conditions:

- If only one member of the household is covered by the program versus 1.5 (40,000 or 60,000 workers, respectively)
- If the workers are hired for a total of 120 or 60 days; assuming they work only 20 days per month, this would result in a 6- or 3-month program, respectively

The following table spells out the cost implications of three different scenarios. In each scenario, an extra 20 percent premium for nonlabor costs and a wage rate of $3 per day is assumed. The total cost of each scenario is calculated by multiplying the total number of beneficiary workers by the total transfer value per worker (per year). The number of people per project and the number of projects are also estimated (40,000 workers/100 people per project = 400 projects under the first scenario).

Findings from the simulation exercise help to inform the overall scope of the program, balancing a range of parameters—number of workers and beneficiaries (coverage), duration of project, number of days of employment generated, and number of projects created. Scenario A requires the highest budget, but allows for a 120-day program. By reducing the program duration to 60 days under

*(continued next page)*

**Box 5.1** *(continued)*

Scenario B, the budget is effectively halved. Scenario C opts for a different approach—the program duration is kept at 60 days, but eligibility is offered to 1.5 members of each household. In addition to looking at the total value of cash being transferred under each scenario, officials may wish to look at the total number of assets created.

| *Public works: cost estimates* | *Scenario A* | *Scenario B* | *Scenario C* |
|---|---|---|---|
| **Public works: beneficiary estimates** | | | |
| Beneficiaries—workers (10% of poor) | 40,000 | 40,000 | 60,000 |
| Beneficiaries—people (@ 4/household) | 160,000 | 160,000 | 160,000 |
| Wage rate/day ($) | 3 | 3 | 3 |
| Days (20 days/month) | 120 | 60 | 60 |
| Transfer/worker/year ($) | 360 | 180 | 180 |
| Total cost of transfers (million $) | 14.4 | 7.2 | 10.8 |
| Total cost of program (million $)[a] | 17.2 | 8.6 | 12.9 |
| **Public works: project estimates** | | | |
| People per project | 100 | 50 | 50 |
| Number of projects | 400 | 800 | 1,200 |

**a.** This total takes into account 20 percent nonlabor inputs (e.g., for administrative costs).

- *Assessment of particular country circumstances.* There may be other elements to take into account in the feasibility assessment depending on the country context—for example, assessing *security of beneficiaries in conflict areas*, or ensuring the availability of skilled labor and capital inputs in remote rural areas. In this context, lessons of similar projects implemented in the country are incorporated in the design of the program.

- *Assessment of institutional capacity.* The administrative and institutional capacity of existing institutions at the central and local levels needs to be assessed, bearing in mind past experience with public works programs, if any, on such details as mode of payment of wages and the efficiency of current delivery mechanisms. The next sections provide more details on this issue.

### *Scope*

Once the objective of the program and the model to be followed (short term, long term, or public works plus) are determined, the next step is

to clarify the program's scope. The scope of a program is determined by the availability of domestic and external resources and the institutional capacity identified in the feasibility assessment. The following parameters are helpful in defining the scope of the program within a given budget:

- Number, location, and population size of geographical locations where the program is planned to be launched
- Number of months the program will be operational every year
- Number of projects planned
- Number of days of employment envisioned
- Potential number of beneficiaries who would participate and total number of person-days provided, disaggregated by projects and regions.

Simulations of potential coverage of programs can be done using the above-mentioned elements to shed light on the budgetary implications of available options. This exercise allows program managers to determine the feasible scope of the program within a given budget (box 5.1). Particular consideration needs to be given to the potential fiscal sustainability of the program, especially when it is entirely financed from general tax revenues.

## Institutional and Financing Arrangements

The identification and setup of the institutional structures to implement the program entail an assessment of capacity at the central and local levels; this in turn determines the delivery model (centralized or decentralized) and the mechanisms for allocation of funds. If existing institutions are not considered ready to undertake a public works program, alternatives could be assessed, including the presence and role of nongovernmental agencies willing to and capable of implementing a public works program, the private sector, and the potential for private-public cooperation.

Institutional arrangements can vary between centralized systems and decentralized structures. Typically, in a centralized system, different government levels (from the central/federal to local governments) are involved in the design, planning, and implementation of the program. Initiatives typically flow from the center to local bodies, and the project cycle begins to operate at the central level. In a decentralized system, the government outsources implementation of works to other actors such as

nongovernmental organizations (NGOs), community-based organizations, youth groups, small- to medium-scale private contractors, or the community. In this case, the project cycle does not necessarily begin from the center; in fact, initiatives typically begin from the bottom up, and there is generally space for local bodies, village councils, and even NGOs in some countries, in addition to governments at all levels, to plan and implement the program.

For any country attempting to launch a public works program, efficient implementation would require a clear articulation of the roles and responsibilities of various actors at various levels. Table 5.1 shows examples of institutional structures drawn from several countries, organized according to their level (e.g., central and lower levels of administration), delineating their roles and responsibilities in implementing public works programs.

While table 5.1 provides a summary picture of arrangements under centralized and decentralized systems, the actual framework of institutional arrangements can be clearly understood only with reference to a specific country that implements a public works program following all the steps outlined in figure 5.1. Box 5.2 summarizes the Ethiopian (centralized) and Armenian (decentralized) experiences in institutional arrangements at each step in the implementation of the public works program.

There is no right or wrong or hard and fast rules regarding institutional arrangements, as much depends on the program's level and scale. If the program's outreach is small or geographically narrowly targeted, the institution to be selected need not be a large national-level institution; rather, a regional-level institution (which typically already will have a good structural relationship with local-level administrations) would be enough. On the other hand, if the program is to be a nationwide one, a large institution with linkages down to the decentralized structures may be necessary (box 5.2).

In some countries, especially when the program is nationwide and the institutional capacity is low, a dedicated unit, usually called the project management unit, is set up with the objective of managing the program. An example of this is the Social Protection Coordination Unit in Cambodia, which is in charge of implementing the National Social Protection Strategy. One of the unit's main tasks is establishing coordinating mechanisms between line ministries, subnational administration, development partners, and civil society. For more detail, see the Cambodia case study in chapter 13.

**Table 5.1 Common Institutional Arrangements**

| *Organizational structure* | *Roles and responsibilities* |
|---|---|
| Central level<br>• Ministries: typically labor, social protection, agriculture, finance, economic, and/or rural development<br>• National multisector committees, such as the Ministerial Steering Committee (Rwanda)<br>• Ministerial offices, such as the Implementation Central Unit (Argentina) | • Provide general coordination<br>• Design key features of the program<br>• Develop operational manuals<br>• Design instruments for monitoring and evaluation<br>• Contract for the evaluation and supervision of projects<br>• Provide technical assistance for implementation<br>• Administer program finances<br>• Assess resource contributions of governments and donors |
| Regional/provincial level<br>• Regional governmental institutions, such as the Regional Council/Cabinet (Ethiopia)<br>• Multisector committees, such as the Regional Consultative Committee (Tanzania) | • Oversee the general operations of the public works program<br>• Provide final approval of projects and/or beneficiaries<br>• Develop annual implementation plans and budgets<br>• Disburse funds according to budget<br>• Maintain financial records<br>• Provide technical assistance<br>• Monitoring and evaluation activities |
| District/sector level<br>• District governmental institutions, such as the project implementation cell in the district secretary's office (Sri Lanka)<br>• Multisector committees, such as the *woreda* food security task force (Ethiopia), and the district management committee (Kenya) | • Oversee the public works program<br>• Provide direction and assistance to local institutions<br>• Provide technical assistance<br>• Select projects in coordination with communities<br>• Prepare evaluation and monitoring systems<br>• Prepare proposals for funds allocation<br>• Ensure release of funds<br>• Receive and review monitoring reports<br>• Prepare progress reports |
| Local/village level<br>• Local governmental institutions, such as the *kebele* council (elected village council in Ethiopia) and zone offices (Peru)<br>• Multisector committees, such as the *kebele* food security task force (Ethiopia) | • Identify and prequalify/qualify projects and beneficiaries<br>• Monitor operations<br>• Maintain records<br>• Ensure timely payment of projects<br>• Mobilize community members to identify their needs<br>• Manage day-to-day operations |
| Community level—village council (Tanzania), community food security council (Ethiopia), and so on. | • Identify projects and beneficiaries<br>• Provide data about community stakeholders<br>• Contribute to program monitoring |
| External institutions (e.g., NGOs, labor unions, partner organizations) | External partners can carry out implementation, act as liaison to other programs, and help with assessments |

***Sources:*** Authors; based on various program implementation manuals.

**Box 5.2**

## Examples of Centralized and Decentralized Institutional Arrangements: Ethiopia and Armenia

Ethiopia's system of governance is centralized, and most policy and operational decisions are made at the federal level. While regional-level bodies play a coordinating role, local-level bodies actually implement the program according to the rules and procedures laid down at the federal level.

- *Federal level.* The Ministry of Agriculture and Rural Development and the Ministry of Finances and Economic Development are responsible for the overall management and financing of the Productive Safety Net Program (PSNP). Within the agriculture ministry are different agencies in charge of PSNP day-to-day management. The objectives, scope, and design of the program are determined at this level, as well as the development of technical guidelines, and monitoring and evaluation systems.
- *Regional level.* Various regional government bodies ensure PSNP coordination, planning, and implementation. The Regional Council, for example, is responsible for the review and approval of PSNP annual plans and budgets submitted by *woredas*.
- *Woreda level.* The *woreda* is the key level of government; it comprises approximately 10 villages. It determines needs, undertakes planning, and implements PSNP. At this level, the final list of beneficiaries and projects are approved, environmental screenings are undertaken, and monitoring and evaluation are conducted.
- *Kebele (village) level.* The government at this level mobilizes communities to identify their needs, collects and compiles the list of program participants to be submitted to the *woreda* agencies, identifies projects, maintains records on the status of beneficiaries, organizes payments logistics, and conducts monitoring and evaluation.
- *Community level.* The Community Food Security Task Force is a community representative body, responsible for mobilizing the community, identifying clients, monitoring public works, and participating in the regular review of PSNP.
- *NGOs.* NGOs play a role in PSNP implementation; they may also contribute their capacity and expertise to the program.
- *Donors.* There is a donor coordination mechanism to handle transactions (e.g., meetings, missions, overseeing joint projects). This has assumed a more substantive role in recent years and includes a full-time donor coordinator with other support staff.

*(continued next page)*

**Box 5.2** *(continued)*

In Armenia, local governments and communities play a key role in the identification of public works projects. They submit proposals to regional governments, including information on the scope of proposed works, program length, and person-days. They also cofinance projects through in-kind contributions. If approved, projects can be implemented by local governments or subcontracted to selected organizations. Regional governments monitor and evaluate the projects, and the ministry decides on the allocation of funding between districts.

***Source:*** South-South Learning Forum on Making Public Works Work; see appendix A.

Where existing staff members are enlisted to implement the program without a dedicated project management unit, program staffing at various levels will depend on institutional responsibilities assigned to each level of administration. Existing staff members at each level are already performing certain duties prior to the launch of the project, and so they should not be burdened with the additional responsibility of running a public works program, since it could negatively affect delivery of other services. It is likely that current staffing will need to be augmented at the regional and local levels to ensure adequate human resources to both implement the program and to monitor it, including collecting and transmitting the appropriate data to perform this monitoring function.

### *Models of Program Financing and Delivery*

The funding and execution of public works programs vary across countries depending on institutional arrangements. Up-front clarity on delivery model helps avoid confusion regarding the roles and responsibilities of stakeholders, including reporting of monitoring indicators. As described in chapter 4, public works can be funded and implemented entirely by governments or by a combination of government, private partners, and donors. Several approaches can be identified in terms of delivery models; these are described below.

- *Traditional model—government direct implementation*. Traditionally, governments directly fund and implement public works programs through central, regional, district, or local offices. Sometimes a program management unit is set up at the national level, or a separate department is established to implement the program. This model is often found in combination with a highly centralized institutional arrangement.

- *Government financed, but implemented by NGOs, the private sector, and community organizations.* Government funds but outsources works to NGOs, youth and community organizations, or small- to medium-size contractors from the private sector. These organizations are often called "implementing partners," and they implement the projects under government oversight. This system is characterized by a very decentralized institutional arrangement. International NGOs participating in the program often hire local contractors to implement the project.

- *Mixed delivery systems.* There are multiple combinations of the two main systems described above: programs cofinanced by government and donors and implemented by contractors; programs cofinanced by government and implementing agencies; programs administered by a social fund and implemented by the community or local elected authorities; programs that, depending on the complexity of the works, are implemented by a combination of government, community, and contractors; and so on.

### *Allocation of Funds*

The budget made available to the program reflects the program scope and is determined by the government or donors (bilateral or international organizations). In a government-funded program (with or without supplementing funds from donors), determination of fund allocation can take place under three modalities.

- *Supply driven.* Government devotes funds needed by implementing agencies based on objective criteria such as population size, poverty level, trends in the supply of labor, previous budget allocations, and so on. Under the supply-driven approach, cost simulations can be used to derive the total annual budget envelope. Based on these allocations, funds flow, timing, and modalities are organized. Note that, in this process, the macroeconomic situation and priority needs of other sectors must be considered since they will influence available allocations from domestic resources and how much can be raised from donors.

- *Demand driven.* Government dedicates funds for the projects based on budgets and payment requests made by the implementing agencies. In this model, the government arrives at an estimate to run the program at different levels of intensity and scope. Fund allocations are made on the basis of finances available from domestic resources, with donors typically asked to fill a funding gap. Estimates may be derived for specific

geographic regions should the program be targeted geographically. Fund flows will follow, depending on the potential participants, number of days, and so on, subject to the available predetermined budget.

- *Performance-based release of funds.* In some countries, allocations for the next round of projects depend on the performance of existing projects (in terms of persons employed, assets created, etc.).

- C*ombination of models.* Some countries apply a combination of two or more of the modalities described above in order to allocate funds. Local budgets in this case are used to cross-check central government budgets and fund allocations.

Once the budget envelope is known, the next step is to allocate funds to different regions/districts. The procedure for such allocation differs from one country to another: funds could be allocated equally across districts, funds could be allocated disproportionately to deprived/food-insecure/lagging regions, or some other formula could be followed that gives weight to poverty.

### *Flow of Funds*

A critical step in the successful implementation of public works programs is management of the flow of funds from the central level to project sites. This is not an easy task, given that delays can occur at any intermediary level thereby disrupting program implementation. How the funds for the project flow depends a great deal on how the country's administrative structure is organized—for example, whether a country is fully centralized or decentralized, if the program is being implemented by a social fund or NGO, and the availability and channels of donor financing.

The flow of funds encompasses a number of elements: periodicity of flows, the number of channels to pass through, and accounting (and accountability) procedures at each level. This section considers a number of models to show how funds flow in different countries:

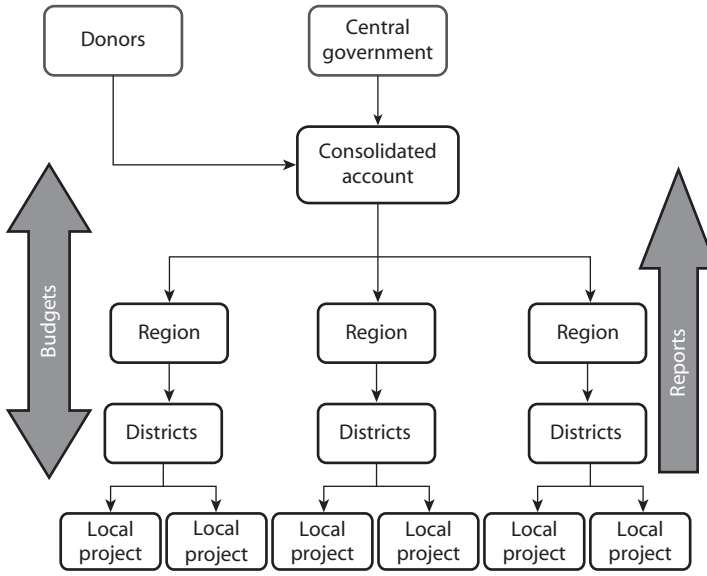
- Model 1 presents the case of funds flowing in a highly centralized delivery system.
- Model 2 presents the case of a highly decentralized system where lower-level elected functionaries receive funds and implement the program.
- Model 3 presents the case under a social fund delivery system.
- Model 4 presents the case of a delivery system under directly donor- or NGO-funded and -implemented programs.

These models are simplifications and are useful primarily for illustrative purposes. In reality, different programs may opt for mixed delivery systems; these are discussed in appendix E.

***Model 1: Flow of funds in a highly centralized delivery system.*** Figure 5.2 illustrates the flow of funds in a traditional centralized delivery system. Under this model, the central or federal government opens a special account in the country's central bank for the public works program. Government and donor funds are pooled in this special consolidated account. Typically, the central government allocates funds to the regions according to the number of beneficiaries in each region. The regional agencies disburse funds to the district offices; the money is then allocated to the local governments to fund each of the local projects.

There is also a budgeting process that starts from the local level up to the federal or central government. Local- and community-level authorities collect information on the resources they will need for each project. District- and regional-level governments prepare the aggregated budgets to be sent to the central government. Budgeting updates are sent periodically along with progress reports in order to request replenishment of funds.

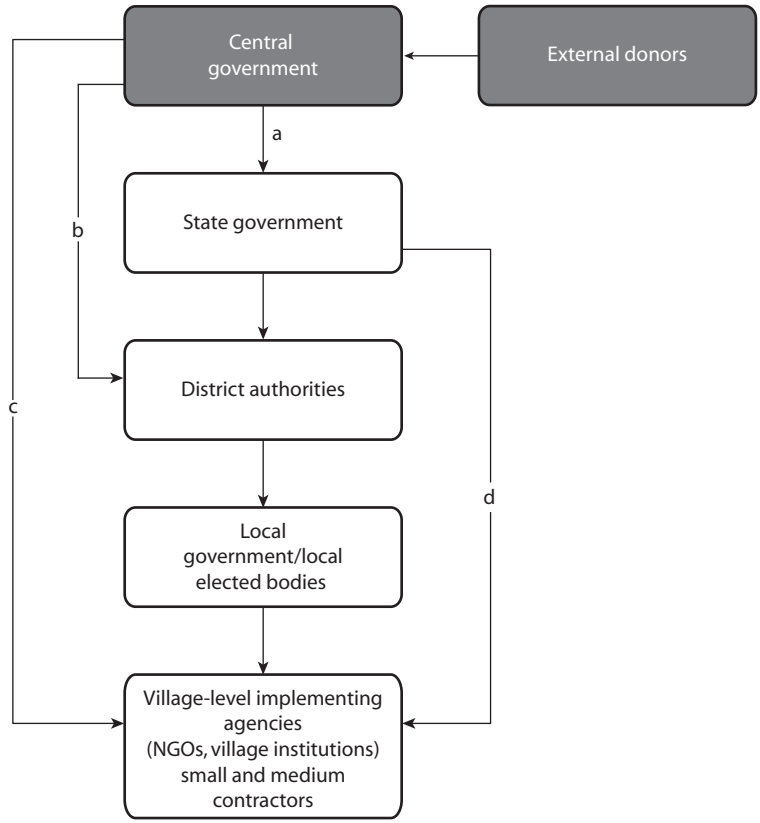
**Figure 5.2 Flow of Funds in a Direct Government Implementation System**



***Model 2: Flow of funds in a decentralized delivery system—alternative channels.*** A decentralized delivery system can have several alternative channels through which funds flow from the government to the village-level implementing agencies. Figure 5.3 illustrates each of the channels as follows:

- In Option a, funds are routed from the central government to each of the government-level structures—that is, state, district, and local government levels or local elected authorities. The latter distribute funds to the corresponding implementing agency.
- In Option b, the central government provides the funds directly to the district-level government, which then distributes the resources to the local governments or elected leaders.

**Figure 5.3 Flow of Funds in a Decentralized Delivery System**



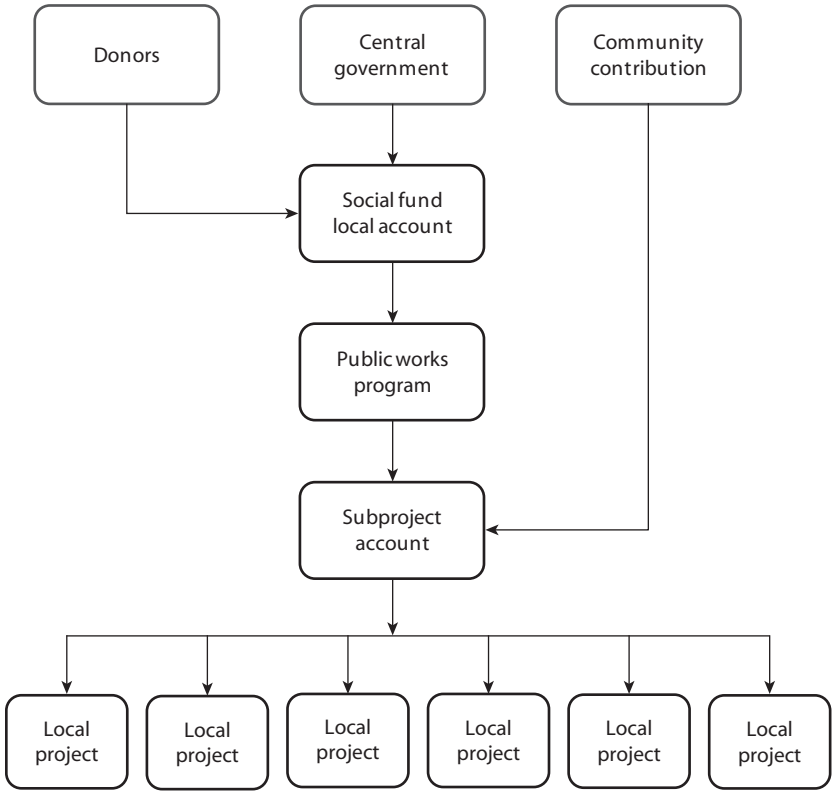
- In Option c, the central government provides the funds directly to the implementing agencies without routing them through other government structures.
- Option d also illustrates a direct flow of funds from the state-level government to the implementing agencies.

In a decentralized delivery system, the implementing agencies have great latitude in terms of program design, planning, and implementation. This is not the case when it comes to funds management. Implementing agencies need to adhere to government regulations in terms of funds administration, financial reporting, and auditing.

***Model 3: Flow of funds in a social fund delivery system.*** The flow of funds in a public works program managed by a social fund varies in accordance with how the fund has been set up and the diversity of donors involved. Figure 5.4 illustrates the typical flow of funds in a social fund–managed public works program. The central government allocates the funds (from government and donors) to the social fund, from which disbursements are made to project accounts for each of the social fund components. Funds to finance local public works projects are drawn from the public works project account. In community-implemented projects, the community may contribute a small percentage of the project's total cost. As figure 5.4 shows, these contributions are typically allocated directly into the public works project account.

***Model 4: Flow of funds in a donor-funded and -managed program.*** The flow of funds in a program implemented by donors is typically simpler than in one implemented by the government. For example, the World Food Programme (WFP) implements food-for-work programs through contractors, called "cooperating partners." The WFP provides funding for the operating costs of the partners' head office and provincial offices based on the budgets submitted in their contracts. Each month, the partners send the WFP a monthly financial summary with the costs of the program and receipts for reimbursement. They arrange for food distribution if there is a food shortage. However, the project committee at the community level should have requested the food for distribution as wages, and at least 20 percent of the project needs to have been completed.

**Figure 5.4 Flow of Funds in a Social Fund Delivery System**




### *Common Implementation and Funding Issues*

Regardless of a program's delivery arrangements, three general implementation and funding issues, discussed below, have arisen across a variety of country settings:

- Delays in financial flows
- Unavailability of funds for nonwage program expenses
- Weak capacity, especially in dovetailing managerial, technical, and labor inputs at the project site and, in this context, the role of contractors.

***Delay in financial flows.*** In countries with a decentralized government structure, the central government typically allocates a portion of program funds, to be supplemented with counterpart funds from the provincial

governments. These funds must reach the project sites in the villages in a timely manner. In many countries, such a convergence of financial flows has proven difficult. For example, in India, central government finances have to move from New Delhi to the districts, where these funds have to be matched by funds released by state governments. Then the combined funds must move from the districts to the villages where the projects are being implemented. Inordinately long delays frequently occur. One reason for these delays is that the central government releases funds during the last quarter of the fiscal year, which is also the busiest season from an agricultural standpoint, meaning that there is little need for a public works program. The result was a low uptake of the public works program that existed prior to the launch of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) (Saxena and Ravi 2006).

In addition, when multiple agencies are designated to carry out implementing activities, coordination problems may arise, causing delays in payments to workers. The public works component of a donor-funded emergency project in Zambia reported mixed implementation performance due to substantial delays in payments to contractors, who in turn delayed payment of wages (World Bank 2006). These delays were primarily the result of poor coordination among the several institutions involved in the multiple layers of disbursement and approval.[1] The result was that payments were not always made when people needed to buy food and other essential goods and services, compromising the initiative's main goal.

***Unavailability of nonwage program costs.*** A public works program requires funds not only for payment of wages to workers, but also for the purchase of materials and for supervision. Nonwage funds (toward administrative and material and supervisory costs) are crucial for the success of the program, but are not always available. In some low-income African countries, the cost of wages is borne by donors, who expect the nonwage costs to be borne by the recipient country. This counterpart contribution is required so as to elicit country ownership of the program. While such an expectation is reasonable, some countries simply cannot afford to pay these costs. Ethiopia, for example, attempted to implement a public works program prior to the 2004 launch of its Productive Safety Net Program (PSNP), but could not provide the nonwage cost—with the result that the program could not be implemented, and the available wage funds were simply disbursed to poor households (Smith and Subbarao 2003). PSNP addressed this deficiency by ensuring that a

minimum of 20 percent of program costs are provided in the budget and available for the nonwage component to cover the cost of materials, wages for skilled workers, and administrative expenses.

In other cases, countries are challenged to ensure the availability of adequate nonwage program funding in the face of rising input costs. In 2005, the Republic of Yemen saw the price of materials such as steel, cement, and fuel—and wages—increase significantly, rising by 60–100 percent. As a result, the number of projects that could be financed under the program was reduced substantially. The World Bank later provided additional financing to cover the increase in the cost of inputs to achieve the original targets (World Bank 2007).

***Low capacity and the role of contractors.*** Contractors are often hired when governments do not have the capacity to ensure convergence of technical, managerial, and labor inputs at the worksite. The expectation is that contractors can fill the gap and execute high-quality public works projects without having to build in-house capacity that can be costly and time consuming. However, caution should be taken when hiring contractors to avoid the following two problems:

- Sometimes agencies implementing the projects neither enforce the design of the program nor have any interest in enforcing it since they are accountable, not to the workers, but to their respective state governments.
- Contractors may bring their own labor and not employ workers from areas close to the project site, for whose benefit the program was initiated in the first place.

This latter problem was evident in Rwanda's public works program, where contractors brought in their own workers and paid them below the stipulated minimum wage. Similarly, in Sierra Leone's recent Cash for Works response, community members expressed complaints that contractors took responsibility for beneficiary selection and did not enforce eligibility criteria, even bringing in outside labor (Andrews et al. 2012). In India too, implementation through private contractors has led to severe problems. The devolving of responsibility for implementing the program to locally elected bodies (the *panchayat raj* institutions) did not help mitigate hurdles in implementation because of weak accountability in the system as a whole. In examining the functioning of the food-for-work program in six villages in Andhra Pradesh, Deshingkar, Johnson, and Farrington

(2005) found that the involvement of contractors in project execution (which was not intended to occur) excluded the very poor and the lower caste and generated the incentive to (clandestinely) use labor-displacing machinery. Arguably, the use of these technologies was an effort to maximize the efficiency and therefore the resources flowing into local works projects, as well as being the result of pressure by line department staff to complete the works in a short time. The net result, however, has been lower benefits to workers. Recognizing these problems, contractors are now banned under India's MGNREGS program.

## Program Management Information System

An MIS is a tool that facilitates the timely collection, processing, management, and dissemination of data essential for program operations, accountability, and policy making. An effective MIS also helps minimize error, fraud, and corruption by warning end users of data when there are discrepancies between the expected and realized flows of funds and inputs or outputs.

### *Components*

A typical MIS relies on four components, which are necessary for its implementation and functioning:

- *Governance and organizational structure* provide the adequate environment for an effective and efficient MIS, including institutional arrangements and service agreements, good oversight, clearly defined roles and responsibilities, and an established process for program improvements.
- *Information management* ensures that quality information is maintained on beneficiaries, project status, and payment information. The characteristics of high-quality information include accuracy, correctness, completeness, and relevance. Information must be tailored to inform all key program processes, as outlined in table 5.2.
- *Application management* makes information usable and prevents vulnerabilities in the day-to-day operations of the public works program. The MIS provides an interface between the user and the beneficiary database, and controls and monitors user and system access to the information.
- *Infrastructure* is the physical equipment used to operate the MIS. It includes the hardware and network used to operate the MIS application and beneficiary database, and connects the program's central office with local and regional offices.

**Table 5.2 Basic Modules in a Public Works Program Management Information System**

| *Module* | *Key activities supported* | *Data included* |
|---|---|---|
| Project interventions | • Tracking projects selected and implemented in different areas | • Project selection (for all projects: project selection criteria adopted and data used)<br>• For executing a project, data on location, type of intervention, ongoing works under execution, inputs, outputs, cost estimates, and measurement of progress |
| Inputs | • Tracking of all project inputs including labor, capital, and materials | • Price data for goods and services<br>• Cross-check with procurement information and plans |
| Workers/beneficiaries | • Selection and registration of eligible beneficiaries if individual targeting used<br>• Tracking beneficiaries and amount of work done | • List of applicants and selected beneficiaries (unique identifiers, sex and age disaggregated)—if individual targeting used<br>• Worker data from identification cards, muster rolls<br>• For each worker, days worked |
| Payments for workers/ beneficiaries | • Payment to beneficiaries according to number of hours and days worked, and agreed wage rates<br>• Ensuring timely and accurate payments | • Beneficiary list from registration<br>• Attendance records and worksheets of beneficiaries<br>• Any specific payment data (e.g., bank records) |
| Flow of funds | • Ensuring the smooth flow of funds from the central level to project sites | • Budget allocation data<br>• Disbursement<br>• Payment schedule information and requests |
| Reconciliation | • Reconciliation of planned versus actual transfers | • Payment information records from service providers<br>• Information on voucher/check cashed (if applicable)<br>• Cross-check with beneficiary lists and payment schedules |
| Monitoring | • Generation of performance monitoring indicators and other information for monitoring and evaluation | • Depending on what has been specified by project—technical performance information (e.g., project implementation rate, average processing time for each component), financial information (e.g., disbursement rate), ratio of implementation rate to disbursement rate<br>• Specified performance indicators may be identified by projects, by project component for each phase of the project cycle |
| Financial and accounting management | • Supporting periodic financial record management and auditing tasks | • Financial indicators, such as funds available, nature of utilization (e.g., wages, administration, materials) |

***Source:*** Subbarao et al. 2010.

Public works programs have a mixed track record regarding the development of well-functioning MISs, such as those delineated above. Common challenges and potential solutions related to the four components outlined above follow.

- *Governance.* A key challenge is ensuring coherence at different levels of implementation. Formal legal agreements may be useful with participating local institutions to clarify roles, responsibilities, and performance indicators. Similar formal, legal arrangements will be required with all actors/institutions engaged in implementing projects at the worksite level.

- *Information management.* The effectiveness of the MIS depends on the type and integrity of information collected relative to the needs of the processes (modules). Public works programs need to collect information from different worksites. Information should cover a variety of activities as outlined in table 5.2. However, such information is often maintained only at project sites and rarely automated or linked to the MIS. The challenge therefore is to strike a good balance between the information to be collected at the job sites and what is to be transferred at the central level. Careful thought is required to ensure smooth systems for data collection and integration at different levels.

- *Application management.* MIS applications can be custom built or commercial off-the-shelf products. The market for the latter is not well developed, and most programs are thus forced to use a customized solution (see box 5.3). The development of an in-house customized system takes several months to develop, and requires strong coordination during design and implementation. In this context, MIS applications should be gradually developed starting with the most important modules required for program implementation, and then incorporating additional modules. All program information should be integrated into a single system with a unique central database where information can be shared if necessary—for example, with different institutions and service providers. Although such start-up processes and improvements, as well as updates and maintenance, can be costly, the long-term gains can outweigh the short-term costs. The precise costs of the MIS will depend on program duration and adoption by other social programs, as well as frequency of use and economies of scale.

**Box 5.3**

## Customizing a Management Information System: The Republic of Yemen's Social Fund for Development

Yemen's Social Fund for Development uses its own (in-house) MIS, which includes general information on different types of projects. The Fund is about to finalize a subsystem MIS for a separate project called the Labor Intensive Public Works. Both MISs will be fully integrated as follows.

***Social Fund for Development MIS***

- *Inputs (data collected).* General information about projects including project name, proposal, location, types of interventions, beneficiaries, labor generated, budget, community contribution
- *Outputs (reports).* General progress report on achievements generated on a timely basis to include amount paid, status of interventions, number of beneficiaries, and so on

***Labor Intensive Public Works MIS***

- *Inputs (data collected).* Projects are linked with the Social Fund Development MIS by project ID, household information (number of household members disaggregated by sex, head of household, etc.), information about households participating in the program, units of work and their cost, payment installments of working households (linked with the payment request in the Social Fund Development MIS), interventions including detailed unit of work and cost (aggregated data are used to feed into the Social Fund Development MIS), and indicators achieved (by project type for each project)
- *Outputs (reports).* Lists of households to be used in preparing forms for work and payments, lists of detailed paid amounts (for wages and materials) for all projects, and reports to feed into the Social Fund Development MIS (number of households, indicators data)

***Source:*** Moheyddeen 2011.

- *Infrastructure capacity.* A particular concern for a public works MIS is local information technology compatibility, including software and hardware. A lack of Internet connectivity may hinder the development of a program-wide automated MIS, particularly where project sites are located in remote and/or dispersed areas. In such cases, countries can combine automated systems with off-line, paper-based approaches; these will require careful tracking and oversight.

No MIS is immune to errors during its development stages. Tests and pilots should be programmed before launch to identify potential errors, and maintenance should be provided to guarantee high-quality execution. Regular evaluations and ongoing updates to streamline processes—and thus reduce transaction time and costs—should be scheduled to ensure that the MIS does not become obsolete and continues to run at peak efficiency. MIS development is a dynamic process, and its structure needs to incorporate the lessons learned from experience as the program is implemented. Box 5.3 illustrates how experience over time enabled the Republic of Yemen's Social Fund for Development to develop a custom-built MIS.

### *Functions*

A well-functioning MIS collects and distributes information on all aspects of the implementation process. Table 5.2 outlines the modules used in a typical public works program to track the implementation of a program that includes several projects. Each module will support some key activities that will require certain data to be collected.

Table 5.2 provides a general framework that needs to be adapted to the specific country context. Chapter 10 illustrates the MIS specifically designed for India's MGNREGS program in the state of Andhra Pradesh.

## Financial Reporting and Auditing

Financial reporting is part of program management and oversight. Most of the information is part of the overall management process, and the best practice is to have it integrated in the computerized MIS. This allows program managers to keep track of their financial transactions and produce their reports on schedule. This system is being adopted in some countries. Financial reports are typically issued on a monthly, quarterly, and annual basis. They usually include the following:

- Income and expenditure accounts—cash and receipts of expenditures detailing the source and expending category according to the budget
- Financial reports with all payments made to contractors, if projects were contracted out
- Balance sheets
- Cash flow statements
- Special account statements (in countries where such accounts exist).

Reports usually flow upstream from the implementing agencies (government, community, or contractors) to the managing agencies and donors. In a centralized direct government implementation system, reporting flows from the local authorities to the central government, passing through all the levels of government involved (district, regional, state). In this process, reporting is consolidated, reviewed, and approved for eventual approval by the central government and donors.

Audits promote program transparency and accountability, and most countries use some form of audit or another. Formal audits ensure the following:

- That government (and donor) funds are properly used according to the procedures set forth in implementing manuals
- That goods, works, and services have been procured following country-specific procurement regulations
- That all supporting documents and records of financial transactions are maintained.

## Project Selection Process and Maintenance

The selection process begins by placing the program at locations where it is most needed and where the poor are disproportionately represented. The use of poverty mapping may help identify areas with higher poverty concentrations within a country. Food vulnerability maps also help in determining areas of chronic or temporary extreme food insecurity. In many countries, the WFP has developed Vulnerability Assessment Mapping System maps, which take into account such factors as food availability at the household level, the availability of coping mechanisms, and access to land.

The projects that are going to be funded and implemented are selected from a list of possible types of projects according to the main objectives of the program, as described in chapter 4. The actual selection process can involve several actors at the central and local levels. For example, projects can be selected based entirely on community wishes, entirely driven by government agencies, or a combination of both.

- *Government-driven selection*. Government officials directly select the projects they consider appropriate for the target population.
- *Civil society–driven selection*. Projects can be selected by civil society representatives, NGOs, or community-based organizations; these

typically submit project proposals to the government, and a competitive process ensues, leading to project selection.
- *Community-driven selection*. Communities are asked to generate a list of projects that they wish to get done that could be of immediate relevance to them. Funding agencies then approve the final list based on eligibility criteria and the availability of resources for the projects.

It is always desirable to take community needs and preferences into account in selecting projects. However, the degree of community involvement in the selection process often depends on the degree to which funds for implementation are also devolved to communities. If communities receive funds for execution of projects, then the degree to which their wishes are reflected will be significantly higher. This again varies from one country to another, depending upon the degree of decentralization and the extent to which communities could be mobilized. Three types of assets can be distinguished with respect to the creation of physical assets:

1. Assets whose benefits extend beyond the community
2. Assets that predominantly benefit the whole community
3. Assets that disproportionally benefit the poorest in the community.

In general, assets falling under (2) are selected by the communities themselves, whereas assets under (1) are necessarily (or best) chosen by line ministries or local governments. In practice, the relative share between the three types of activities may vary from one country to another. In the Republic of Korea, for example, the supply-driven activities selected by local governments under (1) constituted 50 percent, with community-selected activities under (2) and (3) constituting another 50 percent. Box 5.4 illustrates project selection procedures followed in Argentina and Rwanda, which describe the role of the community in project selection.

As described in the "Addressing Political Economy Considerations" section of chapter 4, project selection can be complicated by a variety of political considerations. Elected officials may be interested in specific projects executed under the public works program, which may or may not address community wishes, or their impacts may or may not benefit the poor disproportionately. While such considerations cannot be completely avoided, establishing eligibility and rejection criteria up front will go a long way toward minimizing political interference in project selection.

Once physical asset projects have been selected by communities, they need to be assessed to ensure that they are built according to national

**Box 5.4**

### Project Selection Procedures in Select Countries

*Argentina: Administrative project prioritization and approval.* Community organizations and municipalities present their proposals to the employment and training management office. The office evaluates the feasibility of the projects based on institutional, socioeconomic, technical, environmental, and financial factors. It then prioritizes the feasible projects, ranking them by an array of indicators such as location and type of project, links to other social programs, coverage of target population, and so on. Projects are approved based on the priority ranking until the monthly amounts of resources budgeted by the province are fully allocated.

*Rwanda: Community leadership in project selection.* Community members in Rwanda take the lead in identifying the projects they most need. The selection process begins with village authorities organizing meetings, at which the community members identify and prioritize the projects needed. The prioritized list of proposed projects is sent to the local authorities, which then consolidate the projects and send the resulting list to the *umurenge* (sector). A final list of approved projects, which will depend on the budget available, is posted at *umurenge* offices. The *umurenge* then sends the final list of approved projects to the district. Technical staff at the district level ensure that project studies are conducted for the prioritized projects. The studies are conducted with the assistance of community development committees at the *umurenge* level, with support from Common Development Fund technical staff at the regional and national levels, and program staff at the national level. Study conduct is monitored by program staff at the national level.

***Source:*** Project implementation manuals.

regulations and comply with safety and quality standards. In other words, projects need to be subjected to technical appraisal by experts from relevant government agencies. In addition, as explained in the "Establishing Project Selection Criteria" section of chapter 4, the projects' impact on the environment must be assessed and preventive measures taken, if necessary, to prevent any harm.

#### *Asset Maintenance*

Whatever infrastructural projects/assets are created, they need to be maintained. This program aspect is often neglected. Care needs to be taken up front to guarantee the maintenance of the assets to be created.

This is more easily done when communities have been engaged in the project selection, and technical support is devoted to carrying out the maintenance work. In a review of 60 infrastructure projects in Madagascar, sustainability issues were found in 15 (Van Imschoot 2006). Most assets (primarily some heavily used roads) were not being adequately maintained. This neglect can be attributed in large part to the lack of a sense of local ownership of the projects, since community involvement in project planning and design was not actively sought (e.g., as in the Morocco public works project). Even where local communities are involved in maintenance, a lack of resources tends to prevent them from maintaining project assets.

In fact, in most projects, no practical arrangements were put in place to ensure maintenance, nor were beneficiaries assigned responsibility for that task. In the Zambia public works program, no framework for periodic maintenance of secondary and tertiary roads by the community or local authorities was established. The roads and bridges constructed have not yet been mapped and gazetted, and there are no arrangements in place to ensure that this will happen. These facilities need to be comprehensively mapped, inspected, and gazetted in order for government to maintain and rehabilitate them in the future. No efforts were made by the government to assist communities in setting up local maintenance committees that could draw money from a road maintenance fund to ensure sustainability. While communities were given some training in asset maintenance, they are unlikely to engage in systematic maintenance without adequate financial provision and some guidance. In Afghanistan, most public works projects were roads. Significant benefits ensued following the construction of roads, including a decrease in travel time and costs. Unfortunately, however, the constructed roads are already beginning to deteriorate because of lack of maintenance.

In the Arab Republic of Egypt, the public works program under the Social Fund for Development began to address maintenance problems in 1999 by requesting that "sponsoring agencies" (governorates) deposit 10 percent of total project costs up front for maintenance purposes in a separate bank account, matched by an additional 10 percent from the fund. This was based on best practice experiences from other social investment funds in other parts of the world. However, these funds were rarely accessed due to the inability of governorates to prepare adequate maintenance plans. This suggests that even in cases where adequate financial planning and provisions are made, there is no guarantee that maintenance work will be undertaken. In 2004, tripartite arrangements

between the governorates, NGOs, and stakeholders were reached in two governorates to define the roles and responsibilities of all stakeholders, and local contractors were hired to carry out periodic maintenance of roads, sanitation, and potable water projects and canals. Lessons learned from this pilot will be taken into account as the Social Fund for Development plans to scale up its maintenance scheme in the country's 26 governorates.

There are exceptions. In the Republic of Yemen, the building of schools was an important activity undertaken by the public works program. Schools allocated a certain portion of school fees to cover operational and maintenance costs. In Tanzania's public works program, communities have developed strategies to ensure that the created assets are maintained. They have formed various groups depending on the type of created asset; for example, there are water committees, school communities, and health boards. The government also allocated funds to cover the repair of assets; these funds were channeled through the local government authorities. These authorities also provided expert advice to communities.

Thus, the experience of countries differs a great deal with respect to maintenance of assets. In general, where advance preparation has been made and provisions incorporated in the design of the project intervention including financial provision and community committees with specially assigned roles and responsibilities, the created assets have been maintained. Where no such advance preparation and provisions were made, assets could not be, and were not, maintained.

## Worksite Management

Management of worksites and worker supervision are a key part of the implementation of a public works program. The structure of worksite management will depend on the scale and complexity of the project, and how labor will be organized. The tasks entailed in worksite management include the selection and organization of labor, attendance, payment of workers, provision of materials and technical assistance, physical execution of works, and resolution of the myriad issues that may arise in day-to-day operations.

### *Management Structure*

The staff management structure will depend on the complexity of works executed. Small projects may only require a site manager, while

large-scale projects may need various layers of staff. They will report to either the community, the contractor, or any other agency charged with implementation of that particular project. The typical management positions at a worksite include the following:

- *Site managers.* A site manager has overall responsibility for the worksite to ensure the provision of resources for the project (tools and materials in particular), monitor attendance, approve the payroll, obtain technical assistance, conduct training, and track monitoring indicators. The site manager is accountable for the timely completion and quality of works according to the program objectives and should prepare progress and final reports for the implementing agencies.

- *Crew leaders.* Crew leaders supervise the daily performance of crew members, distribute work tasks, keep attendance and maintain muster rolls, ensure proper use of materials, and administer the tools used by crew members. Crew leaders should also be responsible for the safety of crew members and report any disciplinary problems to authorities at the local/district level. They are usually selected by the community or by their team members. Preferably, they should have some literacy and numeracy skills and some experience in executing projects and in recordkeeping. Crew leaders should also receive theoretical and practical training before the start of the program, and need to be equipped with the necessary tools and materials to facilitate their job. Crew leaders can be remunerated as semiskilled labor. The inclusion of women as crew leaders is suggested.

- *Other supervisors.* Foremen/women may be necessary in the case of large-scale projects where a large number of crews are participating. Foremen/women supervise and direct various crews and report to the site manager. If the complexity of the project requires it, oversight by an engineer or other technical expert would be advisable. Where projects are implemented by line departments at the local level, engineering personnel could act as team leaders.

### *Worker Organization*

Workers are selected and organized into *labor crews* to conduct specific tasks for the project. Organizing the labor, including the number of days and hours to be worked, is done by the management team. In the assignment of tasks, due consideration should be given to women's special needs.

The extent of the use of *skilled and semiskilled labor* and *capital inputs* depends on the nature of the projects selected. Once these costs are budgeted, care must be taken to ensure that there is an adequate supply of needed skilled and semiskilled workers as per the requirements of each project at the project site. It is this convergence of unskilled labor inputs with skilled and semiskilled labor and capital inputs (tools and small equipment) that accounts for the successful implementation of projects.

If projects are implemented by contractors, it is expected that they will bring with them the needed skilled and semiskilled labor (if not available within the community) and material inputs. But if projects are implemented by communities, a policy for hiring skilled and semiskilled labor would need to be adopted, along with a tendering process for procuring material inputs.

### *Worksite Requirements*

Worksite managers also ensure that the conditions needed to guarantee the safety and good performance of workers are met. Following is a list of services to be set up at the worksites.

- *Worksite amenities and worker safety.* Basic amenities (drinking water, sanitary facilities, first aid, etc.) must be available at worksites. In addition, to ensure worker safety, it is good practice to know the nearest health center or clinic where, in the event of an emergency, a worker could be transported. Mobile clinical services (such as immunizations or family planning services) can be provided at worksites on a regular basis. It is also highly desirable to provide shaded areas for breaks; this is especially important in tropical countries. To encourage women's participation, provision of child care services is highly recommended. The women supervising the child care services should be paid the same wages as other workers and considered part of the overall workforce at the project site.

- *Transport facilities.* In general, it is best to select projects close to community neighborhoods. Selection of sites closer to homes will also enable greater participation of women. Where this is not possible, transport facilities can be provided by the agency implementing the public works project. Alternatively, transport expenses could be paid in addition to program wages from the administrative budget of the program, so as to retain the full benefit of wages to workers.

- *Tools and equipment*. Supplying the tools (whether hand tools or mechanized tools) and equipment needed by workers is the responsibility of the implementing agency. Tools must be appropriate to the task at hand and suitable for the terrain. Implementing agencies must ensure that materials (cement, brick, stone, etc.) are readily available at worksites to create quality assets for the community.

## Beneficiary Selection and Organization

Chapter 4 explained the theoretical framework of targeting methodologies to identify potential beneficiaries among the eligible population. In this section, the focus is on the activities carried out at the project site for the selection and enrollment of the beneficiaries.

### *Beneficiary Selection*

The selection of participants is done using one or more of the approaches detailed in chapter 4—self-selection using the wage rate, community-based selection, objectively determined criteria, proxy means testing with reference to income poverty, or any combination of these methods.

### *Beneficiary Compensation*

Since public works programs under the safety net approach are temporary, workers are usually considered beneficiaries of the program and not government workers. This means that the program does not necessarily have to comply with the wage rate or other labor regulations. For example, even though wages paid conform to the minimum wage regulations, sometimes programs have paid less than the legal minimum wage, as the transfers were not considered wages but compensation, as in the case of Argentina's Trabajar (To Work) program.

This also means that deductions to social security or health insurance are generally not made. In a review of the literature of about 40 public works programs across the globe, there were only a couple of cases where beneficiaries enjoyed extra benefits. The Trabajar program offered health insurance to beneficiaries plus insurance that protected them against accidents in the workplace. The Expanded Public Works Program in South Africa also has additional benefits. Beneficiaries who work 4 or more days per week in the program have the right to claim sick pay and family responsibility leave (3 days a year). Women also can take up to 4 consecutive months of unpaid maternity leave. Employers and contractors working under this program are responsible for ensuring that

workers are covered by the Compensation for Occupational Injuries and Diseases Act.

### *Allocating Labor Days*

The workers selected are expected to work a given number of days. When the supply of workers exceeds the availability of places in a public works program, any of several mechanisms can be employed to restore the balance between supply and demand for available work slots:

- *Household/beneficiary ranking*. Households or individuals are ranked according to their level of poverty or vulnerability based on criteria established by the community or the government. The most vulnerable households are given the first opportunity to work.
- *Rationing*. Jobs can be rationed in two possible ways. First, the number of days each individual can work in the same project is fixed so everyone gets a chance to work. The number of fixed days can be allocated using different approaches: for example, quotas could be assigned based on family size, or to ensure women's participation; this latter issue is discussed below. Second, a roster can be prepared and individuals selected by lottery.
- *Rotation*. There are two ways in which workers can be rotated: (1) among different projects—having shorter and more frequent projects in order to accommodate more individuals throughout the program duration; and (2) by reducing the amount of time worked—participants work for fewer hours in a day so that a larger number of individuals can participate in the program.

### *Gender Considerations*

Public works programs tend to attract mostly men as participants. There are distinct advantages in attracting women to these programs as well (Dejardin 1996; Swamy 2003):

- As a means of providing access for women to direct wage employment, either to augment the resources they already command or to protect them from a sustained loss of earnings
- To realize the substantial improvements in children's welfare and women's health and status associated with women's participation in the labor force and their control over resources
- To create awareness of the direct benefits from assets created by public welfare programs.

The manner in which public works programs are designed and implemented can improve or restrict women's participation. Gender neutrality in such programs should never be taken for granted or assumed. Design features can be adjusted in a number of ways to address barriers to women's participation—such as specific cultural and social constraints and the demands on their time from domestic activities—and mitigating provisions included in the design. In some countries, a specific percentage of work slots (quota) is reserved for women. Simple measures to encourage women's participation include the following:

- Locate projects closer to homes.

- Set a quota at the recruitment stage for a minimum percentage of women in the program. It must not be assumed that the existence of a quota will of itself necessarily encourage women's participation in the absence of other measures undertaken simultaneously.

- Provide child care facilities at project sites, preferably run by senior women experienced in child care and paid as workers under the program. India's Maharashtra Employment Guarantee Scheme implemented such a measure, and evidence suggests that women's participation in the program was as high as 40 percent even without a quota (Subbarao 2003). Provide covered rest areas (for protection against the sun) and toilet facilities at worksites.

- Adjust wage payment modalities, as women may prefer to work for piece wages rather than daily wage rates, because this affords them greater flexibility in coordinating this work with their other chores. Care needs to be taken regarding how piece wage rates are determined. Often, women can be exploited into working long hours with very low compensation (especially when works are implemented by contractors), unless work norms and associated payments are carefully specified.

These options are ideally explored through consultation with female beneficiaries, for example, as part of community outreach efforts. Measures taken to enhance female participation in Ethiopia and India—countries with very large public works programs (one with guaranteed employment and one without)—are instructive.

In Ethiopia, PSNP design has a relatively strong focus on women's role in ensuring household food security. Good analysis of some

gender-specific vulnerabilities was done, including the vulnerabilities of female-headed households. Careful attention was paid to labor-poor households, recognizing that men and women have different physical labor capabilities. Provision of cash support during final stages of pregnancy and during lactation was incorporated in the implementation manual, as well as provision of community child care to enable women with small children to be able to work. Though all these steps were not fully implemented, overall participation rates of women have been relatively high. Women accounted for 46 percent of the workforce in the Tigray region, 42 percent in the Southern Nations, Nationalities, and Peoples Region, and 37 percent in Amhara. Women's representation is also high in other Food Security Programs. Careful field-based research by Holmes and Jones (2011) has confirmed that "PSNP has helped to increase household food consumption and contributed to the costs of providing for children's needs including clothing and education and health care–related costs." Despite these satisfactory outcomes, some shortcomings remain, such as uneven distribution of child care facilities, payments being disbursed to the head of the households even if women did the bulk of the work, and so on. Holmes and Jones (2011) note that the "PSNP payment modality is not contributing significantly to women's economic empowerment."

Gender dimensions have been integrated into the design of India's MGNREGS. Child care facilities are to be provided; covered sanitary facilities should be available close to worksites; equal wages are to be paid to men and women; and women should be represented during different parts of implementation—for example, in local-level committees, in the social audit process, and in state and central-level councils. While these are very important measures, implementation and enforcement lag significantly. Nonetheless, Holmes and Jones (2011) note that the program has enabled poor households to increase spending on food, health, and education, which is especially important in supporting women's critical needs as caregivers. The main shortcoming appears to be enormous discretion at the *panchayat* level, which often leads to inadequate attention to women's needs and concerns. An important indirect benefit of the program is worth noting: it is rapidly changing the status of women in the household and in their decision-making power. "Positive changes in women's status however appear to be especially linked to women's access to [MGNREGS] income through their own bank accounts" (Holmes and Jones 2011). Given this finding, the slow progress in the roll-out of bank accounts in women's names needs rectifying.

## Managing Wage Payments

Getting payments to beneficiaries on time is critical to fulfilling the income-smoothing objective of a public works program. Even though this action sounds basic and fair, in practice it is extremely complex. Public works programs hire hundreds or thousands of workers in different locations, and each must be paid several times over the course of the program. The result can be a transaction-heavy operation with a high overhead cost, prone to inefficiencies and delays. Public works programs cannot afford to have inefficient payment mechanisms, as this will not only fail to provide much-needed income, but will tarnish the program's reputation and possibly generate misgivings on the part of government or donors.

Managing payment mechanisms for public works programs requires certain critical information, such as number of workers employed, number of hours and days worked, agreed wage rates, and transfers collected and uncollected. This information is normally included in field records (attendance sheets, muster rolls, authorizing letters, etc.) that must be made available on a timely basis to those managing the payment system. The information needs to flow between worksite supervisors and program administrators, as well as to payment agencies/agents and treasuries/central banks. The timely and proper management of this information will ensure proper monitoring of the payment flow from the moment money leaves the funding agency's coffers until it reaches the hands of beneficiaries.

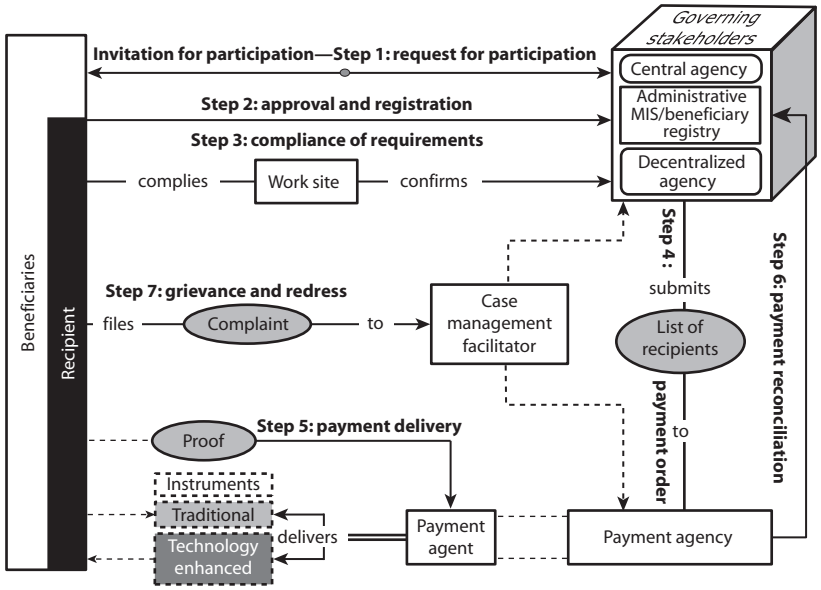
The payment management steps outlined below and summarized in figure 5.5 will help a public works program achieve a minimum level of effectiveness and mitigate against potential sources of delay and corruption. These steps can be implemented either in part, as a complete solution, or in association with already existing information flows (del Ninno 2012).

### *Step 1: Identification*

An identification and registration system enables adequate tracking of the people working on a project that can be used later for payment, verification, and control.

The locations of worksites need to be determined in advance of the identification of potential beneficiaries. Various targeting approaches can then be employed to identify the potential individual beneficiaries, as discussed above. Once the eligible beneficiaries have been identified, their information may be included in the central database (see table 5.2 on basic MIS modules) depending on the targeting mechanism selected, especially if the number of potential beneficiaries exceeds the number of jobs available.

**Figure 5.5 Public Works Program Payment Flow Chart**




*Source:* del Ninno et al. 2012.

### *Step 2: Approval and Registration*

Once beneficiaries have been selected, each is assigned a unique identification (ID) card/number; this can correlate to either a program-specific or national ID system. When an efficient national ID system is in place, as in India, program officials may choose to adopt it in order to avoid duplicative information-gathering efforts (box 5.5). In the absence of such a nationwide ID system, a program-specific system is necessary. In longer-term or guaranteed employment programs, worker registration is managed by the implementation agency at the project site, and the information provided by the workers is stored in the central database (see table 5.2, modules concerning workers/beneficiaries and payments for workers/beneficiaries)

### *Step 3: Compliance with Work Requirements*

For each participant, the number of days and hours worked must be recorded. The method used depends on the type of program and the length of the project. Usually, once workers are registered, they are organized into crews and overseen by a worksite supervisor (see the "Worksite Management" section). In most short-term programs in poor countries

**Box 5.5**

## Identifying the Eligible: The Promise of India's Unique Identity Scheme

Launched in 2010, India's unique identity scheme is intended to generate trustworthy, unduplicated identity numbers based on biometric and other data. The innovation has the potential to enhance the government's ability to effectively deliver welfare benefits to the targeted population and properly monitor them. For India's poor, the scheme holds the potential of removing barriers to previously restricted public and private entitlements such as social assistance benefits, electoral registration, and financial services.

Under the plan, a unique number will be allocated to each citizen over the course of 5 years; this will be linked to a multipurpose smart card, readable via a biometric scan, to accurately target beneficiaries and save the massive transaction costs typically associated with program delivery processes. As of January 2012, the voluntary scheme had reached 200 million Indians.

The program's potential impact is amplified by an equally ambitious Total Financial Inclusion Program that seeks to provide access to a bank account to every family below the poverty line. Various welfare benefits can thus be directly transferred into the respective accounts of beneficiaries without pilferage. The combination of the two initiatives would enable the government to deliver a wider range of welfare assistance such as price and interest subsidies, matching contributions, tax credits, lump sum transfers, and externality credits and vouchers, in addition to the regular types of subsidies.

The potential use of these devices in MGNREGS beneficiary selection and payment is already being realized in some states, resulting in prompt payment of wages, a reduction—if not an elimination—of corruption, and workers' ability to set aside savings, however small. The challenge is to organize a system that allows for the recording of beneficiary participation at the worksite via a point-of-sale system.

Despite the innovation of the scheme, it is not without opposition. Parliamentarians have raised myriad concerns including privacy considerations, national security, and the need for a legislative basis. While some resistance is principled, some appears to stem from those who might benefit from a less transparent system of patronage. The unique ID system will make leakage more difficult by enhancing control and accountability mechanisms.

***Sources:*** *Economist* 2012; Natarajan 2010.

where daily workers can participate on a temporary basis, the information is maintained with the help of the team leaders.

The worksite supervisor is in charge of keeping attendance and recording the number of days and hours worked on the attendance sheets. Records are usually maintained by workers' unique ID numbers to track completion of work and, later, payment verification and control. Work attendance information may be returned to participants for them to keep track of and prove their compliance. For example, in Liberia, at the worksite, it is the group leader who keeps the attendance sheet on a daily basis and records the number of days worked by each worker. The information is later collected on a weekly basis by the implementing partner. The logistics officer has overall responsibility for keeping daily records of workers' attendance.

Once the final work attendance sheet is approved, the worksite supervisor sends it to the administrative agency to make payment order arrangements. This process can be carried out manually or electronically.

### *Step 4: Payment Order*

The program administrator receives and verifies the attendance sheets from the field and uses the approved information to prepare the muster roll. The following basic information is included for each worker in the muster roll in order to organize wage payments (Subbarao et al. 2010):

- Worksite code
- Name of recipient and ID card number
- Number of hours and days worked
- Agreed-upon wage rates.

The muster roll is then submitted to the payment agency, usually accompanied with a payment order letter authorizing and instructing the agency to proceed with delivery, and a wire transfer approved by the treasury or central bank of the total installments to be paid in a given time period.

### *Step 5: Payment Delivery*

Upon receipt of the payment order, the payment agency either makes the payment itself or sends the muster roll to the local agent responsible for that area, along with the authorizing instructions and required transfer of resources. The payment agency ensures that each payment point or agent receives the necessary funds to supply the demand for payment requests

and avoid liquidity bottlenecks. In some cases, payment agents take the money from their accounts to make payments and then request reimbursement from the agency. Workers can collect their pay at the payment point by presenting proof of identification as reported in the work attendance sheet.

Several payment options exist, ranging from the more traditional and less sophisticated to new technology-enhanced methods. Regardless of which method is used, it should include verification of payments and recording of transactions at the central level.

***Traditional delivery.*** Wage payments are traditionally made in cash directly to workers by either government agencies or by contractors, depending on the implementing modalities. On a set day and time, workers can go to the payment site (worksite, bank, post office) to request their payment over the counter upon showing their ID. The payment agent compares the ID against the muster roll and may request further proof such as a password or special code to validate the recipient's identity.

Upon validation, the agent provides the recipient with cash notes, sometimes in the presence of the team leader. The recipient is asked to provide proof of receipt of payment, which can include a signature or a fingerprint on a payment report sheet. The team leader, if present, may also be asked to sign the list to guarantee that payment is being made to the correct participant.

The lists are signed and are maintained by the implementing management team for verification. They may also be collected by program management for monitoring and verification. In some programs, payment may be in kind with food or in the form of coupons that can be exchanged for food at specific stores (box 5.6). The identification and verification processes are the same as with cash payments.

Traditional payment systems tend to suffer from high delivery costs, among other problems. When cash travels physically between various hands, it can "leak" more easily along the way before it gets to its intended recipient. It is not uncommon that wages paid are less than the amount stipulated. In addition, program managers are sometimes unwilling to handle large amounts of cash for security reasons, creating bottlenecks in delivery. Another complication in traditional systems is the high transaction cost in terms of time or transport to recipients.

***Technology-enhanced delivery.*** To increase the efficiency of payment mechanisms, a number of nontraditional models of cash delivery have

**Box 5.6**

### Ethiopia: Using a Coupon Payment System

Some programs issue coupons to workers corresponding to the amount of work done instead of cash or food. The coupons can later be exchanged for food at participating stores, thus adding flexibility for households to access food when it is most needed at a price that has been guaranteed. Ethiopia's PSNP provides a good example of how coupons can be used.

The coupons are produced by the Federal Food Security Coordination Bureau and made available to the *woreda* rural development office, which is responsible for distributing them to implementing agencies and ensuring accountability. The printing and distribution of coupons is under the strict control of the federal government.

The serial number of each coupon is recorded when it is issued to a worker. Each worker signs the issue sheet upon receipt of the coupons. Immediately afterwards, the implementing agency sends the original issue sheet to the *woreda* rural development office, which forwards it to the storekeeper(s). A copy of the sheet is retained by the implementing agency.

recently been developed; these include cash payments involving checks or bank accounts and electronic delivery using mobile phones or smart cards.

*Cash payments via checks and bank accounts.* In this arrangement, which is used in permanent programs such as those in South Africa and Sri Lanka, potential workers are encouraged to open accounts in the bank branch closest to their home or worksite. Upon receipt of the appropriate information from project managers via the MIS, the amount due an individual beneficiary is automatically deposited into his or her account. Recipients can then collect the cash payment at the closest payment point at their own convenience. Depending on the type of instrument employed, the recipient would need to show identification or use a password or code for the payment agent to convert money from the account into cash.

The system promotes the use of banking facilities—and possibly savings—by recipients. It eliminates intermediaries, ensures proper accountability, and helps prevent fraud and/or underpayment. The downside is that bank branches must be available and accessible to participants.

Where a banking network is not widespread, workers may find it difficult to access money when and as needed. Bank account transaction systems are being used in Malawi, Rwanda, South Africa, and Swaziland.

*Electronic delivery systems.* The above system is improved upon through electronic delivery systems that make use of debit cards, smart cards, or mobile phones to transfer money. A range of options are available depending on the existing financial infrastructure and length of participation in the program.

- *Debit cards* are the cheapest solution. They can be loaded with variable amounts of money made available at any local automated teller machine. Smart debit cards are more expensive, but contain more information and can be used anywhere there is a point-of-sale device or terminal, such as a personal digital assistant device. Smart debit cards can be used to record information about the beneficiary and his or her entitlement, the number of days worked, the salary, and the total amount due.

- *Biometric smart cards* are cards that additionally contain biometric information—the recipient's name, photo, household identification number, fingerprint records—for both primary and alternate recipients. Their use can reduce instances of fraud and of "ghost" workers, preventing identity falsification or impersonation. The use of smart biometric cards is worthwhile in programs that hire workers for longer periods of time.

- The use of *mobile phones* for payment transfers is becoming more common. Transfers can be made individually if each beneficiary has a phone, or by using the phone of the payment agent in charge of disbursement of salaries to verify the beneficiary records.

Evidence on the use of electronic delivery systems is promising. Experiments with various devices are taking place all over Africa and in South Asia. A combination of improved financial infrastructure and advances in technology is enabling the use of these systems. While they do not automatically eliminate leakage problems, they do provide the scope to minimize them (Gallaher 2005). The biggest challenge remaining is to integrate the payment mechanisms in the MIS used for registration and other processes.

### *Step 6: Payment Reconciliation*

Payment reconciliation refers to the procedure through which the payment agency reconciles the list of people to be paid on the muster roll (workers expected to be paid) with those workers who have actually received payments. Once all payment disbursements are made, the payment agent transmits a report to the payment agency confirming the amount of funds to be disbursed against what was actually collected. The payment agency then transmits the report to the central management unit, which records it to the MIS so the program administrator has a record of payment completion (collected funds) and incompletion (uncollected funds). This process helps payment agencies and program administrators keep track of the progress and effectiveness of payment transfers.

### *Step 7: Grievance and Redress*

Grievance mechanisms provide beneficiaries with a channel to file complaints or to report irregularities. Recipients who received incomplete and/or delayed payments can file a complaint to a complaints management facilitator; this latter can be appointed by the administrative agency, a community committee designated to manage complaints, or an NGO acting as an intermediary between payment agents and recipients. The facilitator evaluates the grounds for each complaint and determines its accuracy/authenticity. If the complaint is valid, the facilitator issues a redress request to correct the payment. Using penalization/compensation in case of incorrect payments can create incentives to deliver payments in due time and form.

## Procurement of Goods and Services

For execution of any public works project, materials are needed. Even a small repair to a school building may require bricks and cement. Unless clear protocols are devised around the procurement of materials, a program's efficiency may be weakened, and in the worst case scenario, a program may be exposed to error, fraud, and corruption.

Methods for procurement of material inputs vary across countries, and by implementation system, project type and size, and the specific circumstances of the communities in which projects are implemented. In some countries, procurement is allowed without a tendering process if the cost of procurement of a specific good does not exceed a certain threshold. Table 5.3 presents selected methods of procurement and when they are used.

**Table 5.3 Types of Procurement Methods**

| *Method* | *Definition* | *When to use* |
|---|---|---|
| Direct contracting | Goods are purchased directly from a sole supplier without generating competition. Quotations from other sellers are not requested. | • Used when there is only one supplier in the area and transportation costs are high<br>• Used when very small amounts of an item are needed<br>• Used when unique items are needed and/or use is urgent<br>• Extension of existing contracts where competitive procurement does not add any advantage<br>• Applies to purchases that are below defined financial thresholds |
| Local shopping | Price quotations from several suppliers are compared, with a minimum of three quotations analyzed. Selection is made based on competitive prices, quality, and availability. Communities are in charge of implementation. | • Used for small-scale projects<br>• Applies to purchases that are below defined financial thresholds |
| Local bidding | Contracts are awarded competitively based on bids obtained from qualified local suppliers. Bids are open to the public and are advertised widely in local popular venues to promote transparency and generate competition. | • For medium- or large-scale projects<br>• Applies to purchases that are between specific financial thresholds |
| Force account | Community members or governments implement projects by directly contracting for labor, without any labor contractor. | • For small and scattered projects in remote areas<br>• During emergencies needing prompt implementation<br>• Where work is required to be executed without interruption<br>• When the amount of input (labor and material) needed is hard to define in advance |
| National competitive bidding | Contracts are awarded competitively based on bids obtained from qualified domestic suppliers or contractors. Bids are open to domestic firms and are advertised nationwide. | • For large-scale or specialized works or services<br>• Applies to contracts between specific financial thresholds |
| International competitive bidding | Contracts are awarded competitively based on bids obtained from qualified local suppliers or contractors. For projects funded by the International Development Association, governments send the World Bank a draft of the general procurement notice, which the Bank publishes and disseminates. | • For large-scale or specialized works or services<br>• Applies to contracts above defined financial thresholds |

***Source:*** Based on World Bank 2004.

When a program is directly implemented by government, procurement decisions usually take place at the highest levels of government. For example, district- or regional-level authorities identify the goods and services that can be purchased at the local level using direct contracting, shopping, or local bidding. Typically, goods or services can be obtained locally if the purchase falls under a financial threshold previously defined by the government. If it is not possible or efficient to obtain goods and services locally, regional authorities collect the procurement requests from district or local governments and consolidate them into packages to take advantage of more competitive prices by buying in bulk. The central or federal government usually undertakes national competitive bidding or international competitive bidding for goods and services that are above defined financial thresholds. Donors may have their own guidelines for procurement when donor funds are involved. In such cases, governments need to follow donor-established guidelines.

The central government may still be in charge of procurement even if projects are implemented by NGOs, community-based organizations, or private contractors. They may also delegate this task to contractors as long as government procurement guidelines are followed.

Projects implemented by communities tend to be small enough that procurement can be done locally. In these cases, committees—formed by elected authorities or beneficiaries—undertake the procurement of goods, works, and services for their own projects. The government provides training and assistance to these committees so they are able to undertake the bulk of procurement. Community procurement is monitored periodically by government authorities; this includes spot check visits to the worksites.

In all cases, to ensure transparency and accountability, implementing agencies are required to prepare procurement plans. A procurement plan should include a projection of the goods, works, and services needed and their estimated price; timetables; responsible parties; and monitoring strategies. Prices of the materials most used at the projects are often collected by community and local authorities. The list of prices collected are then consolidated at the regional or central level to create a marketprice database to be used in procurement and make pricing of the projects more transparent. Box 5.7 illustrates the recent experience of community procurement in Sri Lanka.

Procurement plans may need to be adapted to specific country circumstances. For example, in a postconflict country, goods may or may

**Box 5.7**

### Sri Lanka: Community Procurement Process

Procurement-related activities under Sri Lanka's Emergency Northern Recovery Project are first reviewed by the project management unit and then by the World Bank, to ensure that both the Bank's procurement guidelines and Sri Lanka's own guidelines are followed.

Items to be procured include tools and materials for Sri Lanka's cash-for-work public works projects (combined value: 10 percent of total cost), miscellaneous administrative-related items (combined value: 9 percent of total cost), and incidentals (combined value: 1 percent of total cost). Items are procured directly from suppliers such as the Multi-Purpose Cooperative Society or commercial outlets located in the vicinity of resettlement areas, or by obtaining quotes from at least three suppliers in the vicinity or in the nearest town.

Each public works project proposal includes a list of items to be procured, the estimated costs for such items, and items already received by others to be used in the proposed project.

Once each proposal is approved, the community workfare committee proceeds to procure the items required. At least two members of the committee sign the purchase orders, and certify delivery and acceptance of the goods. Payments are made directly to the suppliers on certification by the committee of delivery and acceptance.

A community resource person is reimbursed for small-value incidental expenses. The resource person maintains a register of all expenditures incurred with supporting receipts of payment/invoices, and prepares biweekly statements of expenditure covering all procurement activities by category. Payment is made directly to the resource person's account.

*Source:* Government of Sri Lanka 2010.

not be available locally, or there may be no contractors willing to offer tenders.

## Program Communications

Communications is the process of exchanging key program information with external and internal audiences through formal and informal channels. A well-planned and well-executed communication strategy can

help identify obstacles and opportunities for program success, promote an enabling environment to broaden program understanding, and unearth new ideas. For public works programs, a cornerstone of good communication involves effective beneficiary outreach during each stage of implementation in order to provide information on program participation, grievances, and program exit/graduation. This section explores the different aspects involved in beneficiary outreach, as well as the issues involved in developing a strategic communication plan for a range of internal and external program needs.

### *Beneficiary Outreach*

The importance of beneficiary outreach in public works programs is fundamental and yet often understated. Proper outreach maximizes targeting efficiency, helps reach the poorest groups (including those most vulnerable, e.g., the illiterate and indigenous), and improves program transparency and accountability. Finally, a sound outreach strategy may empower potential beneficiaries by providing them with comprehensive information on their entitlements and responsibilities in relation to the country's array of social programs.

A public works program's success greatly depends on how its basic features and entitlements are communicated to potential participants. Such communication is particularly important in countries emerging from decades of conflict in order to bolster confidence in the program being launched. Information on such critical program aspects as criteria for participation, project selection, employment duration, gender composition, and prevention of benefit leakage should be disseminated clearly, consistently, and comprehensively. If beneficiary outreach is not part of careful planning in advance of a program launch, it can set programs on the wrong path before they even begin (box 5.8).

Among the important messages to convey to the community and program beneficiaries are the following:

- *Program objectives.* Information needs to be disseminated about the role of the program as a safety net strategy and the population that it intends to benefit; this includes targeting and eligibility criteria.
- *Program scope.* Clarity must be ensured regarding the location and duration of the program, noting whether it is a seasonal or a one-time program, and emphasizing that it is not a long-term employment solution.

**Box 5.8**

## The Importance of Good Communication for Program Beneficiaries: The Cases of Kosovo and Ghana

Kosovo's Sustainable Employment Development Policy Project was launched in 2010 with the aim of linking specific targeted households to be involved in public works and training for reintegration into the labor market. A key objective of the program was to target at least 50 percent of so-called Category II welfare recipients—households with an adult family member who is unemployed and where at least one child is aged 5 or below or is an orphan up to age 15. In practice, the number of applications for the public works program was surprisingly small; in some locations, none of the beneficiaries were Category II recipients. Closer examination found that the targeted recipients misunderstood the aim of the program and feared eventual welfare cuts. Employment offices also appeared unaware of the program requirement. More communication and coordination between the employment office and the social welfare workers to increase knowledge about eligibility criteria and program goals were required.

Ghana had implemented several public works programs in the past, most of them not preceded by good communication that clearly informed potential participants of the obligations of workers, the program's duration, and the expected outputs. This deficiency led to a divergence of expectations on the part of participants and scheme operators as to what the program would deliver, its duration, and other design features. The recently introduced Ghana Social Opportunities Project corrected this situation with a clear communication strategy anchored on the following messages:

- *Employment is for a limited number of days.* There should be no expectations from the community members that the project will run indefinitely, nor should the project be regarded as a long-term source of employment.
- *Community participation is important.* District authorities and their implementation partners should underscore the importance of broad community participation (not only of community leaders and government officials) in the processes of selecting eligible projects and programmatic activities.
- *Beneficiaries should be aware of the more common forms of corruption.* When workers receive their payment, they should be informed of common forms of corruption, including bribes, dishonest traders, and money changers. Community members should be made aware that there are no taxes or other fee services on the daily salary they receive.

- *Terms of work*. Information should be clear about the number of hours people are expected to work, the wage rate for 8 hours of work, the form of payment (cash or food), the mode of payment (cash, electronic transfer), the nature of the work and organization of labor (individual, teams, units), and the outcomes to be remunerated (hour, daily rate, or piece rate).
- *Conditions at the worksites.* Information should be provided on the use and availability of equipment, availability of transportation to worksites, and the availability of sanitation facilities and child care services. If any of these facilities are not available, potential participants must be informed.

Program managers should keep in mind a number of good practices for smooth outreach to beneficiaries. In lower-income and limited-capacity contexts, some programs have used community structures (community leaders, women's networks or groups) or NGOs to pass information on via community radio, flyers, and posters with pictures. For example, Liberia's Cash for Work Temporary Employment Program used an extensive network of community facilitators and local leaders in fostering broad community participation, as well as ensuring feedback to program implementers. It is important to take literacy levels, cultural and ethnicity differences, and accessibility to remote areas into account when designing outreach approaches. One approach under Ethiopia's PSNP was to develop a charter of entitlements (with simplified illustrations, including animation) and circulate this widely in the communities.

Public works programs rarely have a separate budget dedicated to outreach activities, despite their centrality for successful program implementation. Thus, beneficiary outreach should be included as part of the ongoing program budget.

### *Communication Strategy*

As public works programs develop and expand in coverage, the role of effective communications becomes increasingly important. More than merely providing information, communications facilitates public dialogue and social awareness, and provides a mechanism to enhance program implementation through a two-way exchange between the public and the program itself. In devising a communication strategy, messages should be separately tailored to external and internal audiences. External audiences cover a diverse spectrum but typically include program beneficiaries, decision makers at all political levels, academia, media, and civil society. Internal

**Box 5.9**

### Communication Mechanisms Used in Rwanda's Vision 2020 Umurenge Program

Rwanda's Ministry of Local Government, along with local government officials, is responsible for sharing and explaining Rwanda's Vision 2020 Umurenge Program (VUP) with all the communities under their mandate, including nonrecipient households. To this end, they have prepared communication activities to share VUP information (objectives, policy, and procedures) and are planning to expand the communication strategy. The activities employed so far include the following:

- *Radio and television shows.* Representatives of local government, central government, and beneficiaries regularly appear on live radio and television shows to explain the program. This has been a feature since the program was launched. Radio and television programs offer toll-free numbers for listeners to call with their questions.
- *Workshops.* Workshop and training events target mayors, vice mayors, and district and sector executive secretaries. Participants learn how to present VUP and provide guidance on how to communicate about VUP effectively and accurately to community members.
- *Brochures.* Brochures containing key information about the program are distributed to communities, using local language and simple illustrations.
- *Website.* VUP program information is periodically posted on the Ministry of Local Government website.
- *Newspaper and newsletter.* Articles are periodically published in national newspapers discussing VUP progress. An electronic newsletter has also been published biweekly since November 2009.

***Source:*** Andrews et al. 2010.

stakeholders include partner organizations that fund and help implement the program, NGOs that contribute toward program accountability, and program staff at various levels. Ensuring internal coherence is critical.

Messages targeting different audiences should be relayed via a variety of formal and informal channels. These involve interpersonal (word of mouth, face-to-face interactions, meetings), mass media (print and electronic public documents, websites and social media, radio, television, publication and dissemination of materials), and specialized strategies

(training, seminars, conferences, selective dissemination of meeting notes, internal newsletters, etc.). Box 5.9 highlights the communication strategies implemented under Rwanda's Vision 2020 Umurenge Program (VUP).

Some key considerations to keep in mind when devising communication strategies for public works programs—as well as for other safety net interventions—include the following:

- Communication plans are often the least prioritized of program processes. Programs often allocate communication roles and responsibilities to nonspecialized program staff as opposed to specialists (e.g., media coordinators, stakeholder outreach coordinators), thus risking program success.
- Adequate communication activities should be incorporated into project design from the onset, concretely taking into account the local context (e.g., remoteness and lack of formal media access) and any existing means of communication.
- Programs should incorporate mechanisms for ongoing stakeholder feedback to measure the impact of the communication strategy and improve it if necessary. These mechanisms can include direct feedback from stakeholder meetings, media monitoring, and tools such as focus groups and opinion research to gauge public opinion.
- More communication does not automatically translate into better outcomes. A communication strategy must be well planned. In certain situations, communication dynamics may even hinder development efforts—for example, an exclusive focus on new social media may inform the nonpoor better and empower them to have more access to the program.
- A consistent communication strategy should be used by all implementing/official stakeholders. The delivery of incoherent information by different sources can result in confusing messages to target audiences and lead to misinterpretations.
- A communication strategy should be able to create a "brand"—a unique identity for the program.

Incorporating a communication strategy is a necessary prerequisite for implementation of the program, but not a sufficient condition. The poor need to be given a voice. The next chapter provides more detail on the importance of giving the poor and their communities a voice in public works programs.

## Note

1. The public works component had a tripartite arrangement whereby the Ministry of Local Government and Housing certified the works after inspection, the National Road Fund Agency was responsible for channeling the funds, and the Project Implementation Unit in the Office of the Vice President was responsible for disbursement and overall management. This arrangement resulted in delayed reporting, delayed disbursement, and delayed payment of wages, as each of the implementing entities in turn held up some portion of the inspection-certification-disbursement process. Some wages remained unpaid (World Bank 2006).

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CHAPTER 6

# Governance and Corruption in Public Works Programs

> 'Frankly, I have been lied to and deceived by people who, instead of serving the people of South Africa, were intent on lining their own pockets.' With these bitter words, Public Works Minister Gwen Mahlangu-Nkabinde made the shock announcement on Monday that a Special Investigating Unit (SIU) probe of her department had uncovered more than 40 cases of tender irregularities involving at least R 3 billion. (*South Africa Daily News* 2011)

> Too much money ends up in crooked officials' pockets. The gloomiest estimates, such as one by Surjit Bhalla, a prominent economist, suggest two-thirds of funds might be squandered. That looks extreme, but abuse can be crass. In Gonda, a sugar- and rice-farming district in eastern Uttar Pradesh, an anti-graft campaigner, Brijesh Pandey, claims he has tracked how 'ongoing scams' divert a quarter of the jobs funds. Common complaints are of officials who pocket wages signed out for non-existent workers. (*Economist* 2011)

These quotations bring into focus the hot button issues of governance and corruption in public works programs, while highlighting two salient factors motivating the discussion of this chapter. First, the rapid expansion of public works programs across the globe has led to heightened interest from clients and donors alike in ensuring the efficient and effective use of public funds in the design and implementation of programs so as to yield results and minimize the risks of error, fraud, and corruption.

While these risks are a challenge across all social protection programs in general, error, fraud, and corruption issues may be more acute in regard to public works programs. This is a consequence of the number of actors involved at different levels as well as the variety of functions conducted under these schemes, not to mention the fact that public works programs offer scope for private gain at many important programmatic junctures—selection of projects and participants, flow of funds, purchase of materials, monitoring of worker attendance and performance, and payment of wages, to name a few.

Second, there is increased recognition and evidence that good governance is central to improving service delivery and outcomes. Governance is not just about reducing corruption, it is also about improving incentives for policy makers and providers, and strengthening the accountability of services to citizens. This implies that promoting governance can help improve the service delivery of public works programs, including timeliness of transfers and quality of assets produced, thereby contributing to the legitimacy of a program as well as to its ultimate effectiveness. Given the decentralized nature of many public works programs, this emphasis on governance suggests an important role for the community in identifying public works projects and selecting beneficiaries.

This chapter provides an overview on corruption and governance in the context of public works programs. It sets out a series of mechanisms that can help promote the control and accountability of programs, thereby bolstering their efficiency. Finally, the chapter looks at a variety of measures and innovations aimed at improving program outcomes; these include social audits, expenditure tracking, the role of the media, and the use of information technology (IT).

## Understanding Error, Fraud, and Corruption in the Context of Public Works Programs

As illustrated in table 6.1, *fraud* and *corruption* are intentional violations of program rules by beneficiaries and staff, respectively; whereas unintentional *errors* may arise from a misunderstanding of program procedures on the part of either set of stakeholders. While the existence of controls is a necessary condition for preventing program abuse, it is not a sufficient condition, unless incentives are built into program design (e.g., upward career mobility for implementers with a clean performance record), program implementation details are made transparent via media scrutiny, and there is a some sense of honesty in the public service ethos. To

**Table 6.1 Typology of Error, Fraud, and Corruption in Public Works Programs**

| *Beneficiary* | *Program staff*[a] |
|---|---|
| Intentional | |
| *Fraud*<br>Beneficiary deliberately misreports<br>• Eligibility<br>• Number of hours/days worked (with or without the collusion of program staff) | *Corruption*<br>Staff deliberately<br>• Manipulates information<br>• Seeks bribes/kickbacks from potential participants<br>• Registers "ghost" workers<br>• Falsifies wage payments either independently or in collusion with beneficiaries<br>• Uses low-quality materials and charges for cost of high-quality ones<br>• Misreports outputs<br>• Falsifies resources |
| Unintentional (error) | |
| Beneficiary inadvertently provides incorrect information (this rarely happens in public works programs) | Staff makes unintentional mistakes, largely because of unfamiliarity with new technology/system |
| Mitigation measures | |
| • Ensure good governance, including clarity on rules, roles, and controls surrounding a program<br>• Establish program-level controls including audits and procurement and financial management, as well as mechanisms for monitoring and disclosure of information<br>• Involve community and beneficiary members to provide feedback in the form of grievance reporting, monitoring, and redress<br>• Make extensive use of IT-based monitoring to prevent manipulation through cross-checks for consistency<br>• Empower the media and civil society to expose bad practices through involvement in spot checks and social audits; and through transparency of program administration and data<br>• Establish incentives at the staff level linked to performance, and disincentives, such as relocating the program from an area where fraud/corruption is detected or enacting severe penalties for detected fraud including total denial of future benefits to beneficiaries and/or dismissal of staff | |

a. Staff includes program managers, officers and/or worksite managers, and contractors.

address these issues, the following two sections elaborate on the nature of and challenges surrounding corruption and governance. The remaining sections explore the key mitigation measures highlighted in table 6.1.

Fraud occurs in many safety net programs, but the opportunities for fraud are more prevalent in public works programs, both on the part of program beneficiaries and of program operators. Fraud is a concern in beneficiary selection, especially in public works programs that are not self-targeted. Beneficiaries could misrepresent their household characteristics

in order to claim eligibility for participation. Fraud can also occur in work reporting: the number of hours or days worked could be manipulated and wrongly reported, sometimes in collusion with local scheme operators.

Corruption is also a key concern. Transparency International, an independent agency that assesses the prevalence of corruption worldwide, defines corruption as the abuse of entrusted power for private gain, and differentiates between "according to rule" corruption and "against the rule" corruption. Facilitation payments, where a bribe is paid to receive preferential treatment for something the recipient is required to do by law, constitute the former. The latter is a bribe paid to obtain services the recipient is prohibited from providing. This latter phenomenon is often referred to in the public works literature as *program leakage* to describe funds that are diverted from legitimate use for salaries (wages) to intended beneficiaries or for purchases of materials needed for the project.

Leakage may typically be systemic corruption (rent-seeking,[1] bribery of officials), as well as project reallocations (to meet unforeseen project expenses, land compensation). Typical sources of leakage include the following:

- Differences between the amount of work done and the amount stipulated in project documents (overestimation of work done or workdays reported, or undercompletion of tasks)
- Overreporting of resources allocated to workers, such as differences in wage payments received versus those agreed upon, remuneration not conforming to work norms (e.g., for skilled labor), or a higher number of workers reported than actually employed
- Appropriation of leftover funds or assets
- Differences between wages paid in cash and the market value of wages paid in kind
- "Ghost" workers (a phenomenon where more workers are shown to be employed in muster rolls than the actual number of workers)
- Favoritism in beneficiary selection (politically influenced or driven by considerations such as caste, status, etc.)
- Labor contractors using market power to pay less than stipulated program wages that should legitimately be paid to workers.

## The Import and Challenge of Good Governance

It is widely accepted that most safety net interventions—including public works programs—lose some fraction of their resources to error, fraud,

and/or corruption. Unfortunately, actual evidence that quantifies the amount lost is limited or completely absent in most developing countries. What is clear is that error, fraud, and corruption undermine the effectiveness of public works programs as a safety net instrument because they decrease the amount of resources devoted to beneficiaries. They also generate a loss of credibility for the program, eroding its political and public support. Strong governance is imperative in public works programs to promote the needed checks and balances against manipulation for personal ends or special interests, as well as to ensure overall program effectiveness. In this context, governance can be understood as "the set of incentives and accountability relationships that influence the way in which providers are held accountable for their behaviors and ability to deliver services with quality and efficiency" (Basset et al. 2012).

Establishing effective control mechanisms means addressing the challenges to governance at each government level and at each program process. There are at least five main areas of challenge that directly affect successful delivery of the program (Van Stolk 2010).

- *Clarity of institutional responsibilities.* Unclear institutional responsibilities lead to duplication of tasks, diffusion of responsibilities, and confusing or ambiguous "rules of the game." These in turn create opportunities for discretion, nontransparent and conflicting procedures, and inadequate mechanisms for implementation and monitoring. A lack of clarity in responsibilities is a particular issue for programs with decentralized implementation. In such cases, it is crucial to delineate institutional roles, standardize procedures, and develop job descriptions that avoid overlap of functions. Clear delineation of roles and responsibilities allows for better governance, as all stakeholders can be held accountable for their performance. Box 6.1 illustrates some of the challenges arising in contexts of multiple institutional stakeholders based on the experience of Ethiopia.

- *Alignment of incentives to program implementation*. Public works program staff members need to have incentives to administer the program well. Career development, bonus payments, meritocratic and transparent appointments, and fair performance evaluations are some incentive mechanisms to motivate staff to perform efficiently.

- *Collection and disclosure of program information.* Routine collection of program information allows for monitoring of program performance,

**Box 6.1**

### Coordination Issues in a Decentralized Program

The budget of Ethiopia's Productive Safety Net Program is set at the federal level and subject to formal oversight by Parliament, including post-audit reviews by the Standing Committee on Public Accounts. Thus, program implementers are held accountable for program resources, and every item of expenditure is subject to independent audit at the federal level.

However, the same is not true at either the regional or *woreda* (administrative unit of a group of about 10 villages) level, meaning that regions and *woredas* are responsible for implementing a federal government program with resources that are outside their direct lines of authority. This is, at times, at odds with the autonomy of regional governments within the decentralized environment. There are concerns that this has weakened incentives for local decision makers to take responsibility for program implementation. Local authorities implement the program, but they have no control over the resources allocated to them by the federal government.

***Source:*** Government of Ethiopia 2006.

which facilitates the prevention and detection of fraud and corruption. It also provides beneficiary-level and project-level data that can be disclosed for accountability and lesson learning. India's Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) illustrates good practice in this area. Given the complexity and magnitude of the program, authorities introduced an IT-based management information system (MIS) in some states, which quickly became the backbone of the program. A key feature of the MIS in Andhra Pradesh is the real-time recording of monitoring indicators and transactions across multiples sites and levels of program implementation. Error, fraud, and corruption are minimized due to warnings that the system releases when data discrepancies are detected. Moreover, information on all aspects of the program is available to the public through the program website (see case study in chapter 10 for more information on the Andhra Pradesh MIS).

- *Ensuring the rule of law.* Administrative and legal sanctions should be applied in cases of noncompliance with program rules. Sanctions and corrective actions (such as dismissal of corrupt officials or contractors)

serve as effective deterrents against fraud and corruption, but are rarely featured in either public works programs in particular or social safety net programs in general. The reason is that irregularities are usually not well defined and not easily detected; sanctions are not usually legislated and hence enforcement can be difficult. A study conducted in Bangladesh to assess the Employment Generation Program's capability to tackle error, fraud, and corruption concluded that the program did not have a strategy to combat these issues. Specifically, the institution in charge of the program, the Ministry of Food and Disaster Management, did not establish clear definitions of error, fraud, and corruption. As a result, the program put no additional monitoring mechanisms in place to explicitly prevent and detect error, fraud, and corruption. Most of the information on this area was anecdotal in nature (Van Stolk and Tesliuc 2010).

- *Ensuring proper financial management and accounting.* Proper financial management includes reducing the number of organizations or levels of government involved in handling money; clearly delineating financial responsibilities; ensuring that systems are in place for monitoring distribution, collection, and processing; making payments on time; verifying beneficiary compliance; and ensuring efficient and adequate documentation of cash flows. In Ghana's Social Opportunities Project, for example, financial responsibilities are clearly delineated to fix accountability at the proper administrative level (box 6.2).

The remainder of this chapter examines mitigation measures and innovations that are being put in place to combat corruption and strengthen governance. These measures address some of the challenges above.

## Program and Beneficiary-Level Mitigation Mechanisms

To prevent the emergence of error, fraud, and corruption at all levels (see table 6.1), governments can take steps to promote accountability and control. Countries differ a great deal on the extent to which such mechanisms exist. Transparency in program activities, media oversight, independent third-party audit of program activities, and legislative actions that ensure recovery of funds that are fraudulently amassed by any individual/institution during program implementation are some of the measures that can help prevent error, fraud, and corruption. These measures are explored here and in the next section, with the current discussion focusing on program-level controls and beneficiary/community inputs.

**Box 6.2**

### Ghana's Institutional Arrangements for Financial Management of Its Social Opportunities Project

Ghana's Social Opportunities Project is a major nationwide public works program funded by the World Bank. It relies on Bank policies, procedures, and guidance in its financial management and disbursement of project funds. These program control arrangements are complemented and strengthened by a range of official legislative acts, including the following:

- The Public Procurement Act of 2003 provides guidelines for public procurement, establishes administrative and institutional arrangements for procurement, and stipulates tendering procedures.
- The Financial Administration Act of 2003 regulates the financial administration of the public sector and prescribes the responsibilities of persons entrusted with financial management in the public sector. It also ensures the effective and efficient management of state revenue, expenditure, assets, liabilities, public resources, the Consolidated Fund and other public funds, and provides for matters related to these.
- The Internal Audit Agency Act established a central agency to coordinate, facilitate, monitor, and supervise internal audit activities within ministries, departments, agencies, and metropolitan, municipal, and district assemblies in order to secure quality assurance of internal audit within these institutions of the state.
- The Local Government Act of 1993 provides the framework for district assemblies to exercise political authority and empowers them to exercise deliberative, legislative, and executive functions.

Control and accountability mechanisms are critical to ensuring that a program is fair and delivers the expected results. Control and accountability arrangements can be put in place through program-level mechanisms (top down) such as fiduciary controls, or inputs involving beneficiaries/communities (bottom up) such as social audits and grievance mechanisms. The two types of arrangements are complementary and rely on a strong MIS and good monitoring procedures.

This section reviews different control mechanisms from both the program/staff and beneficiary/community perspective. It is important to stress that the extent to which control mechanisms can be designed and

implemented depends greatly on the program's administrative capacity, in terms of both sufficient human and material resources as well as adequate training and incentives to understand and enforce program rules and legislative support. IT plays a key role in enhancing operational capacity. A program can be well designed but can lack the capacity to deliver according to plan. Limited capacity undermines governance and ultimately affects the effectiveness of the program as a safety net.

### *Program-Level Controls*

Internal controls are necessary to reduce a program's risk of error, fraud, and corruption, as well as to promote transparency and accountability among beneficiaries and stakeholders to strengthen program governance. Program-level information draws from functioning financial mechanisms and other controls. The primary controls at the program level involve audits, procurement, and financial management as well as mechanisms for monitoring (spot checks, data matching) and for disclosure of program information to promote transparency. In Argentina, the application of sanctions and the use of public prosecutors serve as important deterrents to corruption.

Certified *program audits* are typically a requirement both for donor financing agreements and compliance with national legislation in most countries. A minimum program requirement is the annual auditing of accounts by an independent auditor. In practice, this process may be facilitated through a national coordination office. Programs may also introduce a system of roving audits, technical audits, and periodic spot checks to investigate compliance with financial rules, disbursements and payments, and appeals and complaints, as well as to inform monitoring.

A typical audit focuses on the following aspects:

- Disbursement procedures and systems
- Basic accounting records relative to the number of beneficiaries working on a daily basis
- Amount of material inputs purchased and actually used
- Adequacy of internal control system in terms of payments, purchases, requests, and authorizations
- Eligibility of expenditures under the program.

Programs usually use their MIS to conduct *routine data checking and investigations*. Some programs develop additional monitoring mechanisms

to receive timely feedback. For example, in Argentina's Jefes (Head of Household) program, registration was decentralized through municipalities and civil and political organizations. To ensure transparency and accountability, a set of informational and grievance resolution measures were put in place. Toll-free hotlines were established to provide information on payment dates and eligibility requirements; a commission in the Ministry of Labor was set up to handle allegations of abuse and complaints; criminal offenses were referred to a federal prosecutor in the social security system; and a monthly cross-check of databases was conducted (Giannozzi and Khan 2011).

Because much fraud occurs regarding attendance and payroll records, a particular area of interest in public works programs is strengthening *reconciliation of the payment process*. This may involve mandating a link between the payroll and attendance sheets to program audits.

### *Beneficiary and Community Inputs*

Program-level control and accountability can be supplemented with inputs from beneficiaries and communities. These inputs have taken different forms in different countries, but the essential element is feedback in the form of grievance reporting, monitoring, and redress. One recent innovation to elicit beneficiary-level inputs is the social audit pioneered in India (see the "Innovations in Governance Response" section).

Beneficiary and community participation should be facilitated as part of program transparency and accountability measures. Community participation can enhance transparency and accountability if it encompasses such areas as targeting and beneficiary selection, project selection, and participatory monitoring. Beneficiaries and community members are more able to hold program implementers accountable the more access to information they have and the more involved they are in key stages of program implementation. Such participation has become mandatory in some countries; Ethiopia and Rwanda are among those countries that have addressed community participation in their public works program implementation manuals. In this regard, Rwanda has pioneered and invested heavily in drawing poverty rankings at the village level. Every household was ranked according to its poverty status from poorest to richest, and this was done through participatory processes that ensured ownership and acceptance by all members of the community. Rwanda has also instituted a mechanism to handle complaints from any member of the community.

Similar mechanisms to handle complaints are established in countries where elaborate poverty mapping exercises such as those taken at the village level by Rwanda were not attempted. Box 6.3 illustrates how complaints are handled in the Republic of Yemen's public works program.

Strengthening community-level inputs is not without its own challenges. Community participation does not necessarily guarantee that the voice of the poor is heard. In some cases, the very weaknesses, poor access to information, and low level of education of the very poor lead to exclusion of intended beneficiaries—especially if they are women. It is also difficult operationally to distinguish the poor from the very poor, and there could be genuine unintended errors made as a consequence. Further, concerns and issues pertaining to women are often ignored or are not well represented in community meetings. For example, women's preferences regarding project selection could be different from those of men, and such differences may not always be reflected in community choices. For all of these reasons, much sensitization of women's concerns

**Box 6.3**

### Resolution of Beneficiary Complaints in the Republic of Yemen's Public Works Program

In the Republic of Yemen, program managers have approved several simple mechanisms to allow beneficiaries to provide their complaints and observations:

- A locked complaint box is located at each worksite, with the key held by the community participation officer at the Social Development Fund branch office.
- The community participation officer solicits complaints during his field visits.
- Complaints received are immediately looked into by the community participation officer and the program officers at the branch offices. Difficult complaints are referred to program management.
- Branch program officers provide program management with a list of the complaints received at each project and the measures taken each month in response to these.
- The phone and fax numbers of the Social Development Fund branch and headquarters offices are circulated at each project worksite.

***Source:*** Government of the Republic of Yemen 2003.

and constraints should precede community-level participation. The following steps could avoid possible problems:

- Hold community-level public meetings at times that are convenient for both men and women to ensure wider participation.
- Note missing households to determine if these belong to the very poor. While selecting households for participation, supplement community preferences with objectively drawn indicators (from household surveys) where possible.
- Ensure that women vote on the selection of public works projects so that works are valuable to the community in general and to women's needs in particular, and aim to balance competing interests within and among communities.
- Post the program budget, public works plan, salary levels, and list of beneficiaries in public locations to help ensure that community members are fully informed of program objectives and procedures. In some instances, outside help by nongovernmental organizations (NGOs) may be necessary to communicate selections to illiterate and very poor households.
- Conduct sensitization exercises, preferably by NGOs, to raise awareness among beneficiaries on potential areas of fraud, mistargeting, and so on.
- Establish program grievance and appeal mechanisms. In Malawi, citizen report cards and community scoring procedures have been introduced to improve transparency and accountability. Both Ghana and Rwanda include a formal appeals mechanism in their public works programs.

## Innovations in Governance Response

With the increasing use of public works programs across the globe, an array of innovations has been developed in recent years to improve program accountability. Many challenges to governance are thereby being addressed, allowing countries to have better control over fraud and corruption issues. One such innovation is social audits pioneered by India. Creative use of IT is also enabling program managers to detect and control fraud and corruption. Some of these innovations and related measures are described below.

### *Social Audits*

Social audits are a process by which citizens come together to review and monitor government actions on the ground and place accountability

demands on the government at public hearings. Their basic objective is to ensure public accountability in the implementation of programs, laws, and policies. The social audit is a process compliance audit that assesses the extent to which operational rules and regulations are followed, especially in areas involving some degree of discretion, such as the selection of works locations, beneficiaries, and projects to be financed. Social audits are tools for enhancing the transparency of program activities, and seek to improve the overall accountability of a public works program. They also can serve to raise awareness about the program, promote redress, and help ensure improved outcomes in implementation. Social audits are usually implemented by a civil society organization selected on a competitive basis. It is a good practice for the reports resulting from social audits to be made publicly available. Chapter 11 provides an in-depth case study on the use of social audits performed in India's MGNREGS.

### *Use of Information Technology*

IT-based MISs that allow for real-time monitoring of all program activities are extremely helpful in improving governance. Such systems can track program activities including beneficiary selection, allocation of work to work groups and muster rolls at the worksites, opening of bank accounts and verification of payment orders for compliance, and measurement of work and number of days worked. Chapter 10 describes the MIS implemented in Andhra Pradesh, India. The following steps taken by the Andhra Pradesh program are worth noting.

The MGNREGS program implemented in the state of Andhra Pradesh developed a complex MIS to facilitate the collection, processing, management, and dissemination of program data. The system allows real-time monitoring of all transactions recorded, ensuring accurate and timely management of a high volume of data, often across multiple sites and levels of program implementation. Through the use of specialized software, many important checks are incorporated throughout the MIS, such as the pay order generated transaction (for wage payments to workers), which validates the number of workers who were provided wage employment, number of days worked, and total payments made to workers.

Other MIS features include the following:

- *Electronic muster and measurement system*. This is a mobile phone–based technology designed for field staff. Field assistants' phones contain the data concerning all job cards, labor groups, and works in a village. Program field assistants then make use of the MIS e-Muster module by

gathering workers' attendance records every day, and sending daily confirmation via mobile phone to the program's central server.

- *Wage payments through smart cards.* Wage payments are disbursed in the villages through a biometric (fingerprint) identification process with the help of smart cards issued by technology firms. Since every individual has a unique set of fingerprints, this technology is reliable; it can also accommodate illiterate beneficiaries, often living in remote areas far from banking institutions and other infrastructure.

- *Electronic fund management system.* The electronic fund management system (eFMS) was established as a robust mechanism for efficient fund management. By linking all field offices with a central server and to bank servers, the eFMS enables all types of payments to be made within and by the program. Funds are debited from the central account of the appropriate department at the state capital at the federal level and deposited in the bank account of the account holder in the field at the village level. No expenditure is allowed outside the MGNREGS software or outside the eFMS, which enables real-time monitoring of expenditures dovetailed to the program.

### *Expenditure Tracking Studies*

Public expenditure tracking is one of many approaches used to assess the extent to which funds intended for beneficiaries actually reach them. Public expenditure tracking surveys are increasingly used at the district level to make budget flows from local government to service delivery agents transparent. Tracking the funds provided by both the government and donor agencies will increase accountability and responsiveness at different bureaucratic levels. For example, if 80 percent of public works funds are allocated for wages, it is possible to add up all wage payments made in a district/block/village to see whether or not this has been accomplished. Tracking funds can be expensive, so such studies need to be done selectively. Findings from these studies could be very useful in determining the exact point at which the funds transmission misappropriation or leakage is occurring and putting remedial measures in place.

### *Incentives and Disincentives*

Where a public works program is implemented by locally elected official bodies (such as the village councils in India that implement the MGNREGS

program), incentives can be used to promote better performance and discourage poor performance. For example, if an elected official is seeking eventual or near-term reelection, he or she has an incentive to ensure that funds are spent according to stipulated rules and that jobs are provided to the needy. If the official is unlikely to be elected, or is only interested in using the office for short-term personal gain, positive incentives may not be applicable, and fraud or corruption could entail. Since it is not possible to assess *a priori* whether a particular incentive is helpful in controlling fraud and corruption, it is always highly desirable to establish oversight by civil society organizations wherever a program is implemented by locally elected bodies.

Where governments (at any level) are directly responsible for implementation, incentives for better performance could be built into the civil service career path. There is a risk in so doing. If better performance is interpreted, for example, as the number of participants in a public works program, or adherence to gender norms, and so on, there could be an incentive to falsify the numbers and show performance on records that did not take place in reality. Severe penalties for misreporting could prevent this situation, provided such cases are detected—for example, by random checks, IT-driven real-time monitoring, civil society organizations, or social audits.

Instituting incentives to ensure better performance is rarely straightforward. The role of incentives is very much conditioned by country-specific circumstances including the nature of administrative rules and regulations, the space and role accorded to nongovernmental and civil society organizations, and the media (discussed below), all of which vary a great deal across countries.

### *The Media as Watchdogs*

Media could play an important role in promoting better governance and reducing corruption. For example, the media in Ghana publicized the excessive costs and leakages in the country's Youth Employment Program; the government ultimately acknowledged the problems and set about addressing them. In India, the media exposed numerous instances of corruption and leakage in MGNREGS and other programs, including India's food rationing system known as the Public Distribution System. Of course, the extent to which the media can be helpful depends on the extent to which freedom of the press is guaranteed in a country. Where significant barriers to free press exist, the media will not be very effective in detecting and preventing fraud and corruption—nor will any other measures involving civil society, such as social audits.

## Note

1. The simplest definition of rent-seeking is to expend resources in order to gain wealth by increasing one's share of currently existing wealth instead of trying to create new wealth. Since resources are expended but no new wealth is created, the net effect of rent-seeking is to reduce total social wealth. It is important to distinguish between profit-seeking and rent-seeking. Profit-seeking is the creation of wealth, while rent-seeking is the use of social institutions such as the power of government (or in this case, the power of public works program operators) to redistribute wealth among different groups without creating new wealth (Conybeare 1982).

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CHAPTER 7

# Monitoring and Evaluation

Monitoring and evaluation (M&E) provide the foundation for effective management and planning. A good M&E system supplies feedback that will help enhance program effectiveness, makes projects accountable to the public, and helps government better allocate budget resources. This last is particularly important in times of economic stress, when tight budgets demand programmatic solutions that provide the "biggest bang for the buck." Well-planned and -implemented monitoring and evaluation are thus imperative for public works programs to demonstrate their effectiveness and results, and to enable comparisons with other social protection programs.

Monitoring and evaluation are separate, complementary activities. Together, they aim to assess a public works program's outputs, outcomes, and impacts. Examples of *outputs* in a public works context include the number of days of employment provided, the number of kilometers of road built or maintained, and so on. O*utcomes* are the intermediate benefits accruing to beneficiaries, such as changes in the per capita income of participating households. Outcomes can be positive or negative; short, medium, or long term; intentional or unintentional; and may occur either directly or indirectly. *Impact* is the degree to which outcomes lead to improving the welfare situation of participating households; measures of

impact would include, for example, the percentage decline in the incidence of poverty.

*Monitoring* is a continuous process of collecting and analyzing information to better understand how well a program is performing against expected outputs. *Evaluation* is an objective assessment of program effectiveness that uses specialized methods to estimate net results or impacts, and/or to identify whether the net benefits (impacts) of the program outweigh its costs. Programs with strong M&E systems benefit from feedback on program functioning. Such feedback allows midcourse correction to effect improvements in program design and delivery so as to enhance its impact. In recent years, a growing number of programs have been designed around results-based M&E systems, which typically use a results chain (see below).

This chapter examines the basic arrangements for putting an M&E system for public works programs in place, as well as the practical challenges of refining M&E tools to make them work in low-capacity settings. It begins by describing the results chain as a tool for mapping a program's objectives, and the use of appropriate indicators derived from the overarching objectives and orientation of the program. The discussion underscores the need for continuously evolving M&E systems designed in a flexible manner and with active stakeholder participation. It describes how tools can be customized and may evolve over time to address some common challenges and pitfalls such as data constraints, institutional roles, and limited capacity. The chapter ends with some lessons and conclusions regarding experiences with M&E systems drawn from different countries.

## Results Chains and Indicators

As detailed in chapter 2, public works programs encompass a variety of objectives, including temporary income support, employment generation, skills acquisition, and the development of infrastructural projects and services. A good start toward understanding the attainment of these objectives is to generate a *results chain*. A results chain is a management tool that shows how inputs and activities, through a number of intermediary causal links, are expected to result in the realization of the goals/objectives of the program. Examining these causal links facilitates the identification of performance indicators at each link in the chain, as well as risks that might impede attainment of the objective. The results chain is a useful tool for engaging implementing partners in clarifying

**Table 7.1 Results Chain and Indicators for Public Works Program or Project**

| *Key element* | *Definition* | *Sample indicators* |
|---|---|---|
| Inputs | Resources used to support the primary activities of the program/project | • Budget expenditures for salaries, intermediate tools, and administration<br>• Number of program staff by level |
| Activities | Actions taken to convert specific inputs into outputs | • Implementation and program/project-related activities including setting up targeting, payments, management information system, worksite arrangements, and so on |
| Outputs | The delivery of foods and services to the target population (supply side) | • Number of projects by type, region, and month<br>• Kilometers of road created<br>• Number of days worked per beneficiary<br>• Wages paid/food distributed to workers |
| Outcomes | Intermediate effects resulting directly from project outputs that may be necessary to achieve desired impact (demand side) | • Net improvement in household food consumption<br>• Percentage of program beneficiaries who report 12 months of food access<br>• Percentage of households reporting satisfaction from community assets developed |
| Impacts | More meaningful changes in beneficiary conditions, reflecting program/project primary objectives | • Number of households attaining food security within 3–5 years |

***Source:*** Adapted from Andrews et al. 2010.

objectives, designing activities, reviewing progress, and taking corrective action where needed. Table 7.1 provides an illustration of a results chain, including examples of indicators to be used in monitoring the progress of a public works program or project.

Besides the core indicators for inputs, activities, outputs, and outcomes, a results chain can also collect *process*, *efficiency*, and *cost* indicators as shown below:

- *Process indicators* provide information regarding program operations to determine if the program is running efficiently. Examples of process indicators are average time taken to select viable projects, number of projects appraised and evaluated per month, and average number of supervisory visits per month.
- *Efficiency and cost indicators* examine the program's results per unit of output, thereby helping to assess a program's overall cost-effectiveness.

A cost-effective program will channel most of its resources toward the achievement of its objectives. For example, when assessing cost-effectiveness using cost indicators for the construction of infrastructure, it might be useful to compare the costs of building the same infrastructure using high-labor intensity techniques compared to other standard methods of building infrastructure, such as semi-mechanized and highly mechanized intensity techniques. See appendix F for sample input, output, outcome, process, and efficiency indicators for a typical public works program.

Once indicators have been defined, program managers need to plan the following for each indicator: source, data collection method, agency responsible for collection, frequency of collection, data storage, and how and by whom the data will be used. Data for indicators should be obtainable at a reasonable cost and at a reasonable level of accuracy. Therefore, when planning an M&E system, managers should look for information that is readily available (such as from administrative databases and household surveys) and determine if any indicator data can be derived from those sources. Also, to make the most of the data collected, information should be disaggregated by beneficiary characteristics (age, sex, household income, etc.) and/or by administrative characteristics (project location, field offices, etc.). These data should then be compared at specific intervals to track progress.

The data can be collected at various levels: worksite, household, community, and various administrative levels. The mode of collecting information can vary (manually, or using hand-held computing devices or laptop computers) across implementing agencies depending on the available capacity at each level. Table 7.2 describes the different types of information to be collected at the project, community, and household levels, and some modalities of data collection.

A timetable for data collection and reporting needs to be established. Indicators that measure day-to-day operations—such as attendance, use of materials, and wage payments—may need constant monitoring, necessitating data collection on a monthly, weekly, or even daily basis. Indicators that measure performance and results may need more time to allow changes to be realized. Some programs collect quarterly or annual data for these indicators.

M&E systems that are set up *before* the program starts enable the collection of baseline data on beneficiary characteristics prior to the intervention—especially on indicators relevant to the outcomes the program wants to influence (incremental income gains, food security,

**Table 7.2 Examples of Types of Data to Be Collected and Data Collection Instruments**

| *Data collection level* | *Information* | *Instrument* |
|---|---|---|
| Project | • Input and output indicators at project and local levels<br>• Efficacy of design and implementation | Management information system registry and project-level sample collection |
| Community | • Community perceptions of implementation issues<br>• Community characteristics in terms of labor market, wage rates, infrastructure gaps filled through public works activity<br>• Community perceptions of project benefit | Interviews with local officials and community- and village-level surveys |
| Household | • Household perceptions of access to program, service quality, and satisfaction with implementation<br>• Profile of beneficiaries and their households<br>• Income, assets, and welfare level<br>• Eligibility and participation in the program<br>• Amount of transfers received<br>• Follow-up with beneficiaries to gauge long-term impact | Beneficiary survey and citizen report card, cross-section household survey of beneficiaries, and longitudinal household surveys |

***Source:*** del Ninno, Subbarao, and Milazzo 2009.

consumption smoothing, etc.). Such information is invaluable in assessing the final impact of the program.

## Challenges in Setting Up M&E Systems in Public Works Programs

Country experiences point to a number of distinct challenges when it comes to public works program M&E implementation. Some of these challenges are summarized here. Building on this discussion, the "Tools and Components" section looks at how such challenges can be overcome through customized tools and approaches.

### *Operational and Capacity Constraints*

Operational and logistical difficulties—which generally go hand in hand with limited capacity—in establishing an M&E system can make it very

difficult to assess whether a public works program was successful in accomplishing its objectives. For example, in the Republic of Yemen, reaching beneficiaries and communities for M&E data collection was a difficult process in the initial years of the public works operation being implemented by the country's Social Fund for Development. This difficulty was largely due to the remote and mountainous nature of the districts involved. The amount of data needed, the time required to collect these data, and the lack of information, communication, and technology skills and infrastructure greatly constrained effective program monitoring. It took a certain amount of time and special efforts to overcome these constraints.

Similarly, Ethiopia's Productive Safety Net Program (PSNP) faced multiple operational and logistical obstacles, due to difficult access and the lack of an organized system for collecting timely information. These obstacles resulted in very little reporting being accomplished during the early stages of PSNP implementation. The program was able to deal with these issues by setting up a rapid response mechanism to detect issues requiring immediate attention and to solve implementation bottlenecks. Rapid response teams were formed at all levels of government to conduct field visits, collect information, and provide technical assistance.

### *Roles and Responsibilities of Institutions and Stakeholders*

Clarity on institutional arrangements and responsibilities for program staff and institutions at different levels is particularly vital in public works programs that are implemented by various actors such as governments, donors, nongovernmental organizations (NGOs), and contractors. Lack of coordination or willingness to share information can obviously have an impact on the amount of information and data shared. This issue can be especially problematic where contractors take a large responsibility in project reporting and the possibilities for corruption are particularly acute. In practice, this will call for a strong articulation of roles up front, including mechanisms to promote community reporting through social audits and spot checks, for example (these tools are described below).

Problems can also arise in centralized implementations, when multiple ministries are involved and implementation is handled at different levels of government. In this case, linkages within government levels should be established to allow the flow of information and feedback within administrative layers to generate the data needed for an efficient management

information system (MIS). The Republic of Yemen's public works program integrated two MISs, one used by the central agency and one designed for the field offices, to ensure a flow of information between central and local governments. Appendix H provides a detailed overview of the various roles and responsibilities established for public works M&E in Ghana at different levels of implementation.

### *Data Availability*

Data availability and information on outcome indicators is essential in monitoring program effectiveness. Outcome indicators are not collected very often for public works programs, especially where implementation capacity is very low. In the Malawi Social Action Fund program, the M&E system was not able to track outcome indicators because of poor linkages between the system and poverty monitoring activities by the Ministry of Planning and Economic Development. Consequently, outcome indicators that were included in the program design were not collected, making it quite difficult to measure the program's impact on beneficiaries and beneficiary communities (World Bank 2004).

Sometimes even input and output indicators are difficult to collect due to low capacity. This deficiency can be particularly pronounced in the early stages of program implementation, and over time, the situation can be corrected. For example, even though Ethiopia's PSNP had a strong results-oriented M&E design, the program did not have the capacity to collect the expected information. Program managers thus had to reevaluate the M&E system and simplify it. They instituted a sample-based system to collect a minimum amount of monitoring data while improvements could be made to the formal M&E system. These examples underscore the fact that M&E systems need to evolve over time.

## Tools and Components

Based on the challenges identified above, it is clear that M&E systems must be tailored to suit the particular intervention. This section reviews how a variety of M&E tools and components that have been used in safety net programs can be customized for public works programs across different settings around the world.

Table 7.3 presents a comparative overview on the use of various M&E tools and components by social safety net program type, based on a

**Table 7.3 Use of Monitoring and Evaluation Tools and Components by Type of Social Safety Net Program**
*percent*

| *Program type* | *MIS* | *Process evaluation* | *Beneficiary assessment* | *Spot check* | *Impact evaluation* | *Technical/ operational audit* | *Participatory M&E* | *Expenditure tracking study* | *Other* |
|---|---|---|---|---|---|---|---|---|---|
| Social safety net reform[a] | 80 | 30 | 30 | 10 | 40 | — | 40 | — | 50 |
| Cash transfer | 91 | 55 | 55 | 55 | 82 | 55 | 45 | — | 27 |
| **Public works** | **75** | **50** | **75** | **25** | **75** | **75** | **50** | **25** | **50** |
| Safety net programs responding to food crisis | 50 | — | 25 | 25 | — | 75 | — | 25 | 75 |
| Other | 80 | 40 | 40 | 40 | 80 | — | — | — | — |
| **Average** | **75** | **38** | **43** | **30** | **55** | **30** | **33** | **8** | **40** |

*Source:* Adapted from Rawlings et al. 2011.
*Note:* — = not available.
a. Reform of design/targeting of any cash or in-kind transfer or public works program.

review of 40 safety net projects (Rawlings et al. 2011). While far from exhaustive, the review points to some important general practices:

- M&E systems include different tools and components aimed at collecting and systematizing data required for program management.
- An M&E system may be revised to meet changing performance and tracking needs. Thus, an M&E system is a dynamic one that should adapt itself to changing needs.
- Public works programs put a strong emphasis on operational assessments, incorporating a relatively high usage of technical audits as well as beneficiary assessments. Impact evaluation has now become a common feature of many public works programs.

In addition to the tools mentioned in the table, cost-effectiveness analysis can be used to estimate the cost of transferring resources to beneficiaries. It can be used ex ante to determine the estimated cost of a public works program, and it is verified ex post, once data are available from monitoring and evaluation.

### *Monitoring*

The following describes how the two monitoring tools used most by public works programs—MIS and beneficiary assessment—have been tailored to the implementation of public works programs in specific contexts. The discussion draws on the experiences of several countries, including Ethiopia, Nepal, Somalia, and the Republic of Yemen, to illustrate the range of tailoring options that can be applied.

***Management information systems.*** An MIS is a system to collect, process, and manage program information. It includes data on program beneficiaries, disbursements, complaints, audits, and so on. An MIS does not necessarily have to be computerized; some public works programs have paper-based systems to track information. For example, Ethiopia's PSNP collects paper-based information from the local and district levels. This information is entered into computers at the regional level, where it is processed and transferred to the Food Security Coordination Bureau at the nation's capital in Addis Ababa. An MIS is the backbone of a program's M&E system, generating reports on inputs and outputs and disaggregating data by different features such as beneficiary characteristics, administrative units, or geographic locations.

In the Republic of Yemen's Labor-Intensive Works Program (LIWP), the agency that manages the project uses its MIS to record summary data on the public works projects approved and their key indicators. The MIS is also used to process payments to each project. Program managers have integrated two MISs to track program performance. The first system is within the Social Fund for Development, the central agency that manages the program; the second was designed for LIWP field offices. The LIWP MIS was developed in house as a Web-based system to enter data directly from the field. For locations without Internet access, information is collected in Excel templates that can later be imported into the system.

The LIWP MIS collects information on project operations and implementation (e.g., beneficiary households and their characteristics, type of project, wages, other disbursements, and works completion) and is entered by field officers into the system. The system then generates various reports: a household information report, a household payment list, and cumulative project information by branch office. General information on each project is imported from the Republic of Yemen's Social Fund for Development MIS; the amount of payments and units of work implemented are exported from the program MIS to the agency MIS to report on program achievements (Moheyddeen 2011).

***Beneficiary assessments.*** Beneficiary assessments are another monitoring instrument commonly used in public works programs. They evaluate program performance from the beneficiaries' point of view, and typically look at some or all of the following questions: How do beneficiaries perceive the program? Is the program targeting the needy efficiently? Do beneficiaries and communities participate in the decision making on various aspects of the program? Beneficiary assessments are seen as an important way to obtain beneficiary inputs and promote transparency and accountability. Typically, they are carried out through key informant and focus group interviews using structured and semi-structured questionnaires.

The World Food Programme (WFP) has implemented the Food/Cash for Assets Program (F/CFA) in Nepal since 2007. A notable feature of the M&E system for the F/CFA is that it is focused primarily on beneficiary perceptions and experiences at the household level (Hobbs 2011). Beneficiary feedback is collected on process and outcome indicators. F/CFA data collection begins after a project's first

distribution of food/cash and continues until the end of the project. Semi-structured questionnaires are the main tool used for regular monitoring; these are used to conduct interviews with individuals and households. Project sites to be monitored are selected randomly, and three households from each selected project site and one user committee[1] are interviewed. Secondary data, including user committee documents such as project books and meeting minutes, are occasionally consulted.

An innovative feature of F/CFA's monitoring system is its community scorecard, which was designed by the WFP as a means of gathering information from largely illiterate program beneficiaries. The scorecard elicits feedback on 11 program processes and outcome indicators by having beneficiaries score each by checking either a smiling, serious, or sad cartoon face. The scorecard is filled out during beneficiary meetings, including public audits. Facilitators explain each indicator listed on the scorecard. Each beneficiary household is then given a scorecard and asked to complete it. The scorecard thus ensures the participation of illiterate beneficiaries, as no writing or reading is needed for response (Hobbs 2011).

To circumvent any difficulties in data collection due to low in-house capacity, many public works program managers opt for simplified techniques to collect data on critical indicators. Nepal's simple scorecards and Ethiopia's rapid response mechanism both rely on random sampling of projects. Both programs illustrate how an originally ambitious M&E system was adapted and simplified to adjust to available capacity and other country-specific constraints.

The challenge of conducting meaningful beneficiary assessments should not be underestimated. Somalia's Cash for Works program attempted to conduct beneficiary assessments via semi-structured focus group discussions and interviews with key informants in addition to structured household surveys. The program organized a monitoring system to verify that wages were distributed (as either cash or vouchers) 2 weeks following program payment to worksites. Structured household surveys were conducted with approximately 10 percent of the program's beneficiaries to assess their level of satisfaction and to evaluate whether the program had met its objectives (Mattinen and Ogden 2006). However, only limited and sporadic focus group discussions and interviews were held, presumably due to logistical difficulties.

### *Evaluation*

Evaluation uses specialized methods to assess program effectiveness and final impacts on participating households. This section provides information on three types of evaluations:

- Process evaluation—to assess if the program has been implemented as designed
- Targeting evaluation—to assess if the program has reached the intended beneficiaries
- Impact evaluation—to determine if the program has the intended impact on beneficiaries.

As with monitoring, it is important to establish an evaluation system at the beginning of a program; this system is intended to

- gather baseline and follow-up information to enable assessment of whether the program's intended results are achieved;
- make timely adjustments and/or corrections to prevent distortions or negative impacts;
- justify the allocation and use of resources in terms of the results achieved;
- guide the decision-making process regarding expanding, modifying, or eliminating a program; and
- make the program accountable to the public.

Over the past 20 years, more and more public works programs have been subjected to a thorough evaluation. Programs in Argentina, India, Peru, South Africa, and the Republic of Yemen, among others, have been evaluated in depth. However, evaluation has not yet been mainstreamed across all existing programs. The reasons for the lack of evaluations vary from the temporary nature of the programs to the difficulty of collecting data mainly due to cost considerations. Recent experiences in Sierra Leone have shown that it is possible to conduct robust evaluations using some creative data collection techniques. For example, Backiny-Yetna, Wodon, and Zampaglione (2011) used a light survey, which included a limited amount of information drawn from randomly selected beneficiaries, with two key objectives: assessing the targeting performance of the program and the likely impact of the program on poverty.

***Process evaluations.*** The purpose of a process evaluation is to determine if a program is being implemented as designed. A process evaluation should be used at the start-up of a program to quickly address initial issues or bottlenecks and to allow for documented solutions in similar scenarios encountered later in the program's life. As the program matures, process evaluation provides valuable feedback about operational issues that may be identified by the monitoring system in place. Findings from a process evaluation are thus vital in improving program efficiency and effectiveness. Box 7.1 illustrates how the Republic of Yemen's LIWP adjusted critical implementation issues in response to feedback obtained through process evaluation.

Table 7.4 provides an illustrative set of questions that can be addressed by a process evaluation.

**Box 7.1**

### Using Feedback from Monitoring and Evaluation: The Republic of Yemen's Labor-Intensive Works Program (LIWP)

In Yemen, a process evaluation was conducted that involved extensive focus group discussions with all stakeholders, as well as a short but structured questionnaire (survey). Process evaluation results led the LIWP to make some corrective actions in response to key challenges related to program implementation:

- **Simplify targeting methods.** The LIWP targeting process originally took place at two levels: selection of targeted communities and then selection of the poorest households within those. Both processes were difficult and time consuming to implement, as a lack of data necessitated multiple field visits. As a result of the process evaluation, the program sought to involve local councils in community targeting and communities in selecting targeted households.
- **Enhance participation by women.** Questions in the survey identified factors preventing program participation by women, and provided information to address the issue such as implementing flexible work schedules and providing female consultants to conduct awareness campaigns and home visits.
- **Ensure sustainability of program benefits.** Monitoring field visits and qualitative data shed light on the length of time the program needed to be in place to achieve sustained benefits. As a result, the program has developed a vision to implement projects in targeted communities for 3–5 years in order to create longer-term benefits and to focus more on projects that have sustainable impacts such as watershed management.

***Source:*** Moheyddeen 2011.

**Table 7.4 Sample Questions to Address in a Process Evaluation**

| *Level of process evaluation conduct* | *Questions* |
|---|---|
| Management | • Who is implementing the projects?<br>◦ Oversight—local government, engineers…<br>◦ Use of contractors<br>• Is the program well organized?<br>• Are resources allocated according to plan?<br>◦ Are they tracked properly and delivered efficiently? |
| Project | • Are projects completed on time and to specification?<br>• How many people are being hired?<br>◦ Is this number less than expected? More than expected?<br>• What is the wage with respect to the local wage and rules?<br>◦ If not self-targeting, what selection processes are employed? |
| Beneficiary | • How did beneficiaries hear about the program?<br>• Are the beneficiaries coming from local communities?<br>• Are people being paid on time?<br>• Are the working conditions appropriate?<br>• Are there any accommodations for female participants? |

***Source:*** Adapted from Grosh et al. 2008.

Process evaluations are an integral part of the M&E process; therefore, their cost should be built into that of running the program.

***Targeting evaluations.*** The primary question targeting evaluation seeks to answer is if the program is reaching the intended people. This question can be addressed in two ways. The first deals with the geographic location of the projects. Public works projects are location-specific; therefore, well-targeted public works should be located in the areas where there are more poor people and where the population is more likely to be in need of short-term employment. The second way deals with the actual participation of poor people in public works projects. Evaluations taking this tack concentrate on welfare indicators (typically, per capita income or consumption)[2] to rank participants according to their standard of living and thus assess the effectiveness of the targeting provided by the wage rate or additional screening mechanisms.

Few evaluations of public works programs assessed the location of public works projects. Those studies that did found that some projects were not always located in poor areas. Sometimes this mismatch reflected the fact that poor areas were less accessible and more difficult to work in. In South Africa, for example, Adato and Haddad (2001) found that some

districts with high levels of poverty and unemployment had no public works projects, while others with low levels of poverty had benefited from several projects. Projects tend to be correctly targeted when the project location follows poverty criteria, such as the poverty map used in Peru's Trabajar Urbano y Rural (Urban and Rural to Work) program: 90 percent of its projects were carried out in districts in the bottom 40 percent of the poverty distribution (FONCODES 2003). On the other hand, nonpoor areas might also contain poor households; it is thus not entirely justifiable to exclude nonpoor areas from the purview of public works.

The few targeting evaluations reviewed show that, when properly designed, public works programs have been able to reach poorer households. In Argentina, 80 percent of the beneficiaries of the Trabajar (To Work) program in 1997 came from the poorest 40 percent of households in the country (Jalan and Ravallion 1999). Similarly, incidence analysis of the Jefes de Hogar (Head of Household) program found that the share of program participants among the 40 percent of better-off households in Argentina was only 6 percent in 2005, while the share of program benefits going to the bottom two quintiles was 80 percent (Lindert, Skoufias, and Shapiro 2006). A more recent evaluation of Latvia's Workplaces with Stipends (WWS) program (discussed in chapter 3) found successful targeting of poor and vulnerable people, and minimal leakage to nonpoor households.[3] Almost 83 percent of WWS beneficiaries were in the bottom 20 percent of the income distribution, and the program was credited with raising the income of participating households by 37 percent in the short term (Ajwad et al. 2012)

In Ethiopia, those who participated in public works programs had a higher income and level of assets than those who received direct support, but less than those who did not participate in either of the country's two programs (World Bank 2007). Research by Lanjouw and Ravallion (1998) found that the poorest quintile is well served by public works programs in India. More recent research carried out in three Indian states has confirmed the strong pro-poor bias of public works compared to other safety net programs (Dev et al. 2007).

The targeting performance of Peru's Trabajar Urbano y Rural program is differentiated between the urban and rural program areas. Estimates obtained using national income quintiles show that the rural program is well targeted because the rural population is overrepresented among the poor (FONCODES 2003; World Bank 2005). Nonetheless, the program's two components do an effective job in targeting, given that most of the participants (80 percent in rural areas and 75 percent in urban) are in the

bottom 40 percent of the population. In contrast, the National Safety Net program in Indonesia reached those affected by the financial crisis, who were not necessarily the persistently poor (Pritchett, Sumarto, and Suryahadi 2002; Sumarto, Suryahadi, and Pritchett 2000). However, the program was not necessarily poorly targeted, because it reached a segment who lost income because of the crisis and who faced the risk of consumption and asset loss.

Another study assessed the effectiveness of India's flagship public works program, the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS), in reaching the poor. Dutta et al. (2012) used available data sets—the National Sample Surveys—to assess the program's targeting performance. Their analysis found considerable unmet demand for work provided by the program in all states, and more so in the poorest ones, where the scheme is needed most. Job rationing was pervasive and higher in poorer states. Although MGNREGS is targeting and reaching the rural poor and backward castes, and is attracting poor women into the workforce, its targeting performance varies by state. The overall participation rate seems to be an important factor in accounting for these interstate differences in targeting performance, with the scheme being more pro-poor and reaching its intended populations more effectively in states with higher overall participation rates.

***Impact evaluations.*** The objective of an impact evaluation is to assess how the outcomes of a project have affected beneficiary households. Impact evaluation assesses the impact of the program among beneficiaries relative to the counterfactual situation where the program did not exist.

The impacts of a public works program on a beneficiary can be many; an impact evaluation can capture the following:

- If programs are able to raise the income of poor beneficiaries and help them smooth their consumption and eventually reduce their level of poverty
- If objectives such as skills development have been accomplished and if the beneficiary household could eventually use its newly acquired skills in the marketplace to generate income
- If the infrastructure and services provided by the programs have an impact on the life of the community.

The techniques for impact evaluation include randomization or experimental design, quasi-experiments such as matching or double differences,

and non-experimental or instrumental variable methods. A full discussion of these various techniques is beyond the scope of this chapter. An overview with examples taken from public works programs is available in Grosh et al. (2008).

Some important considerations to take into account before launching an impact evaluation include the following:

- Selecting an independent evaluator to ensure objectivity
- Building in an evaluation at the beginning of the program so that valid comparison groups can be determined and timely data collected
- Using appropriate quantitative methods to measure the level of the impacts
- Integrating qualitative methods to complement the findings of the quantitative methods
- Ensuring the quality and availability of data, since the quality and accuracy of the analysis will be highly dependent on these factors.

As listed above, impact evaluations typically use a comparison group of nonbeneficiaries to estimate what the welfare of the beneficiaries (treatment group) would have been if they had not participated in the program. Baseline surveys on the treatment group as well as the control group are recommended, both to determine the preprogram condition of the beneficiaries and to assess whether the two groups are in fact comparable. Box 7.2 provides an example of the baseline information collected for Rwanda's public works program.

***Evidence and challenges of impact evaluations.*** There are several challenges implicit in measuring the direct impact of public works on beneficiaries. One challenge is to define the outcome of interest clearly and determine how to measure it while taking into account the influence of other factors. If the main outcome to be measured is the increase in beneficiary household income as a result of the wage income (cash and/or food) received, the analysis needs to deduct net transaction costs (transport, etc.) as well as lost income from alternative opportunities to work. The marginal increase of income tends to be less than the level of transfer, which implies that in the absence of this program, the beneficiaries could have received some income from participating in informal jobs. When this foregone income is deducted from the public works wage, the marginal income transfer (or net wage gain) will be lower than the wage income received from the program. It is worth stressing that while the net

**Box 7.2**

## Rwanda: Information Collected for Baseline

***Household situation at the launch of the public works program***

- Household composition: adults/children by age and sex
- Level of education of each member
- Children currently enrolled in school
- Any household-specific vulnerability
- Marital status
- Housing quality
- List of all important tangible assets

***Occupation and income***

- Whether currently employed or looking for work
- Occupation of each member
- Income from each current activity
- Self-employed activities
- Net income from self-employment
- Net income from wage employment
- Amount of monthly welfare payment
- Amount from charitable organizations
- Income from other sources

***Major expenditures***

- Average total monthly expenditure of the household
- Average monthly expenditure on food
- Average monthly expenditure on nonfood items

***Financial transactions***

- Has any money been burrowed during the past month; if yes, for what purpose
- Has any money borrowed in previous months been repaid; if yes, for what type of loan
- Current debt, if any
- Have any assets been sold recently to meet household expenses
- Have any assets been purchased recently

***Source:*** Government of Rwanda 2009.

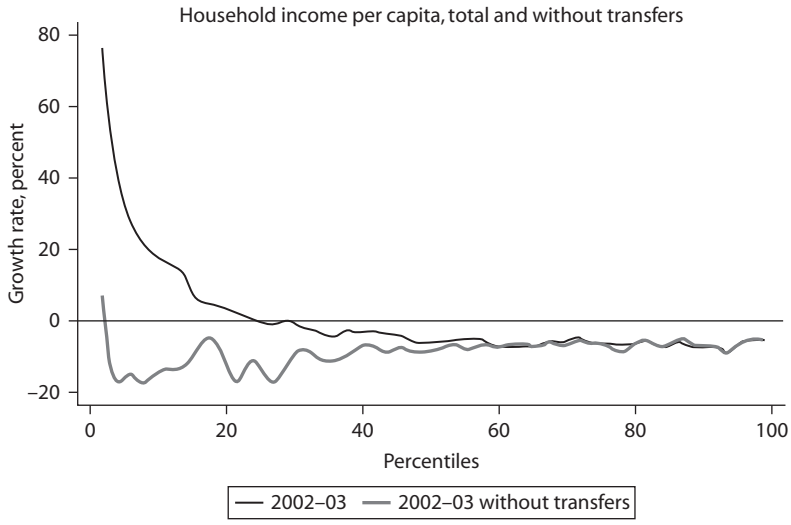
wage income gain for the participant may be lower than the wage, the gains to society may not be lower, since in a situation of high unemployment, some other person in the country would fill the job vacated by the participant in the public works program.

In Peru, Chacaltana (2003) found that the net wage gain derived from the Trabajar Urbano y Rural program was equal to 24 percent of the nominal transfer. Beneficiaries received a monthly salary of S/. 300, while the control group was able to generate S/. 227 on its own in the absence of the program. In the Jefes program in Argentina in 2002, the net wage gain (after taking into account participants' foregone income) was estimated as two-thirds of the Arg$150 benefit. This net income benefit decreased to one-third of the transfer by May 2003 (Ravallion and Galasso 2004). In Colombia's Empleo en Acción (Employment in Action), the increase in participants' monthly program employment income was, on average, close to 39 percent of the income that would be earned without a program. This percentage was much higher for youths aged 28–25 and for women: 54 percent and 90 percent, respectively (Departamento Nacional de Planeación 2004). In Liberia, Backiny-Yetna, Wodon, and Zampaglione (2011) found a net high wage gain equal to 93 percent of the salary probably due to the small substitution effect given the lack of available gainful employment when the program was in operation.

Another challenge of impact evaluation is to calculate a program's longer-term impact on poor people—that is, its ability to facilitate their smoothing consumption over difficult periods, rebuilding critical assets, finding a permanent source of income, and ultimately getting out of poverty. Achieving those outcomes not only depends on the individuals participating in the program, but also on the other members of the beneficiary households, and might take longer to achieve. Moreover, there may be contemporaneous events unrelated to the project that could influence the outcome on beneficiaries positively or negatively. Evaluation of long-term impacts thus requires additional data and sophisticated techniques. Not surprisingly, very few evaluations have assessed the long-term impacts of public works programs.

One such sophisticated evaluation was conducted on Argentina's Jefes program. In the 2002–03 period, this program prevented 10 percent of program beneficiaries from falling into extreme poverty (Ravallion and Galasso 2004) and was instrumental in tilting the overall distribution of income changes at the beginning of the recovery phase in a pro-poor way. The growth incidence curves in figure 7.1 show that while all nonparticipants had negative income growth over the period, beneficiaries

**Figure 7.1 Growth Incidence Curves in Argentina, 2002–03**




*Source:* Ravallion and Galasso 2004.

in the low-income percentiles showed positive income growth.[4] In India's MGNREGS, the decline in poverty was very low and ranged from 1.5 percent to 2 percent in the poorest state of Bihar (Dutta et al. 2010).

As noted above, programs' long-term impacts also include the acquisition of useful skills and job prospects, as well as gender- and youth-related effects. The Rural Maintenance Program in Bangladesh, for example, attempts to build basic skills and to help female beneficiaries become successful microenterprise operators with the help of local NGOs. Although not all women are successful, 63 percent of them remain members of the microenterprise group 3 years after leaving the program (Hashemi and Rosenberg 2006).

In general, public works programs' records of impact with respect to the promotion of gender equity is mixed. For example, India's Maharashtra Employment Guarantee Scheme was designed to encourage the participation of women. To this end, employment was provided within 5 kilometers of their places of residence, day care facilities were provided, and male-female wage discrimination was eliminated. As a result, close to half of all participants in the program were women (Subbarao 2003). On the other hand, in South Africa, although women were among the main target groups of the public works program, only 23 percent of those employed by the program were women (Adato and Haddad 2001).

Several studies found that public works programs had a positive impact on beneficiaries, at least in the short term. Long-term impacts have also been shown to be positive, but fewer studies are available in this respect. Findings from quantitative evaluations have been supported by qualitative evaluations. For example, qualitative evaluation of Ethiopia's PSNP has shown positive impacts, supplementing the findings of quantitative evaluations (see chapter 12 and appendix I for an overview of these quantitative evaluations). PSNP qualitative evaluation has shown that 60 percent of program participants were less likely to sell assets to buy food in 2005 and 30 percent enrolled more of their children in school.

***Secondary and indirect impact.*** The secondary and indirect impact of public works programs on communities is an important outcome worth exploring. The types of indirect impacts usually considered include the positive effects generated by the assets created (schools, roads, etc.) and the fact that private labor markets could possibly be tightened when a large public works program is operational. A recent study of MGNREGS (Berg et al. 2012) found that the program has had significant labor market tightening impacts. Using monthly wage data for the period 2000–11 for 240 districts across 19 Indian states, the researchers determined that, on average, MGNREGS boosts real daily agricultural wage rates by 5.3 percent. It takes 6–11 months for an MGNREGS program shock (essentially a high-intensity shock to the *private* labor market because it offers guaranteed employment in the *public* sector for 100 days on demand) to feed into higher wages in private agricultural labor markets. Berg et al. argue that since most of India's poor live in rural areas, and the poorest are agricultural laborers, MGNREGS constitutes a potentially important antipoverty tool because of its indirect impact in raising agricultural market wages. An earlier study (Gaiha 2000) noted similar labor market tightening impacts of the Maharashtra Employment Guarantee Scheme by exercising an upward pressure on agricultural market wages.

Quantitative studies show that well-designed public works programs have the potential to confer significant social gains from the assets created. Evidence suggests that in Zambia 37 percent of people in the areas covered by public works projects improved their access to market (the program reduced distances by connecting previously disconnected road networks). Further, 15 percent of persons living in the project area said that student school attendance had improved because of the program. Finally, 13 percent indicated that the program had improved access to health services because of an improved ability to pay (World Bank 2006). In Peru, the benefits of

community assets built represent a 54 percent additional return for labor (Chacaltana 2003). This figure is slightly lower than the indirect multiplier of civilian works—estimated to be between 1 and 2—but this is the result of the mix of projects, which include activities that can provide a small added value to the rest of the economy, such as afforestation. The overall multiplier effects of additional employment in the local economy were found to be positive in the long run, particularly where incomes saved were invested in further productive activities.

### *Cost-Effectiveness*

Public works, like all other safety net programs, transfer cash benefits to participants, albeit in return for work. As such, it would be useful to determine how cost-effective a public works program is in transferring income to the poor, relative to other safety net programs. Estimation of cost-effectiveness should take into account both the costs and the benefits of the program. The analysis of program cost usually takes into account both the direct and indirect impacts of the program before concluding if public works are an expensive way to transfer income to poor households compared to other programs. Cost information should include budget data disaggregated by activity (labor, administrative, managerial, input materials) and by project (roads, irrigation infrastructure). It should also take into account targeting efficiency to assess the proportion of funds that actually reach the intended beneficiaries. The calculation of benefits should include short-term direct outcomes, measured by the increase in employment and income of participants, discounted by the cost of participation and opportunity cost[5]; and the potential medium- to long-term indirect impacts, measured by value added to the community and second-round employment benefits from assets created.

Typically, the information needed to conduct a comprehensive analysis of costs and benefits is not available at the start of the program. In the absence of such information, analysts have attempted to calculate cost-effectiveness using plausible assumptions. Ravallion (1999) suggested simple analytical tools to calculate a comprehensive measure to rapidly appraise the cost-effectiveness of public works programs in raising the income of the poor. The analysis proposed focuses on the values of five key variables:

- The proportion of the total wage bill over the total operating cost
- Targeting performance—proportion of the wages paid out to workers who are poor as a percentage of total wages paid to all workers (both poor and nonpoor)

- Net wage gain—gross wages minus all costs of participation incurred by workers
- Indirect benefits flowing from the assets created
- Budget leverage or the share of the government's outlay that actually benefits the poor when cofinancing from communities is required.

The results of a simulation analysis in a low-income setting show that the cost of transferring $1.00 to poor people (i.e., persons falling under the poverty incidence rate of 50 percent for the country) works out to $2.50 if future gains from assets created are taken into account and $3.60 if only current benefits are considered. These simulations may still not fully take into account the indirect and secondary beneficial effects of public works programs noted above; to this extent, they probably overstate the costs of transferring wage income under public works programs.

A slightly modified and simplified method to calculate cost-effectiveness has been used recently in several countries for which there has been more information to calculate the cost of transferring $1.00 of benefits after the program has been implemented and M&E data are available. The results, as detailed in box 7.3, range from $1.80 in Ethiopia to $4.23 in Liberia. The differences in the results are due to variations in program design and implementation as well as to the opportunities available in the labor market. Information on the benefits of infrastructure projects are more difficult to find; therefore, their overall cost-effectiveness is seldom calculated.

## Evolving Issues for Public Works Programs

Evidence from experiences with M&E in several countries has shown both the potential and the challenges of obtaining robust results that can influence not only the design of a specific program in a particular country, but those of programs in other countries. Some evidence deals with the costs associated with setting up and running an efficient M&E system, especially one that will undertake an in-depth impact evaluation. Another set of challenges entails investment in the use of technology that could facilitate the collection of M&E data (see the study on India) and reduce the cost of M&E in the long and medium term. Different issues are faced in setting up and implementing short-term and temporary public works in response to crises, where insufficient time is available to institute a proper M&E system. Finally, measuring the aggregate impact of public works is a useful endeavor, but one not done very often because of its

**Box 7.3**

## Examples of Cost-Effectiveness Calculations

The cost-effectiveness of public works programs in Ethiopia, India, Liberia, Niger, and Sierra Leone—countries for which databases are readily available—was calculated using the following four variables: the share of wage costs relative to program costs, targeting performance, net wage gain (the share of the gross wage received by the poor after taking into account any foregone income), and indirect benefits that accrued to the poor from the assets created or services provided. These variables and the analysis are detailed below and summarized in the table.

The *average share of wage costs* for some successful public works programs in low-income countries ranges from around 60 percent in India's National Rural Employment Guarantee Scheme, 65 percent in Liberia, 60–80 percent in Bangladesh's Food for Work Program, 70 percent in Niger, to 85 percent in Ethiopia's Productive Safety Net Program (PSNP). In higher-income countries, the share of wage cost varies depending on the type of activity. In Argentina, for example, the share was about 40 percent in construction projects, and a much higher 80–90 percent in service industry projects.

*Targeting performance* measures the proportion of wages that went to beneficiaries in the two poorest deciles of the population. PSNP represents good international practice in this regard, with 87 percent of beneficiaries in the target group. In Liberia's Cash for Work Temporary Employment Program, it is estimated that between 74 and 86 percent of the program participants are poor. In Bangladesh's Employment Guarantee Program, 80 percent of the beneficiaries are poor: approximately 67 percent of program benefits went to the poorest 40 percent of the population, and 37 percent went to the poorest 20 percent. Achieving high targeting efficiency is not easy; in Sierra Leone, only about 46 percent of program participants are likely to be poor.

*Net wage gain* measures the share of the gross wages received by participants after taking into account any income that would have been expected in the absence of program participation. The gains are usually higher if the programs are run during the lean agricultural season. International experience varies greatly, ranging from 50 percent in the Jefes program in Argentina, where more work alternatives are available; to around 75 percent in India, 79 percent in Sierra Leone, and 93 percent in Liberia. Liberia's high percentage reflects the fact that

*(continued next page)*

**Box 7.3** *(continued)*

approximately three-quarters of the program's participants had no other income or employment before the program began, and so foregone earnings were very low (Backiny-Yetna, Wodon, and Zampaglione 2011). Some analysts tend to discount losses due to wage substitution, because others may benefit from the job opportunities made available when those people leave to participate in public work activities.

The *indirect benefits* derived from public works programs accruing to the poor are more difficult to estimate. While some traditional public works program activities are of considerable importance to the poor, as shown in ex post evaluation (e.g., construction of schools or work in hospitals, clinics, schools, or soup kitchens), others are probably "make work" activities with small benefits (second-hand clothing recycling or handicrafts). The indirect benefits have been estimated to be around 80–85 percent in Ethiopia, Liberia, and Niger.

| *Factor* | *Bangladesh* | *India* | *Ethiopia* | *Liberia* | *Niger* | *Sierra Leone* |
|---|---|---|---|---|---|---|
| Wage share | 0.65 | 0.71 | 0.85 | 0.65 | 0.7 | 0.68 |
| Targeting performance | 0.8 | 0.7 | 0.87 | 0.46 | 0.8 | 0.8 |
| Net wage gain | 0.5 | 0.5 | 0.75 | 0.79 | 0.8 | 0.93 |
| **Cost-effectiveness** | **0.26** | **0.25** | **0.55** | **0.24** | **0.45** | **0.51** |
| Cost to transfer $1 in benefits to the poor | **3.85** | **4.02** | **1.8** | **4.23** | **2.23** | **1.98** |
| Share of indirect benefits to the poor | — | — | 0.85 | 0.8 | 0.8 | — |
| Cost-effectiveness ratio | — | — | 0.47 | 0.19 | 0.36 | — |
| Cost to transfer infrastructure benefits to the poor | — | — | **2.13** | **5.29** | **2.79** | — |

***Sources:*** Backiny-Yetna, Wodon, and Zampaglione 2011; Backiny-Yetna et al. 2011; Grosh et al. 2008; Subbarao 2003; Teklu and Asefa 1997, 1999; World Bank 2012.
***Note:*** — = not available.

complexity. The few quantitative studies conducted have shown that well-designed public works programs can have a positive impact on poor communities.

### *Cost Considerations*

M&E systems can be costly depending on their level of complexity. This cost is part of the administrative expense of running a program. In public works programs, the share of administrative cost with respect to total program costs varies widely. The cost of evaluations can be particularly high, and, since they are not done continuously as is monitoring, their cost may be overlooked or inadequately budgeted for. Provision for evaluations should be made even in small program budgets. Some programs opt for a one-time evaluation to assess a few important questions on program implementation, targeting, or impact; others prefer regular but smaller evaluations that may be less expensive (see Liberia case study in chapter 13).

In the case of Nepal's F/CFA, the cost of operating the monitoring system and conducting regular evaluations is approximately $100,000 per year, according to the WFP. This includes salary for eight full-time staff members and costs to transmit the information. The cost represents close to 1 percent of the entire F/CFA operating budget. When the cost of conducting external evaluations is factored in (the WFP recently undertook a more detailed baseline nutrition evaluation for the micronutrient powder component of the F/CFA program), the total cost for evaluation is likely closer to 2–3 percent of the total F/CFA budget.

Even though it is important to obtain relevant and rich data, complex, multimodule systems that collect large amounts of data can end up being a costly bureaucratic burden that does not lead to relevant results. It is important to establish a balance between cost and the amount of information that is practical and realistic to manage, given a country's institutional capacity. Given a specific budget, managers need to decide what is the optimal number of indicators needed to monitor program performance and to ensure an adequate level of transparency and accountability.

### *Use of Technology*

A few programs have invested in sophisticated information technology to overcome various implementation-related obstacles, including some related to M&E. For example, to address difficulties in data collection, the Republic of Yemen's public works program developed an in-house, automated, Web-based system to facilitate the collection of implementation-related data

from the field. However, entering data from the job site remains difficult due to the lack of adequate information and communication technology infrastructure and project staff skills. As explained earlier, extending the MIS in the Social Fund for Development to cover the program's main activities was extremely beneficial in improving the flow of information between government levels through electronic means. The MGNREGS program in Andhra Pradesh, India, is perhaps the most iconic example of how information technology has been leveraged to promote effective program monitoring. A variety of information technologies—including biometric technology, mobile phones, and the Internet—are enlisted to facilitate the monitoring of this large public works program, assessing program performance in real time and providing strong checks on fraud and corruption. These innovations have a correspondingly large price tag, however. Even though the software was created at no cost, the state government pays about $1 million annually for troubleshooting and software improvements, as well as for specialized field staff to support and manage the software. (For more information on India's program and its innovations, see chapter 10.)

### *Planning Monitoring and Evaluation in Fragile Economies*

Countries with economies that are fragile or emerging from a long-time crisis face particular challenges in implementing M&E systems. It is useful to look at the example of Liberia's Cash for Work Temporary Employment Project in this regard. The program experienced—among other challenges—understaffing, lack of information technology capacity and Internet connection, and a low budget. These deficiencies necessitated a simplified M&E system that drew on the support of stakeholders such as EcoBank, nonprofit organizations, local authorities (mayors and district commissioners), and communities. The Liberia Agency for Community Empowerment, the implementing organization, had broad experience in implementing community empowerment projects. Using stakeholder capacity was an efficient way to overcome some of the program's main constraints. Community involvement at each step of program implementation was another successful feature. For example, communities undertook monitoring activities through community facilitators; this has been a partial solution, as challenges and areas of improvement still remain with regard to monitoring. The program was able to conduct both a quantitative and a qualitative light evaluation at a low cost. This suggests that high-quality light evaluations (with drastically reduced structured questionnaires) are a valuable alternative for capacity-constrained programs,

particularly if the information can be cross-checked and complemented by administrative records.

### *Measuring Aggregate Impact*

Measuring the aggregate impact of public works is a difficult task and is thus not typically undertaken. There are, however, a few examples of impact evaluation that show the overall positive impact of those public works programs that use a higher percentage of labor intensity than that applied to a typical infrastructure program. Ramilison and Randrianarison (2007) use a macroeconomic model to assess the comparative advantage of using high-labor intensity versus high-mechanical intensity in public works programs in Madagascar. They found that high-labor intensity programs have a much higher level of value-added consumption, household income, and job creation than high-mechanical intensity programs (table 7.5). This higher level derives largely from the indirect contribution of high-labor intensity.

Alternatively, a computable general equilibrium model can be used to measure broader impacts on macroeconomic variables such as net jobs created, income redistribution, and so on. Using this approach, Narayana, Parikh, and Srinivasan (1991) found the aggregate impact of public works programs to be highly beneficial to poor households.

**Table 7.5 Comparative Analysis of the Investment Impact of Infrastructure Work in Madagascar**

| *Description of components considered* | *High-labor intensity* | | | *High-mechanical intensity* | | |
|---|---|---|---|---|---|---|
| | *Effect* | | | *Effect* | | |
| | *Direct* | *Indirect* | *Total* | *Direct* | *Indirect* | *Total* |
| Total value added | 72.7 | 170.9 | 243.7 | 35.8 | 84.2 | 120.1 |
| Consumption | 60.2 | 191.0 | 251.2 | 29.7 | 94.1 | 123.8 |
| Household income | 72.7 | 230.7 | 303.5 | 35.8 | 113.6 | 149.5 |
| Public deficit | –155.3 | 15.6 | –139.7 | –152.3 | 7.7 | –144.6 |
| Public expenditure | –164.4 | 0.0 | –164.4 | –164.4 | 0.0 | –164.4 |
| Public revenue | 9.1 | 15.6 | 24.7 | 12.1 | 7.7 | 19.8 |
| Import duty | 8.4 | 8.9 | 17.4 | 11.8 | 4.4 | 16.2 |
| Tax on goods and services | 0.0 | 4.6 | 4.6 | 0.0 | 2.3 | 2.3 |
| Income tax | 0.7 | 2.1 | 2.7 | 0.3 | 1.0 | 1.3 |
| Balance of trade | –91.7 | –97.4 | –189.0 | –128.6 | –48.0 | –176.5 |
| Job creation | 54,276 | 96,814 | 151,090 | 26,746 | 47,707 | 74,452 |
| Coefficient | — | — | 1.48 | — | — | 0.73 |

***Source:*** Ramilison and Randrianarison 2007.
***Note:*** Measured in ariary billions. — = not available.

## Lessons and Conclusions

The design and implementation of an M&E system is a core element of program implementation. It ensures not only successful program performance but also provides necessary feedback regarding processes and impact. From the review of numerous M&E systems in public works programs, the following conclusions and recommendations emerge:

- Project design should involve a thorough consideration of the technical, institutional, and political aspects of M&E and the costs, actions, and technical assistance needed to implement the proposed M&E system. Assessing the capacity of implementing organizations allows managers to anticipate challenges and look for alternative solutions in implementation such as using private contractors or using simplified monitoring methods as in Ethiopia and Nepal.

- M&E activities should be accorded realistic time frames that take into consideration the need to develop terms of reference and carry out the contracting process, as well as unforeseeable situations during data collection. Similarly, managers need to pay close attention to how project implementation affects planned M&E activities—particularly the timing of baseline data collection for program evaluation, delays in project activities that affect reporting on results, contracting of external evaluations and surveys, and whether performance indicators are being generated as planned through M&E instruments.

- M&E systems can—and should—evolve over the course of a program's life. An M&E system should start simply—for example, using existing systems for early monitoring and building on them. Additional components can be added, as well as deeper and more detailed information, as monitoring capacities improve and the M&E system is strengthened. As discussed earlier, managers in the Republic of Yemen added extra sets of indicators to monitor and evaluate program outcomes after the first phase of the LIWP had been completed.

- M&E systems can also use innovative ways to obtain feedback. For example, Nepal's F/CFA program developed a pictogram-based scorecard to elicit feedback from a beneficiary population with a high illiteracy rate. The Republic of Yemen's LIWP hired female community facilitators to reach out to female beneficiaries and promote their participation.

- An MIS is at the heart of an M&E system, able to provide a wide range of operational assessment tools. Programs can use an information technology–based MIS to maximize operational capabilities for monitoring as in the case of MGNREGS in Andhra Pradesh. Even without information technology capacity, an MIS is a starting point to collect and process program information. It can also serve as an important link to promote coordination within and among implementing institutions.

- Impact evaluations should be used selectively. They are most useful when a project is innovative, replicable/scalable, addresses a knowledge gap, and is likely to have substantial policy impact. Impact evaluations must be closely coordinated with project implementation. Operational program rules will frame how to identify the comparison group needed for the counterfactual.

## Notes

1. A user committee is made up of persons who actually use and benefit from the project output, such as, for example, a road or a small irrigation system.
2. To be comprehensive, a consumption indicator should capture all *i* components, such as food, nonfood, and services, as well as the value of goods produced and consumed by the household and the imputed value of durables or the rental value of an owner-occupied dwelling. Similarly, a comprehensive income indicator should cover the incomes earned by all household members from formal and informal sources and the value of goods produced and consumed by the household (Grosh et al. 2008). For guidance on constructing a consumption-based welfare measure, see Deaton and Zaidi (2002); for guidance on constructing an income-based welfare measure, see Eurostat (2003).
3. The WWS program targeted all registered unemployed people who were not receiving unemployment benefits; opportunities were provided on a first-come, first-served basis. The WWS program participants, half of whom were women, were eligible to work up to 6 months, with a 2-week minimum requirement. The WWS opportunities included work on public infrastructure maintenance, environmental clean-up, social services (working through civil society organizations), and municipal and state services (excluding municipal and state enterprises). The program benefits were rationed using a self-targeting mechanism with two main components: (1) a relatively low stipend was offered to WWS participants (approximately 80 percent of the net minimum wage, or $200 per month); (2) WWS opportunities were labor intensive and thus generally unattractive to better-off households.

4. Growth incidence curves allow comparison of the incidence of growth in poorer segments of the population with that of richer segments or with the rate of growth of mean income (or expenditure).
5. The loss of income transfer due to the opportunity cost might be overestimated in the aggregate. It is possible that those few income opportunities bypassed by participants in the public works program are being taken by other poor people.

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PART 2

# Case Studies

CHAPTER 8

# Rwanda: Wage Setting—From Policy to Practice

This case study explores the evolution of wage setting in Rwanda's public works programs, focusing on the Vision 2020 Umurenge Program (VUP), one of three flagship programs under the government's Economic Development and Poverty Reduction Strategy 2008–12. Rwanda is an excellent example of a country that has faced some of the most common challenges in wage setting, in particular, the calibration of an efficient wage level—that is, one that promotes self-selection among poor beneficiaries and does not distort the local labor market. With the country's long history of public works implementation, Rwanda's wage-setting policy has evolved over time, ultimately achieving a consensus and adoption of efficient wage levels conforming to international good practice.

The case study is divided into four sections:

- "General Context and Background of Public Works in Rwanda" provides the general context, describing the need for public works programs in Rwanda and the administrative governmental structure created to implement them.

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- "Evolution of Wage-Setting Policies in Rwanda" explains how wage-setting policies have evolved over time, influencing the design and policy choices of the VUP public works across key pillars—namely, wages are set locally, at less than or equal to market rates for an 8-hour workday equivalent and on a project-by-project basis.
- "Wage Setting in Practice: Challenges and Solutions" outlines relevant wage-setting policy features and challenges specifically under the VUP public works, including that of avoiding inclusion errors of nonpoor beneficiaries, monitoring wage rate data, and eliminating problems in the payments process. This section shows how VUP is drawing on lessons from past experience and how wage-setting policy has evolved to conform with best practices in the Rwandan context of decentralized public works administration.
- The last section of this chapter outlines the main lessons learned, highlighting the challenges of achieving efficient wage policies against a backdrop of wider administrative and operational challenges.

As both VUP and its administration are constantly evolving, note that this case study reflects the VUP public works program, implementation arrangements, and lessons learned as of 2010.

## General Context and Background of Public Works in Rwanda

### *Country Context*

Known as the Land of a Thousand Hills, Rwanda is a small, land-locked country of 26,338 square kilometers, of which over 96 percent is land. It is densely settled, with a population of 10.2 million. The annual average population growth rate from 2005 to 2010 was 2.7 percent, which is relatively high; urban and rural population growth rates for the period were 4.2 percent and 2.4 percent, respectively.

Forty-five percent of the land is dedicated to agriculture, and agricultural work predominates, with approximately 72 percent of the population living in rural communities. Over 85 percent of the working population is involved in agricultural activities, and the agricultural sector accounted for about a third of the country's overall gross domestic product (GDP) in fiscal year 2009/10 (NISR 2011). The population density and high population growth rate mean that landholdings are typically small; these average less than a hectare per person. As a consequence, agricultural production tends to be on a subsistence basis. The hilly terrain negatively affects the land's agricultural productivity. Rwanda's rainy seasons are February to April and November to January.

The country's troubled history has resulted in a significant proportion of the working-age population lacking formal education, restricting their ability to access better-paying work. This limitation particularly affects the rural population, which already has little access to work opportunities outside the agricultural sector. Consequently, the rural population is highly dependent on subsistence agriculture to support their families, sometimes supplemented by casual work (petty trade, farm labor, etc.). The government of Rwanda has used public works programs as a means of providing poor families with wage-earning opportunities while creating and rehabilitating community assets, generally of an infrastructural nature.

### *Early Public Works Experiences*

Rwanda's experience with public works programs stretches back over 30 years, during which time several donor partners have implemented public works initiatives, albeit with differing wage rates, objectives, and target groups (table 8.1). The first of these, the pilot Labor-Intensive Special Public Works Program, was formulated in 1978 and implemented in 1980. It was financed over a three-year period by the government of the Netherlands, and supported by the International Labour Organization (ILO). The program was expanded for two implementation phases through 1991, with continuing support from the Netherlands as well as from Austria, Italy, and the United Nations Development Programme. Works were carried out mainly in the provinces of Gitarama and Ruhengeri, and the overall program was implemented by the Ministry of Internal Security. In 1991, the Programme National d'Actions Sociales (Social Action National Program) was developed to take over from the pilot program. The new program was implemented in two phases lasting until 1998 by the Ministry of Planning, with financial support from the United Nations Development Programme and the World Bank.

Rwanda next developed a public works program in 2002 to address the urgent need of quickly reabsorbing the half-million unemployed and

**Table 8.1 Institutional Structure in Rwanda**

| | |
|---|---|
| Provinces | 5 |
| Districts | 30 |
| *Imirenge* (sectors) | 416 |
| *Akagari* (cells) | 2,148 |
| *Umdugudu* (villages) | 14,837 |

***Note:*** The country has four provinces (Northern, Southern, Eastern, and Western), and Kigali City, though a local government, has a status equivalent to that of a province.

underemployed people in the country's rural areas. The program was devised to target specific vulnerable groups including ex-combatants (50 percent) and female victims of genocide (50 percent), demobilized soldiers, militia, and detainees. Featuring infrastructure and service projects, the new program, Programme de Développement Local à Haute Intensité de Main-d'Oeuvre (Local Development Program: Labor-Intensive Approach—PDL-HIMO), was designed.[1] The program was launched in November 2003, with support from the ILO. Shortly thereafter, the Cabinet adopted the Labor Intensive Public Works Strategy.

### *Public Works under the VUP*

In 2007, despite remarkable economic growth since 2000/01, a large proportion of Rwandans still lived in extreme poverty. It became clear that unless action was taken, the country's aspirations regarding poverty reduction would not be achieved. In response, the government in 2007 developed the VUP during its annual retreat. VUP is a broad national social protection program aimed at reducing the country's rate of extreme poverty from 36.9 percent in 2007 to 24 percent by 2012.[2] VUP was launched under the Economic Development and Poverty Reduction Strategy 2008–12; it consists of three components, one of which is the public works program discussed here. While this component kept a focus on labor-intensive techniques, it also emphasized community-based participatory approaches to build community assets and create off-farm employment infrastructure. The public works component under VUP is complemented by a direct support component to improve access to social services for labor-constrained households, as well as a financial inclusion component to promote entrepreneurship and employment.

The design of the VUP public works program was informed and enriched by Rwanda's previous experience, encompassing a focus on labor-intensive approaches to asset creation, the role of community participation, and the centrality of wage setting to ensure good targeting performance. Launched in February 2008 in a single sector per district (see table 8.1 on administrative structures), by 2009, the public works component was scaled up to two sectors per district. As of July 2010, the VUP public works component, together with its direct support component, had been scaled up to 90 sectors, 3 per district. By July 2011, it had been scaled up to 120 sectors, 4 per district. The scale-up plan envisages that all sectors in the country will be covered for direct support by 2016; by that time, 240 sectors will have been reached for public works.

The percentage of the public works budget spent on labor wages has remained high since the start of VUP; in 2009/10, it was 88 percent. The remainder of the program's budget goes to inputs, supervision, and contractor costs for worksite supervision. On average, a participating household worked 69 days in 2009/10 and earned a total of RF 63,423 ($109) in wages, equivalent to RF 454 ($0.78) per day.[3] Information collected on beneficiaries' use of their public works wage income from VUP shows they are being invested in similar ways as direct support transfers—on consumption, human capital, asset accumulation, house building and renovation, income-generating activities, and savings.

There was an average of one project per sector in 2008 and during the season running from January to June 2009, and two projects per sector in 2009/10 (123 in total for the year). Environmental protection projects (mainly antierosion ditches and terraces) have predominated and continue to increase in number; such projects accounted for 58 percent of the works undertaken in 2008 and 72 percent of those undertaken in 2009/10. Roads are the second most common type of VUP public works project. Project types have diversified over time. New projects implemented in 2009/10 included the construction of school classrooms, marketplaces, water infrastructure, health centers, improved furnaces, bridges, and crop cultivation (Government of Rwanda 2007; World Bank 2010).

The VUP public works component, like most of Rwanda's programs initiated since 2000, relies on decentralized implementation. Much of the administration and implementation of Rwandan programs occurs at the district, sector, cell, and village levels. The Ministry of Local Government (MINALOC) oversees the activities of these decentralized entities; it is also the ministry responsible for VUP oversight and monitoring. Until 2010, VUP was located within the Common Development Fund—a government-owned entity to support decentralized administration—with oversight by a director, reporting to a board of directors. A VUP central management team, led by a national coordinator, centrally managed the program and reported to the Common Development Fund. This structure has since changed, in response to the National Social Protection Strategy approved in January 2011. The strategy is implemented by a newly created Rwanda Local Development Support Fund, whose 60-member staff is responsible for, among other tasks, VUP implementation. However, it is too early to draw any lessons from the new administrative structure.

The primary point of VUP service delivery is at the decentralized sector level, where two posts—program manager and finance manager—have been created in each of the sectors in which VUP is active (120 as of July 2011).[4] These posts serve two main functions: to administer VUP in the sector, and to build the sector's capacity so as to eventually migrate VUP management into the government's own administrative structure.

## Evolution of Wage-Setting Policies in Rwanda

Under an increasingly harmonized policy and program agenda between government and development partners, VUP has leveraged both past experience and stakeholder support to develop and adopt best practice policy. During VUP public works program design, the following key pillars of wage setting were identified:

- Wages should be set locally (at the sector level), not nationally.
- Wages should be set as less than or equal to market rates for similar work, and include a requirement of 8 hours of work per day.
- Wages should be set on a project-by-project basis according to project type.

Much of the motivation for these pillars stems from previous experiences, which have provided insight on the practical operational support requirements to turn design features into workable program arrangements. For instance, under the PDL-HIMO in 2003, program managers grappled with the use of local market versus fixed wage rates. Initially, under the guidance of the ILO and the Ministry of Finance and Economic Planning, PDL-HIMO wage rates were set at local levels so as not to distort the local economies, contribute to inflationary tendencies, and risk paralyzing other activities implemented by other stakeholders locally. In practice, this approach ran into a number of obstacles. While PDL-HIMO would monitor the local market wage rates, no specific mechanism was established to ensure that this was adhered to (e.g., a system for redressing grievances, or a monitoring mechanism). The relevant government ministries or districts would tender to private third-party implementation agencies to supervise the work and make payments to the workers. These agencies often established their own wage levels with minimum external interference. As a consequence, different implementing agencies had different wage rates—sometimes in the same locality. For example, the large-scale tree-planting project conducted between 2004 and 2006 in the

Bugesera region, in which close to 3 million trees were planted and tended to for a total cost of RF 624.2 million (about $1.06 million), was implemented by three different agencies, two nongovernmental organizations, and one private company. Each agency applied its own wage rate; these ranged from RF 350 to 500 ($0.70–0.90).

Despite a clear vision and past experience to draw on, the policy options for VUP in general and for its public works component in particular were not straightforward. Various policy options had to be weighed against each other to ensure the cohesiveness of the overall program; this was especially true for the wage rate-setting policies where multiple policy objectives had to be aligned, including the following:

- Balancing a preference for self-selection of public works beneficiaries through wage rates set at below market rates, so as to minimize distortion of local markets
- Fostering a savings mentality and encouraging investments in small microenterprises without attracting the nonpoor to the program
- Balancing the desire to minimize fraud and increase efficiencies of timely payments to beneficiaries with the need to support practical implementation arrangements in low-capacity and decentralized settings.

The "Wage Setting in Practice: Challenges and Solutions" section discusses some of the challenges and solutions adopted in refining wage-setting approaches for public works under VUP, in consideration of the above issues.

## Wage Setting in Practice: Challenges and Solutions

This section elaborates on the chief features, practical implications, and challenges of VUP's wage-setting policies.

### *Promoting Self-Selection among Eligible Households*

An important challenge for a public works program is the adoption of an efficient wage policy—that is, one that promotes self-selection among poor beneficiaries and does not distort the local labor market. To avoid the latter, Rwanda implemented a policy that, throughout the country, the public works wage rate was not to exceed the private wage rate for similar labor-intensive work in the same geographic labor market area

(Government of Rwanda 2009; World Bank 2009). In addition, the wage rate would adjust to control for price inflation, even if this implied fewer work slots (Sabates-Wheeler and Devereux 2011).

Available evidence points to some difficulties in setting wages below prevailing market rates. An internal VUP comparison of local wage rates with public works program wages in 2009 found that in 14 of 30 sectors, wages were actually higher than the market rate by an average of about 10 percent. The analysis of VUP wage rates is based on data from sectors that reported data for the two periods (November 2009 and July 2010), reviewing project types and labor types and using casual labor in the community for comparison. Similarly, findings from an external assessment conducted during May–June 2010 revealed that about 63 percent of VUP beneficiary households reported their wage rate as higher than the market for similar non-VUP-supported jobs, especially in the Western and Northern Provinces (Kimetrica International Limited 2010).

Despite these findings, it has generally been accepted that VUP's market distortion effects may be overstated. In 2010, a review by the U.K. Department for International Development (DFID) noted that prevailing market wages tended to be unreasonably low because there is a far greater supply of labor than there is of demand. This conclusion helped support the continuation of local wage setting and to dispel notions that the public works program was negatively distorting the labor market. The review also found that allowing the public works program to exert higher pressure on daily wage rates would be a positive indirect benefit of the program.

Notwithstanding the generally positive findings on wage setting, a key concern has emerged around possible inclusion errors—that is, ineligible households participating in public works projects. During 2008, 18,304 households participated in VUP public works. The number participating in January–June 2009 was similar, but increased significantly in 2009/10 to 61,335 households (which is around 21 percent of all households in the sectors). Almost half (49 percent) of the households participating in 2009/10 were headed by females. The VUP annual target is that at least 35 percent of eligible households participate in public works during the year. In 2009/10, 77 percent of eligible households participated; this was more than double the target. However, a sizable proportion of ineligible households also participated (36 percent of total public works households in 2009/10 were ineligible).

Two factors need to be taken into account when considering the possibilities of inclusion error under the public works VUP. First, the timing and seasonality of the program matters. The seasonal nature of projects, delays

in project start-up, and need for timely completion have been contributing factors toward ineligible households sometimes participating in VUP public works at the expense of targeted eligible households. The implications are that some eligible households receive fewer days of work, and some are not employed at all. Scarce resources are not spent as efficiently as they could be, which has implications for extreme poverty reduction.

Second, key policy objectives around income support and savings had to be clarified and balanced. During the original VUP design, for 8 hours of work, the wage rate was set at RF 700 ($1.32), of which RF 200 ($0.38) was to be saved. To meet the mandatory savings objective, wage rates were set above local market wage rates. These policies were operationalized, but soon revealed limitations and gaps. For example, mandatory savings appeared to limit the ability of extremely poor households to meet their immediate and basic needs, a key VUP objective. Following careful consideration of past experience and drawing on best international practices—including eliciting input from development partners—the original policies were revised at an early stage. A new wage rate policy was adopted that set the VUP wage rate equal to the local market wage. A new voluntary savings policy was also introduced; it encouraged rather than mandated savings, while maintaining the VUP spirit of fostering small-scale investments and graduation and giving beneficiaries autonomy over their own earnings.

### *Monitoring Wage Rate Data*

Building on previous lessons learned, the program established strong monitoring arrangements to support its wage-setting policy. VUP developed a formal monitoring framework, as set forth in its 2009 Monitoring and Evaluation Manual, and reinforced the framework by providing training to local VUP staff. This approach strongly contrasted with the informal wage rate norms and monitoring practices established under PDL-HIMO. As part of the monitoring process, VUP management could verify the wage rates from different sectors. Parameters influencing the wage-setting policy could also include project types and variations in skills and tasks of beneficiaries of VUP public works as the wage rate may differ across agricultural/environmental, roads, construction, and water infrastructure projects. Variation across different levels of skills and roles also could be considered, for example, between ordinary (unskilled) casual labor, mason and mason's aid, team leader, and supervisor. Regardless of variations, the local wage rate would always be referenced, set by local VUP sector staff.

This basic principle implies that wage rates could be set comparing the type of VUP project planned for the sector against the sector's average market wage rate for unskilled workers doing similar work. In practical terms, this means that

- VUP sector staff collect wage cell-level data,
- the median is computed at the sector level, and
- the median is then used as the benchmark to ensure VUP wage rates in the sector are less than or equal to the sector's median average market wage rate.

At the inception of the VUP public works program in 2008, market wage data were collected on a project-by-project basis. Since 2010, monitoring of market wage rate data has been systematized and is collected quarterly, based on the VUP monitoring and evaluation framework.[5] Data are collected for four types of projects and five types of labor as shown in table 8.2.

Data at the cell level were first collected independently in November 2009 and then again in July 2010, allowing comparison of data across the sectors in which VUP operates (60 in November 2009 and 90 in July 2010). Table 8.3 summarizes the number of projects for which sectors have reported data for each project type and category of labor. Sectors only report data for the types of project that have been delivered in their respective sector.

Rwanda took several challenges into account when setting and monitoring the VUP public works program's wage rates, including the following.

- *Availability of data*. Challenges still exist regarding timely, comprehensive data, given the limited infrastructure, especially at the village and cell levels. Getting the balance right between the complexity of the data to be collected and the capacity of the local infrastructure to sup-

**Table 8.2 Wage Rate Data Monitored for Vision 2020 Umurenge Program Public Works**

| *Project type* | *Labor category* |
|---|---|
| Agricultural/environmental | Ordinary (unskilled) casual labor |
| Roads | Mason's aid |
| Construction (schools, etc.) | Mason |
| Water infrastructure | Team leader |
| | Supervisor |

**Table 8.3 Number of Projects Reporting Market Wage Rate Data**

| | *November 2009* | | | | | *July 2010* | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | *Ordinary casual labor* | *Mason's aid* | *Mason* | *Team leader* | *Supervisor* | *Ordinary casual labor* | *Mason's aid* | *Mason* | *Team leader* | *Supervisor* |
| Agricultural/ environmental | 81 | 68 | 66 | 79 | 0 | 44 | 0 | 0 | 44 | 44 |
| Roads | 77 | 74 | 74 | 77 | 0 | 41 | 0 | 0 | 41 | 40 |
| Construction | 78 | 79 | 79 | 78 | 0 | 44 | 0 | 0 | 44 | 40 |
| Water infrastructure | 76 | 75 | 76 | 75 | 0 | 41 | 0 | 0 | 41 | 37 |

port the collection of rigorous data is critical. If the balance is wrong, the result is incomplete, inaccurate, and untimely data, which is something VUP has experienced in the past. VUP has provided its sector-level staff with personal computers to facilitate data processing, but the absence of electricity—let alone Internet access—in some sector offices, coupled with relatively low technical skills among some staff members, makes submission of data difficult.

- *Definition of the local market*. There has been considerable variation in the wage rates paid in the labor market for different cells within a sector. This disparity is most marked in those sectors adjacent to urban areas. In the Kigali Sector of the Nyarugenge District in Kigali City, for example, the wage rate for unskilled casual labor in the Mwendo Cell is approximately 50 percent higher because of its proximity to the city.[6]

### *Eliminating Problems in the Payments Process*

Regardless of how carefully wage rates have been set or wage data are monitored, the success of a public works program will largely depend on the timeliness and reliability of payment transactions to program beneficiaries. Initial VUP public works program implementation was significantly hampered by delays in project processing on the part of community and local government procurement systems, as well as by inefficiencies in the delivery of direct support to beneficiaries and in the financial relationships between the central and local governments.

In this context, a decision to eliminate the middleman—contractors—when paying public works beneficiaries was critical. Prior to VUP's existence, public works wages were paid through intermediaries (typically contractors), which often resulted in the payments received by beneficiaries being lower than the stipulated wage rate. This type of fraud had reportedly occurred in the HIMO program. To preclude the opportunity for private contractors to skim off part of the intended wage of public works employees, and to encourage greater use of the secure payment arrangements that were becoming more widely available in rural areas, the VUP public works program adopted a policy of making direct payments to workers, circumventing intermediaries. To support the elimination of middlemen in the payment process, the government has set in place a requirement that all individuals be paid via direct deposit in an individual account at a bank or other financial institution.

There are a number of advantages to making payments to banks rather than in cash, including the minimization of fiduciary risk. From the VUP

standpoint, such payments also help beneficiary households become familiar with banking processes and dealing with financial institutions, thus facilitating their ability to save and building their capacity to access microcredit. To achieve these objectives, VUP has had to meet certain challenges including investing in adequate financial arrangements in a country with limited financial access.

## Lessons Learned and Conclusions

Rwanda's public works programs have evolved over time, drawing on earlier programs and refining policy and implementation arrangements along the way. Under VUP, MINALOC continues to seek new ways to draw lessons from challenges that have arisen during the course of implementation. For each new phase of the VUP scale-up plan, MINALOC, with assistance from its development partners, has reviewed and reassessed the program to ensure better delivery of cash transfers consistent with best international practice and overall VUP policy objectives. The key lessons of the VUP public works program follow.

- Implementing a policy of clear and coordinated communication ensures the delivery of consistent messages to local officials and beneficiaries; this in turn leads to consistent practices across participating sectors and avoids—or at least reduces—confusion and the potential for discrediting the public works program's long-term objectives.
- Effective communication also ensures that the benefits of setting wages for public works in accordance with international practice—as has been achieved under VUP over time—and that this is clearly understood by beneficiary communities as well as by eligible households.
- Geographic and seasonal variations in Rwanda's market wage rates make local wage setting a sensible approach, even though there is value in setting local wages within a coordinated national framework.
- By setting wages at or close to market rates for each project, VUP objectives are supported in terms of helping households save, invest, be able to access credit, and graduate from the program.
- Monitoring processes are critical but need continued refinement in light of initial experiences. In addition, systematic assessment of administrative interactions among government levels and the development of action plans to address related challenges could further increase the efficiency of program implementation (World Bank 2011).

## Notes

1. The program optimizes the use and management of local resources, including skilled and unskilled labor and the under- and unemployed. Under a high-labor intensity approach, labor is considered the main input. Other inputs (e.g., machinery) are used only as needed to produce competitive products, ensure technical quality, and maximize economic profitability, especially in the reduction of the operational and maintenance costs of investments. The optimal mix of labor and other inputs in relation to total construction costs varies by type of work undertaken and depends on the level of salaries and the materials locally available.
2. The Third Household Survey released in February 2012, showed that extreme poverty had decreased to 24.1 percent, an 11.7 percentage point drop since the survey of 2005/06. While further evaluation is needed, cash transfers were quoted as one of the contributing factors, which would include VUP (NISR 2012).
3. Currency exchanges throughout this chapter are calculated assuming an exchange rate of RF 530 = $1.
4. It has become clear that, with over 461 sectors across 30 provinces and a rapid annual scale-up plan until reaching full national coverage, current resources cannot sustain two posts in each sector. As of 2011, the plan is to share the two posts between sectors within districts, and strengthen capacity at both the sector and district levels to ensure proper implementation of the program as it scales up.
5. As of this writing, it is too early to assess level of compliance.
6. August 2010 data supplied by the VUP program manager for the Kigali Sector.

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CHAPTER 9

# Ethiopia: Project Selection Process

The process of public works project selection is critical, yet poorly documented and understood. This case study explores project selection as it is conducted in Ethiopia's Productive Safety Net Program (PSNP). It identifies criteria used to select types of projects, taking into account country circumstances. These criteria include project location, involvement and role of various stakeholders, the appraisal and approval process, and potential environmental and social considerations, among others. The study illustrates typical issues that arise when trying to apply procedures and implement approved guidelines for public works project planning. Also discussed is the extent to which PSNP addresses these issues in various regions of the country.

Findings are based on a desk review, with particular reference to the role of communities and government agencies and to the method of final project selection. They draw on program documents, guidelines, implementation manuals, and monitoring and evaluation (M&E) data; information from published public works reviews, reports, and impact assessments; and information gathered from discussions with consultants working on impact assessments and others involved in PSNP implementation.

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The case study focuses on the six regions in which the majority of PSNP beneficiaries are located—Amhara; Dire Dawa; Harar; Oromia; the Southern Nations, Nationalities, and Peoples Region; and Tigray—and pays particular attention to the community dynamics underpinning successful project selection. Since its 2006 inception, PSNP has gradually phased in and improved on community planning, although work is still needed in improving the participatory approach and skills development in community public works planning. In this regard, note that it takes time to build standards of performance. Progress can be seen in many areas, including the integration of annual safety net plans (ASNPs) into development planning at the *woreda* and *kebele* levels.[1] In 2011, 95 percent of *woredas* examined demonstrated a strong integration process.

Findings are presented in this chapter for several aspects of project selection, together with lessons learned, which may be useful in the planning of similar public works programs in other situations and other countries.

## Principles

*Woredas* covered by PSNP suffer from severe environmental degradation and limited access to infrastructure. PSNP was designed to address these issues with a public works program, based on integrated watershed development principles. PSNP consists of a large number of projects, currently estimated at approximately 40,000 annually. These projects are what define PSNP in Ethiopia as *productive*. The projects result in the creation of community assets that contribute to sustainable livelihoods and long-term developments such as soil and water conservation structures, feeder roads, social infrastructure, water supply for human and livestock consumption, agriculture activities, and small-scale irrigation facilities. These community assets now provide the foundations of valuable services to the target communities. PSNP projects are based on several fundamental principles:

- *They should be productive*. The projects should create durable community assets that should contribute to reducing severe food problems.
- *They should provide community benefits*. The projects must benefit the community as a whole or groups of households within a given area.
- *They should be labor based*. Projects must be labor intensive and use simple tools as much as possible. The ratio of labor to nonlabor inputs should favor the former and be flexible at both the *woreda* level and the activity level. At *woreda* level, the ratio of nonlabor inputs should not exceed 20 percent of total cost.

- *They should entail community participation and commitment*. The community participates in the selection, planning, monitoring, and evaluation of projects. The projects must be accepted and approved by the community.
- *They should be scheduled predictably*. Public works are provided through a multi-annual resource framework. Program participants should be aware of the timing of project implementation, which should be scheduled to avoid periods of peak agricultural labor.
- *They should be located in proximity to beneficiaries*. Projects are provided as much as possible in the immediate vicinity of the people in need. A maximum walking distance of one hour is recommended.
- *They should take a watershed approach*. Public works are planned according to the community-based watershed development approach outlined in government guidelines.
- *They should be integrated into development plans*. The projects are planned as part of a holistic approach to watershed development. They are integrated into *woreda* development plans and planned on an intersectoral basis.
- *They should promote gender sensitivity*. The projects are designed to enable women to participate, and priority is given to works that reduce women's regular work burden. Work on projects must be flexible to adapt to women's activities (e.g., late arrival from and early departure for home).
- *They must allow work on private land*. The watershed approach allows public works program labor to work on private land if this work is necessary for the treatment of the watershed. In addition, projects can be undertaken on private land belonging to female-headed households with severe labor shortages.

Table 9.1 outlines different types of community-level projects initiated under PSNP and the type of outcomes typically associated with each.

## Procedures for Project Selection and Preliminary Design

There are a number of official procedures and activities established for the selection of projects under PSNP.

### *Community-Based Participatory Watershed Development Principles*

PSNP project selection should be handled at the community level using a planning process based on the concept of community-based participatory

**Table 9.1 Examples of Typical Projects and Outcomes**

| *Community-level project* | *Typical outcomes* |
|---|---|
| Temporary area closures with or without soil and water conservation | Income generation within the closed area (e.g., beekeeping), improved land productivity, soil fertility restoration, increased land availability, fodder production, replenishment of surface water |
| Community roads | Improved access to social services and markets |
| Community water projects such as stream diversion, spring development, and shallow wells | Improved access to water for drinking, irrigation, livestock use, and crops |
| Rehabilitating or extending primary schools | Improved education and potentially increased high school enrollment |
| Rehabilitating or extending health clinics | Improved health standards and productivity |

watershed development (CBPWD). This approach was developed by the government of Ethiopia over a period of many years, in collaboration with the World Food Programme and other agencies. It is recognized both nationally and internationally as an appropriate method and serves as the basis for developing a pipeline of projects, many of which have a soil and water conservation focus. A guideline authored by the Ministry of Agriculture and Rural Development (Government of Ethiopia 2005) provides development agents—the government staff members employed by the *woreda* agricultural office to work at *kebele* level on agricultural extension activities—and rural communities with a workable and adaptable planning tool.

Project selection starts from the bottom up and depends on the participation of community members living in the relevant microwatershed, as they are the people who will live with the results, and the program is one of their tools for addressing food insecurity. In this manner, poor households are assisted while contributing to the development of their locality.

A second objective is to optimize the use of existing natural resources and untapped potential in degraded watershed areas. There is a planning hierarchy consisting of the watershed, the watershed unit, and the microwatershed.

Development agents must ensure that only sustainable projects are selected. Therefore, all projects should have defined "owners" after completion—people or groups with rights of use, and therefore the obligation to maintain and manage the asset. In many cases, user rights

arrangements will involve the creation of group bylaws governing access, management, and responsibility obligations. They may also require the establishment of a system to collect user fees. These user rights and maintenance responsibilities need to be defined during the planning process to establish a sense of ownership by the benefiting community or group. It is critical to ensuring a common understanding between community asset owners and *woreda* government service providers on what further support the owners can expect once the asset has been handed over.

### *Project Planning*

The selection process for projects is multileveled. It marries bottom-up and top-down approaches, and produces nested ASNPs at each of six levels (figure 9.1).

The tasks at each level consist of the following.

***Level 1: Community.*** A "community" is an agreed-upon entity within the local government system. It typically consists of a socially homogenous and identifiable human settlement within a defined microwatershed. In Ethiopia, there are typically three to four communities per *kebele*.

Development agents together with *kebele* staff provide the community with an introduction to watershed management principles. Community

**Figure 9.1 Planning Process**

members are informed that they are welcome to participate in the planning process; they are encouraged to elect a dedicated and representative community watershed team (CWT) to streamline and spearhead the planning process.

Recognizing the wide sociocultural diversity in Ethiopia, the approach to such election is based on local norms. The CWT should consist of at least 10 active members, at least 5 of whom should be women, drawn from the community's main social groups.[2] The creation of a gender-balanced CWT is challenging. The CBPWD guidelines provide the option to have two CWTs, separated by gender, but working together with the facilitation of the development agent.

The CWT provides communication between the development agent, the community, and local leaders during planning, in addition to coordinating with other communities located within the watershed unit.[3] Membership should rotate to allow different people to be responsible for the program and to keep leadership ambitions in check, while allowing for a flow of new ideas for improving implementation.

***Level 2: Community watershed team.*** The CWT leads a participatory survey in order to create a map and an inventory of community assets.

- *Baseline development*. The CWT and the development agent undertake a community and microwatershed familiarization exercise. Community boundaries and major features are marked using simple sketching techniques. The main natural resource conditions and human interactions with the various levels of the microwatershed are described. This provides information about land resources in the microwatershed and assesses the opportunities, major issues, and limitations that may affect its development. The development agent transcribes this basic map to paper for future reference.
- *Detailed natural resource survey and mapping*. The exercise then covers a detailed natural resource assessment, with a land use and watershed map. Boundaries, watercourse, land use, topography, soils, and past erosion are mapped using simple techniques.
- *Socioeconomic survey and constraint analysis*. This analysis is conducted with the CWT following a community questionnaire divided into subject areas such as crop production, livestock production, fuel supply, water supply, infrastructure, marketing, land degradation, role of women in development, land tenure, and others. At the conclusion of this step, community needs have been identified.

- *Analysis of focus areas and priorities*. The CTW and the development agent should analyze the relationship between the identified gaps, the socioeconomic survey results, and the natural resource assessment in order to identify what opportunities are available to solve socioeconomic and watershed problems.
- *Problem identification and ranking*. The CWT and the development agent conduct a problem identification exercise to identify the most important problems of the community and of the target group and make a preliminary assessment of possible solutions.
- *Vision for change*. The community discusses how it would like to see the areas and the people developed followed by a discussion of the possible constraints in reaching that vision.

The highest priority projects are then matched to the resources available under PSNP for the coming year. This process also considers the time of the year when the projects will be carried out. A general meeting is then held with all community members so they can endorse the plan. At this meeting, the CWT presents the plan and encourages community participation and discussion. Problems and priorities are identified and reviewed. By the meeting's conclusion, the following will have been achieved:

- Finalization of the problem identification and preliminary solutions proposed by the CWT
- Community acceptance of the planning work achieved so far
- Verification that CWT results represent the ideas and aspirations of the various community groups.

The community safety net plan is forwarded to the *kebele*.

***Level 3: Kebele.*** The CWT plans are reviewed, approved, and collated; they are then combined with PSNP *kebele*-level beneficiary selection to produce the *kebele* ASNP.

A *kebele* watershed team is established, made up of members of each CWT. The *kebele* team consolidates lists of priorities prepared by the CWTs and prepares a *kebele* ASNP. The plan identifies and specifies which activities within the broader *kebele* development plan will be undertaken under PSNP and ensures that the *kebele* annual safety net and development plans are fully integrated in all respects. If a *kebele* development plan has already been prepared, it will be adapted to integrate new priorities identified by the CWT and specify which activities within the

*kebele* plan will be undertaken under PSNP. The completed *kebele* ASNP is presented to a general meeting of all communities in the *kebele* for review and endorsement. The endorsed plan is then sent to the *woreda* administration.[4]

***Level 4: Woreda.*** The *woreda* watershed team is a group of experts assigned to support and follow up on public works program issues. The team consists of 10 specialists,[5] usually led by a soil conservation specialist.

The *woreda* ASNP is prepared from all of the *kebele* ASNPs in a *woreda* by the *Woreda* office of agriculture, working together with other sector offices. This collaboration helps ensure that their roles and responsibilities are acted on and that duplication of plans is avoided. The *woreda* plan integrates all safety net activities in the *woreda*.

The CBPWD process is integrated into a five-year plan at the *woreda* level, which is produced and updated each year to identify priorities for the forthcoming season. A schedule for additional projects is also maintained in the event of unanticipated shocks that might require scale-up of the public works program.

***Level 5: Region.*** The regional ASNP combines the *woreda* ASNP, along with specific activities to be conducted at the regional level, and submits it to the federal level for approval.

***Level 6: Federal.*** The federal ASNP summarizes plans across the whole program for the coming year, as well as describing specific activities to be conducted at the federal level.

Following approval, the regional plans are sent back to the regions so they are aware of final planning decisions and resource allocations. This process is repeated in turn at each level, thus allowing for downward accountability.

### *Project Design and Screening*

Projects are designed either by a development agent alone or, in the case of infrastructure, the development agent with the assistance of concerned *woreda* specialists. To be eligible, projects must satisfy the principles previously discussed and must be environmentally and socially sound. They should be adapted to local conditions and based on solid technical advice. Adequate technical supervision should be available to ensure good quality.

An environmental and social management framework (ESMF) is developed by the government in agreement with development partners;

the framework specifies environmental and social safeguard procedures. During the design process, potential public works projects are screened to ensure compliance with the ESMF. This screening begins with a project eligibility check, conducted by the development agent, to ensure that the project is appropriate. For example, projects in disputed areas or located within important natural habitats or those involving changes of land use, involuntary resettlement, or loss of assets are not eligible. The eligibility check is followed by a simple environmental and social review screening to identify potential environmental and social risks; this is carried out by the *woreda* environmental expert, who may choose to delegate its conduct to the development agent but who remains responsible for oversight and approval.

During this screening process, some projects may trigger further investigation. This is a key area for backstopping by the regional public works focal unit.

## Implementation of Project Selection Procedures

This section sets out PSNP results and experiences in implementing the procedures described in the previous section. Performance is presented in terms of indicators that the program has found useful for monitoring purposes; these may be applicable to other safety net projects as well.

### *Project Location*

Regarding the requirement for projects to be situated, to the extent possible, within a 1-hour walking distance of beneficiaries' homes, the 2006 household impact assessment found the following:

> In these localities, this requirement appears to have been largely met. Approximately 75 percent of participants in public works reported that it took one hour or less to travel to the project site and less than 8 percent reported that it took longer than two hours. There was no meaningful variation in these travel times across regions. (IFPRI and CSA 2006)

Thus, the majority of projects comply with the requirement, although there are exceptions. For example, the same report quoted a development agent in Oromia saying that, in one case, the distance traveled was a contributing factor to poor project quality: "People complain about the distance they must travel to reach the sites. Some of the seedlings that were planted were not cared for and dried up. Soil and water conservation structures were also subsequently ruined"; in another case,

"Public works participants complained of the distance to the work site" (IFPRI and CSA 2010).

The PSNP's rapid response mechanism—a troubleshooting methodology designed to solve problems on the spot—confirms these findings, in that cases have been encountered in which individual beneficiaries complain about time spent in walking to some of the projects (Food Security Coordination Directorate 2011).

Location of projects is not generally a problem, but problems do occur. Ongoing monitoring should ensure compliance with this principle.

### *Role of Stakeholders during Project Selection and Prioritization*

PSNP has gradually introduced the community planning process in project selection. In 2008, approximately 60 percent of projects were proposed by the community; by 2011, this figure had increased to 90 percent. This finding of increasing involvement on the part of the community is in line with other findings that show a steadily decreasing level of government involvement at the *woreda* level.

There are variations across the *woredas* and *kebeles*, as would be expected. Thus, the 2010 household impact assessment noted a variety of contrasting views on how projects are planned: "In most cases, government staff at [the] *kebele* and community level[s] are also involved in prioritization of public works projects"; it reported that there are various degrees of community involvement both in helping to plan public works as well as in setting priorities (IFPRI and CSA 2010).

In-depth community involvement in watershed planning and project selection is not necessarily expected to take place every year. Once the list of desired projects is finalized, the process of identifying assets, gaps, and needs does not usually have to be repeated for several years. Instead, the list is revisited each year when the annual public works program action plan needs to be drawn up. Thus, most of the time, the process of determining the action plan at the community level consists of the CWT reviewing a list of projects already agreed on by the community, *kebele*, and *woreda* offices. The 2010 household impact assessment found that *kebele* officials reported that "an initial list of indicative projects is provided by the *woreda*, [and] the [development agents] jointly with the community [Food Security Task Force] officials modify these on the basis of local priorities and circumstances" (IFPRI and CSA 2010). This confirms that the planning process is taking place more or less as intended.

Again, there is variation across the *kebeles* and *woredas* in how they implement and agree on a prioritized shortlist. For example, the 2010

household impact assessment found that in Amhara, a *woreda* watershed team sent a list of projects to the *kebeles*; and in three *kebeles* studied, development agents and community members decide the priorities. Such variation is expected in a program the size and scope of PSNP.

Interviews with consultants engaged in the ongoing public works program impact assessment confirmed a degree of variability, but reinforced the overall positive trend. Preliminary findings from the first phase of the impact assessment noted that "In some areas, there are different levels of pressure from above. However, [a specific project] must be seen in the relative context. For example, the *woreda* may have it in its own interest, but it also benefits the community" (IFPRI and CSA 2010).

In some cases, it may be necessary for development agents to take a proactive stance, because the execution of timely implementation of public works projects is essential to PSNP's smooth operation.

In some regions, higher standards have been achieved:

> In Tigray, community members are well informed. CWTs are elected by a general assembly at the community level. CWTs have skills training and in most cases, an optimal understanding of watershed principles. The CWT presents projects for prioritization to the community. The whole community also has an understanding of maintenance and has effective by-laws in place to separate collective and individual resources. (IFPRI and CSA 2010)

Individual cases of concern do occur. The 2010 household impact assessment found one case in which the development agent reported that

> Public works plans were determined by the Kebele Food Security Task Force (KFSTF) but that these did not deviate greatly from plans sent by the woreda. The KFSTF develops a detailed implementation plan based on the indicative plan sent from the woreda. The KFSTF makes minor adjustments to this. It can increase the volume of public works but cannot reduce the number of proposed works. Also, it can substitute one activity with a similar and locally relevant activity, such as constructing a soil bund rather than a stone bund. However, the KFSTF does not have the mandate to make major modifications to the plan sent from the woreda…Public works planning is not participatory, because the main activities and the amount of work to be done is fixed by woreda officials. (IFPRI and CSA 2010)

Such exceptional cases illustrate the need to continually monitor the planning process and ensure that the general trend in standards of compliance continues to be positive.

### *Stakeholder Involvement in Development of Project Plans*

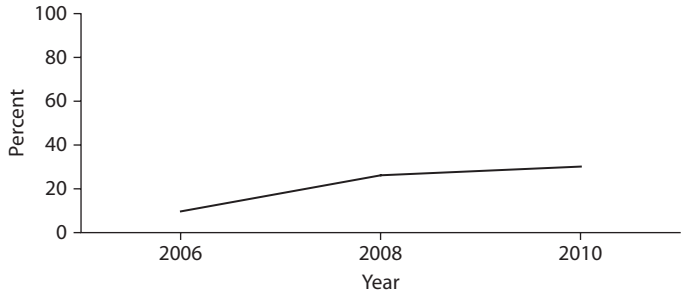
In monitoring the implementation of the community-based procedures, the term "community" must be carefully defined. In the majority of cases, the community elects a CWT that operates on its behalf. Thus, it is not expected that each individual household will necessarily participate in the procedures for project selection.[6] Thus, imprecise use of the term "community" can create problems in public works program reviews, which are designed to monitor the extent of community involvement in project selection.

Figure 9.2 depicts a surprisingly high level of *direct* individual household-level community participation in project planning, where normally rates of less than 10 percent would be expected. The figure is based on a standard sample survey of households (both PSNP and non-PSNP households) questioned in 2012.

Ideally, the development agent leads the CWT in preparing the plan. However, in some cases, the CWT conducts the process without the development agent. In other cases, a local nongovernmental organization or the community food security task force might be involved. Table 9.2 illustrates findings for the years 2008 and 2011, based on public works program reviews covering all six PSNP regions.

The table shows that the involvement of the CWT in developing public works program plans has increased from 76 to 86 percent between 2008 and 2011, and that an increasing number of CWTs are taking the lead with the direct involvement of the development agent. In a few cases, plans are drawn up by a combination of the development agent, the community food security task force, and individual community members (3 percent in 2008 and 8 percent in 2011).

**Figure 9.2 Percentage of Ethiopian Households Involved in Public Works Project Selection**




*Source:* IFPRI and CSA 2010.

**Table 9.2 Shares of Key Stakeholder Involvement in the Preparation of Community Public Works Program Plan**
*percent*

| | *CWT involvement* | | | |
|---|---|---|---|---|
| *Year* | *CWT and development agent* | *CWT alone* | *No CWT involvement* | *No plan* |
| 2008 | 40 | 36 | 3 | 2 |
| 2011 | 41 | 45 | 8 | 0 |

***Source:*** Adapted from Government of Ethiopia 2011.

In 2008, in a few cases where there was no plan, off-the-shelf or preplanned projects were implemented so as not to hold up PSNP program procedures. But in 2011, all communities examined had produced a public works program plan.

### *Gender*

Despite comprehensive guidance related to gender considerations provided in both the CBPWD guidelines and the Program Implementation Manual, challenges have existed with regard to the inclusion of women in project selection. For example, the Amhara region 2007 public works program review found that "the decision-making power and participation of women in public works and CBPWD planning at the KFSTFs [*kebele* food security task force] and CWTs levels was modest (ranging between 12 and 50 percent)" (Government of Ethiopia 2007).

It was concluded that encouragement and support needed to be improved in this regard. Two years later, in 2009, the technical planning audit noted:

> Representation on CWT varies from region to region, but overall in spite of the fact that public works activities directly contribute to lessening their work burden, contacted women often found it difficult to reflect their experience about the CBPWD planning process in general and to provide information on any concrete initiatives they have taken to make the CBPWD and ASN plans responsive to the priority needs of women in their communities. (Government of Ethiopia 2009)

In 2010, the household impact assessment found that in 3 out of 10 randomly selected *woredas*, women were represented in 30 percent of CWTs. Commenting on the desire for this number to be higher, some *woreda* officials pointed out that "there are ways in which women could contribute to decision-making, such as through their representation on

[*kebele* food security task forces] or by attending meetings at the community level to discuss [public works] plans" (IFPRI and CSA 2010).

While significant improvements have been made in women's level of participation, much remains to be done. This is confirmed by the latest findings of the public works program reviews in 2011, which state that in 50 percent of the *kebeles* reviewed, efforts to involve women in planning were "good" or better. Clearly, in the remaining 50 percent significant improvements are called for in the future.

### *Quality of Plans*

Ethiopia's PSNP found that it is important to monitor the quality, beyond the simple existence, of CBPWD plans. Thus, the public works reviews go into some depth on the quality of the project plans.

Plans should include three main components: socioeconomic baseline, natural resource baseline, and community development map. In 2008, there were many communities that had yet to create a plan containing all these components at a satisfactory level. However, by 2011, most communities had comprehensive plans in place. Findings from the 2011 PSNP review indicate a generally high level of quality related to the preparation of the individual components, with the exception of the community development map, as shown in table 9.3.

These results show an encouraging level of planning. But, despite improvements related to the community participation process, there is room for improvement with regard to the community development map. The PSNP is revisiting the issue of community development maps with a view to developing a geographic information system–based public works mapped database for monitoring purposes. This enhancement will entail upgrading the original community maps.

**Table 9.3 Completeness and Quality of Community Public Works Program Plan Preparation in 2011**

| *Plan component* | *Percentage of woredas with component prepared* | *Percentage of woredas with component quality of satisfactory or above* |
|---|---|---|
| Socioeconomic baseline | 100 | 87 |
| Natural resource baseline | 95 | 80 |
| Community development map | 93 | 50 |
| Adherence to watershed logic | 95 | 95 |

***Source:*** Government of Ethiopia 2011.

### *Reconciliation of Kebele ASNPs*

It is important to ensure that the various ASNPs within a given *woreda* are in alignment. Performance on this indicator has shown progress in 2011 compared to 2008. Table 9.4 shows that a high percentage of *woredas* have either a "good" or "very good" alignment of *kebele* ASNPs within a *woreda*.

### *Environmental and Social Safeguards*

The application of the ESMF ensures that PSNP projects are environmentally and socially sustainable and that inappropriate projects are eliminated. However, the program's very large scale (approximately 40,000 projects a year) gives rise to monitoring problems. Sampling is the most obvious approach, but it must be structured so as to limit the sample size to a manageable proportion. Another approach is the case study approach, which seeks to determine typical results for certain types of projects. There is much debate regarding the relative merits of the two approaches. The appropriate methodology must be determined depending on the characteristics of the program involved. To examine the application of the ESMF, the important two dimensions to measure are frequency and quality.

***Frequency.*** Frequency of ESMF implementation has been a focus of monitoring in Ethiopia's PSNP. Following training to address information gaps within and between the relevant institutions that had led to a low ESMF implementation rate in the program's early years, the rate improved. By 2008, rates of ESMF implementation exceeding 90 percent were being reported by the public works reviews. However, it appears that there has recently been a decline in the ESMF implementation rate, at least in the project samples examined (table 9.5).

These data indicate that, overall, in Ethiopia's four largest regions, only about three-quarters of projects are being reviewed against the ESMF by the development agents. The variation across the regions is considerable.

**Table 9.4 Reconciliation of *Kebele* Annual Safety Net Plans**
*percent*

| | *Poor* | *Satisfactory* | *Good* | *Very good* |
|---|---|---|---|---|
| 2008 | 5 | 27 | 44 | 25 |
| 2011 | 5 | 10 | 72 | 13 |

***Source:*** Government of Ethiopia 2011.

**Table 9.5 Frequency of Implementation of ESMF Screening in the Four Large PSNP Regions**

| Region | Number of projects examined | Projects screened by development agent | |
|---|---|---|---|
| | | Number | Percent |
| Amhara | 24 | 16 | 67 |
| Oromia | 32 | 16 | 50 |
| Southern Nations, Nationalities, and People's Region | 32 | 26 | 81 |
| Tigray | 32 | 32 | 100 |
| Total [average] | 120 | 90 | [75] |

*Source:* Government of Ethiopia 2010.

This result could be due to a slackening of oversight on the part of federal authorities, and points to the need to strengthen the federal public works coordination unit with respect to ESMF oversight.

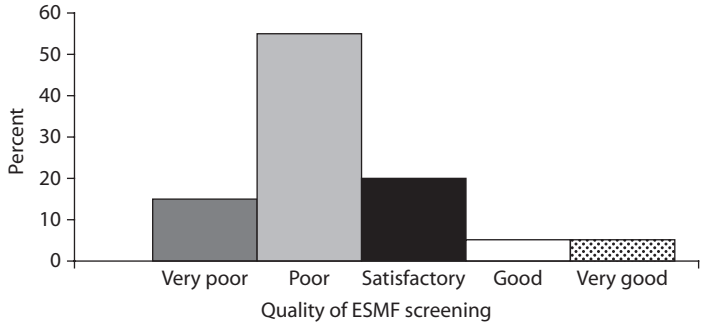
***Quality.*** Figure 9.3 shows the results regarding quality of ESMF screening as per the 2010 public works program reviews, which were based on a sample of 152 projects in 20 *woredas*.

The grades for quality were based on professional judgment, and considered such issues such as whether the screening form was signed, and so forth. Even where ESMF implementation rates were high (such as in Tigray), quality was sometimes poor. This was due largely to the fact that development agents and *woreda* staff were grouping projects together within each microwatershed, thus earning an overall poor rating for quality. Subsequently, the term "project" was redefined for ESMF screening purposes; this is an example of how data collection on implementation can improve procedures.

The findings suggest that while there have been some improvements regarding awareness of the need to implement ESMF screening, challenges in the quality of the screening remain. Improvements in awareness raising and training were undertaken.

It was concluded that despite annual training, in which up to 6,000 development agents are trained, there also remained limited capacity, knowledge, and skills, along with poor follow-up on the part of *woreda* officers and regional focal units. In some cases, there was found to be a lack of clarity regarding the institutional relationship between the environmental protection authority and the natural resource management department.

**Figure 9.3 Quality of Project Screening for Environmental and Social Safeguards, 2010**




*Source:* Government of Ethiopia 2010.

In 2010–11, significant steps were taken toward improving ESMF implementation—for example, by assigning environmentalists to regional public works focal units, retraining *woreda* experts, distributing revised screening formats to *woredas*, and issuing clarifications on the definition of "project." In addition, a special ESMF training course was conducted.

An important aspect of ESMF monitoring is the question of follow-up on the ground to ensure that mitigating measures are implemented and that ineligible projects are eliminated. To verify this information requires a more comprehensive approach than sampling and is best covered in a regular M&E system.

## Lessons Learned and Conclusions

The selection process for PSNP projects is a multilevel one. It marries bottom-up and top-down approaches and produces nested ASNPs at each level. At the core, project selection involves a planning process that is based on the concept of community-based participatory watershed management. Overall, findings indicate that to a large extent these procedures for project selection as outlined in the Program Implementation Manual are being followed.

- When PSNP first began, projects were largely preplanned or off-the-shelf, and community planning had to be phased in over time. Therefore, the early years show a lower level of community involvement in project selection than expected. Because execution of timely PSNP

projects is essential to fulfilling the program's humanitarian objectives, implementation of community planning aspects vis-à-vis project selection sometimes lagged project implementation.

- In both developing community-based procedures and in monitoring their implementation, it is necessary to carefully define the term "community." In the majority of cases, individual community members elect a CWT, which works on the community's behalf. It is not expected that each individual household will itself participate in project selection.
- Work remains to be done in improving the participatory approach and on skills development. For example, after several years of operation, PSNP is revisiting the issue of community development maps with a view to developing a public works database based on geographic information system mapping for monitoring purposes.
- Year-on-year progress can be seen in many areas, including the integration and reconciliation of ASNPs and development plans at the *kebele* and *woreda* levels. In 2011, 95 percent of examined *woredas* demonstrated a strong integration process. This is an area in which PSNP can contribute to a general improvement in the standard of local government planning.
- Location is not generally a problem in project planning under PSNP, but problems do occur. Ongoing monitoring is needed to ensure that projects are located within a 1-hour walking distance of beneficiaries' homes.
- There has been marked improvement in the level of community participation in selecting, prioritizing, and planning projects. Nonetheless, there are exceptional cases in which participation has been inadequate, and ongoing monitoring is necessary to ensure against this eventuality.
- While significant improvements have been made regarding women's participation, much remains to be done. In general, monitoring implementation of gender principles and policy requires the development of more specific indicators, including ones relating to youth, children, and cultural factors.
- ESMF monitoring has proven to be a complex issue, and although ESMF screening has reached quite high levels, problems have been revealed in terms of staff turnover, training, awareness, and definition of procedures that have affected the quality of implementation. It is recommended that ESMF monitoring be given a high priority and sufficient resources in any future public works program.

## Notes

1. A *woreda* is an administrative division in Ethiopia (managed by a local government), equivalent to a district with an average population of approximately 100,000. *Woredas* are composed of a number of *kebeles*, or neighborhood associations.
2. Recommended CWT membership: community leader, four male-headed households representing different social groups, four female-headed households representing different social groups, one youth representative, one religious representative, and others as required by the community. The CWT elects a leader and a secretary.
3. Adjacent communities can sometimes join forces to create a combined CWT.
4. One or more development agents are assigned to work in every *kebele*. They should be able to use the CBPWD guidelines to prepare community-based watershed plans based on local conditions and priorities. Because watershed and community boundaries do not always overlap and more than one community's involvement may be required to complete a specific watershed plan, two or more plans are prepared: one for each community and another for its microwatershed. Communities coordinate with each other on specific interventions.
5. Suggested team members include a soil conservation expert, forestry/agroforestry expert, agronomist, water harvesting/irrigation expert, home agent, livestock expert, land use and administration expert, food security expert, cooperative/marketing and inputs expert, and rural road construction expert.
6. In 80 percent of the cases examined in 2008, the community had indeed elected a CWT to represent it and prepare its plan.

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CHAPTER 10

# India: Technological Innovation for Effective Management Information Systems

The objective of the chapter is to outline how information technology (IT) is being leveraged to promote more effective implementation of the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS) in Andhra Pradesh, India. The case study describes how Andhra Pradesh is using IT-based interventions to ensure that the four conditions set out under the Mahatma Gandhi National Rural Employment Guarantee Act are achieved. These conditions—or as they were later termed, "nonnegotiables"—place a rights-based entitlement at the center of the program:

- No contractors and no labor-displacing machinery should be used within the program. The program should promote intensive labor-based works, allowing temporary employment opportunities to benefit vulnerable target populations, not contractors or middlemen.
- Statutorily fixed minimum wages must be paid, and wage rates should be equal for men and women.
- Payments should be made to program beneficiaries weekly in a timely manner.

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- Village general bodies and local self-government institutions should be responsible for the selection and approval of works to be completed under the program.

These nonnegotiables reflect concerns over pervasive fraud and corruption in previous work programs in India, under which benefits often went to commercial contractors and middlemen rather than the local communities that were typically targeted. The absence of transparent monitoring mechanisms tended to enable such practices—allowing, for example, contractors to complete works using machines instead of local workers. Where information was tracked, it tended to be manipulated or barely maintained. One of the most common fraudulent practices was the manipulation of worker attendance records in muster rolls kept by field supervisors—adding bogus names or "ghost workers" to worksite muster rolls or other project monitoring records. While information sent by field functionaries was always under scrutiny, program documents often were not made available until after a few years, undermining real-time checks and balances.

To ensure that the nonnegotiables were implemented, the program relied on the development of an IT-based management information system (MIS) that allowed real-time monitoring of all program activities. The program was innovative in that it relied specifically on phone-based technologies. These IT solutions are explored in this chapter as follows: "Context" section provides the general program context. "Development of a MIS to Support Program Processes and Structures" section outlines the key monitoring processes and the MIS, which were the backbone of the program. "Key Implementation Features" section presents the chief implementation experiences and innovations, exploring the use of real-time monitoring mechanisms, the use of IT for program innovation (e.g., with smart cards, electronic muster rolls, and electronic fund transfers), and the program's technical and institutional support arrangements. The final section covers lessons learned and conclusions.

## Context

The Mahatma Gandhi National Rural Employment Guarantee Act is a historic piece of legislation in India that guarantees a minimum of 100 days of wage employment per year to every rural family that demands work. The act has revolutionized the rural wage market to the benefit of informal agricultural workers in rural India. Since its operationalization in

2006, it has reached more than 50 million rural wage laborer households in the country. The act is being implemented in all 28 Indian states, with 90 percent funding support from the Indian government. The remaining 10 percent is being contributed by the state governments. Table 10.1 documents the magnitude of the program and its scope in the country.

Table 10.2 shows implementation details of the scheme in Andhra Pradesh. To date, the program has benefited approximately 7.9 million households, creating over 1.22 billion labor days at a cost of $3.2 billion since 2006. Program coverage has increased steadily since its inception, and now covers more 60,000 villages. The specified wage rate for MGNREGS is Rs 121 ($2.70) in Andhra Pradesh.

The implementation of a large-scale national and state-level public works program is a great challenge and requires transparent systems to ensure efficiency and effectiveness. The major administrative challenges posed to the government are registering millions of workers for work, creating

**Table 10.1 Coverage of the Mahatma Gandhi National Rural Employment Guarantee Scheme in India**

| *Factor* | *2006–07* | *2007–08* | *2008–09* | *2009–10* | *2010–11* | *Total 2006–11* |
|---|---|---|---|---|---|---|
| Households covered (millions) | 21 | 34 | 45 | 52 | 47 | 52 |
| Total person-days of work created (millions) | 905 | 1,436 | 2,163 | 2,825 | 1,752 | 9,081 |
| Expenditure ($ million) | 1,765 | 3,171 | 5,450 | 7,588 | 7,600 | 25,574 |
| Average wage per day ($) | 1.30 | 1.50 | 1.68 | 1.82 | 1.92 | 1.80 |
| Average cost per day ($) | 1.94 | 2.20 | 2.52 | 2.68 | 2.64 | 2.52 |

*Sources:* Government of Andhra Pradesh 2006; Government of India 2008; nrega.ap.gov; accessed June 2012.

**Table 10.2 Coverage of the Mahatma Gandhi National Rural Employment Guarantee Scheme in Andhra Pradesh**

| *Factor* | *2006–07* | *2007–08* | *2008–09* | *2009–10* | *2010–11* | *Total 2006–11* |
|---|---|---|---|---|---|---|
| Households covered (million) | 2.1 | 4.7 | 5.7 | 6.2 | 6.2 | 7.9 |
| Total person-days of work created (millions) | 66 | 200 | 227 | 390 | 339 | 1,222 |
| Expenditure ($ million) | 133 | 456 | 569 | 933 | 1,221 | 3,312 |
| Average wage per day ($) | 1.64 | 1.68 | 1.68 | 1.80 | 2.20 | 2.04 |
| Average cost per day($) | 1.80 | 2.02 | 2.20 | 2.10 | 2.82 | 2.52 |

*Sources:* Government of Andhra Pradesh 2006; Government of India 2008; nrega.ap.gov; accessed June 2012.

sufficient work opportunities for 50 million workers, and disbursing payments in a timely fashion. The following section explores the processes and underlying systems put in place for MRNREGS in Andhra Pradesh, followed by an analysis of the key IT-based implementation features.

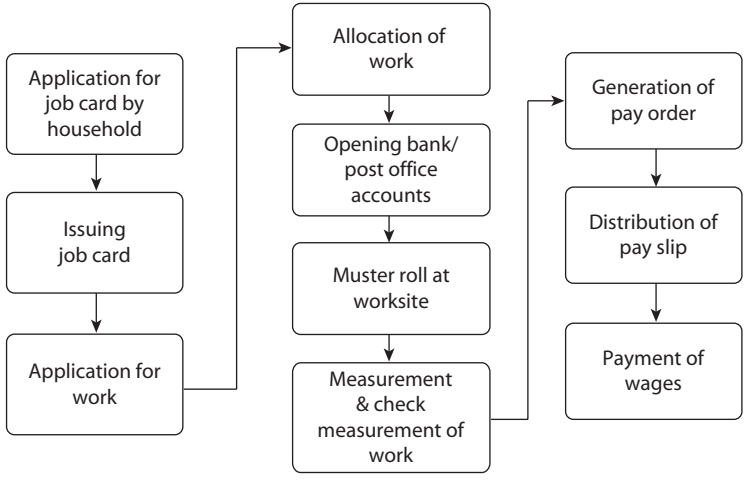
## Development of an MIS to Support Program Processes and Structures

Figure 10.1 illustrates the main MGNREGS processes. The process starts with issuance of a job card to a household demanding work, which reflects the rights-based approach under the program. Several subsequent steps are required as the household moves toward obtaining a job; these include the household's opening an account at a bank or post office to receive payments, and local authorities setting up functioning worksites with all necessary program operations in place: site supervision, works planning, generation of pay orders, and so forth.

In order to track all program processes effectively, the government identified the following parameters that required monitoring as part of program implementation:

- The number of households issued job cards
- The number of households receiving wage employment
- The number of individual workers receiving wage employment

**Figure 10.1 Program Process**



- The number and types of jobs provided and filled
- Project expenditures and status of works
- Number of days of employment generated, average person-days of wage employment provided per household, and number of households that completed 100 days of employment
- Expenditures for wages and materials (to capture the program's ratio of labor to material expenses)
- Performance of special-focus projects such as those involving horticulture and development of lands in disadvantaged areas
- Performance of various administrative units such as village, block (or county subdivision), district, and state
- Specific reports pertaining to any of the above parameters.

Given the complexity of public works program processes and the range of parameters to be monitored, an IT-based MIS was introduced. An MIS is a tool that facilitates the collection, processing, management, and dissemination of data essential for program operations, accountability, and policy making. In the case of the MRNREGS in Andhra Pradesh, the MIS quickly became the backbone of the program, ensuring accurate and timely management of a high volume of data, often across multiple sites and levels of program implementation. At the same time, it minimized error, fraud, and corruption by warning end users when data discrepancies or violations of use occur. All household data captured is kept in the public domain at the state program's website (www.nrega.ap.gov.in). Table 10.3 shows how the key parameters identified by the government were adapted into eight modules under the MIS. For each module, the table presents its objective, key activities it supports, and the data it contains.

The MIS was developed collaboratively to meet stakeholder needs and demands. Local-level capacity and technical expertise were critical; thus, an experienced local IT company, Tata Consultancy Services (TCS), assisted in the three-month design process that led to the system's establishment. TCS offered to develop the software free of cost as part of its corporate social responsibility. The TCS strategy team visited the field and met with the implementation officers of the ongoing similar public works program, National Food for Work, to identify gaps, omissions, and issues associated with field problems. Senior state government officials brainstormed with the TCS programmers to help develop the software. Each senior official was assigned a topic and given responsibility to guide the TCS programmers in software development. Throughout this process,

**Table 10.3 Andhra Pradesh Management Information System Modules**

| *Module* | *Objective/function* | *Key activities supported* | *Data collected/included* |
|---|---|---|---|
| Job application | Job cards are generated for all rural households accessing the program. Applications are reviewed by local government officials and passed on to the block level for data entry and generation of a job card. | • Generation of household job cards<br>• List of households by village | • Household information collected on application: details on each adult in the household, including address, social status, land-holding status, etc. |
| Activities | There are 86 types of permissible work activities in the scheme, and this module generates work estimates and specifications mapped to a unique number and then fed into the MIS annually in English and in the local language. Specifications are based on sample time-and-motion studies. Upper bounds are included to minimize error. | • Generation of work estimates<br>• Printouts of blank data input sheets<br>• Creation of approved works in shelf of projects<br>• Update and modification of project estimates<br>• Deletion of works<br>• Project task sheets: estimated work quantities to obtain minimum wage rate per day | • Technical inputs such as soil type, quantities assessed, project specifications<br>• General information, such as name of village, location, land survey number, beneficiary names<br>• Local rates for certain allowed items |
| Work execution and wage payment | Pay orders are generated subject to the verification of muster rolls and work specification orders. This requires strong coordination among field assistants, program officers, and block-level technical assistants. Measurements are checked on a weekly basis and cross-checked against estimates and specifications. Based on these inputs, the MIS calculates the number of person-days and types of work completed and the corresponding pay order. Wage pay slips are also checked in this module, with information sent to payment agencies. | • Muster roll submission<br>• Work progress submission<br>• Pay order generation<br>• Material payments<br>• Close out project | • Muster roll information<br>• Measurements<br>• Final report for work completion<br>• Pay order, including list of workers, account numbers, job card details, amounts, number of days worked, other payments due |

| | | | |
|---|---|---|---|
| Material payment | Pay orders for material suppliers are generated. Material payments will only be issued to t suppliers registered here. | • Skilled worker registration<br>• Material supplier registration<br>• Material local rates registration | • Information on skilled workers<br>• Information on material suppliers<br>• Material rates |
| Reports | MIS reports can be obtained (electronically and otherwise) by the *mandal*-level (administrative level below district) officials using this module. The reports are also available on the website for public purposes and for other officials. | • Generation of reports on various performance parameters | • No information to be entered |
| Finance and accounts | Funds received are entered. Pay orders are generated only when funds are available. Various financial reports are generated. All the administrative-related pay orders are generated using the claim form. | • Checkbook registration<br>• Bank registration<br>• Generation of administrative pay orders<br>• Generation of orders for online fund transfer | • Checkbook information<br>• Bank and account information<br>• Administrative expenses |
| Analysis | Various analytic reports can be generated, such as performance by gender and vulnerable populations, for review and analysis. | • Generation of various analysis reports (e.g., on gender analysis, vulnerable communities performance) | • No information to be entered |
| Administration | Information on officers and suppliers, their term/tenure, and their bank information are captured to ensure accountability. | • Generation of rural schedule of rates<br>• Generation of information on authorized officials | • Information on authorized officials |

the software source code was kept under government control to ensure against possible abuse or conflicts of interest on the part of the developer. This consideration was clearly spelled out in the memorandum of understanding (MoU) with TCS.

Though the initial software was developed free of charge, the state government pays approximately $1 million every year for troubleshooting, developing, and improving the software. Seventy programmers and database experts and 23 field-based supporting software engineers maintain and manage the software.

## Key Implementation Features

### *Real-Time Monitoring*

The chief feature of the MIS is real-time monitoring of all transactions recorded in the system's eight modules. This is accomplished primarily with phone-based technology. The value of this transaction-based MIS over a paper-based system is that it ensures the timely accuracy of all data and promotes real-time checks and balances within the MIS.

Through the use of specialized software, many important checks are incorporated throughout the MIS. One of the most critical components in terms of reconciling information is the pay order generation transaction, as it validates some of the most important data in the MIS, including the number of households that were provided wage employment, person-days worked, payments to workers, project expenditures, and labor-to-material ratios.

The program is continuously monitored, with 14 different types of reports placed in the public domain. The Web-based reports are designed to control for a number of checks to ensure smooth implementation. These include the following:

- How many households accessed employment, how many households received wage employment, and how much money each household and each individual worker received
- How many projects are available in each village, how many projects are ongoing, and how many are completed
- Project expenditures
- Project and household expenditure reports for social audits
- Various ad hoc reports for internal and social audits
- Expenditures in each budget line to monitor administrative expenditures.

The new MIS was introduced initially as an offline system, because of limited connectivity in a number of blocks. This year, the program will move entirely to an online system. With the fully automated mechanism, changes in software can be made quickly and data protection will be more effective. The online system demands uninterrupted connectivity.

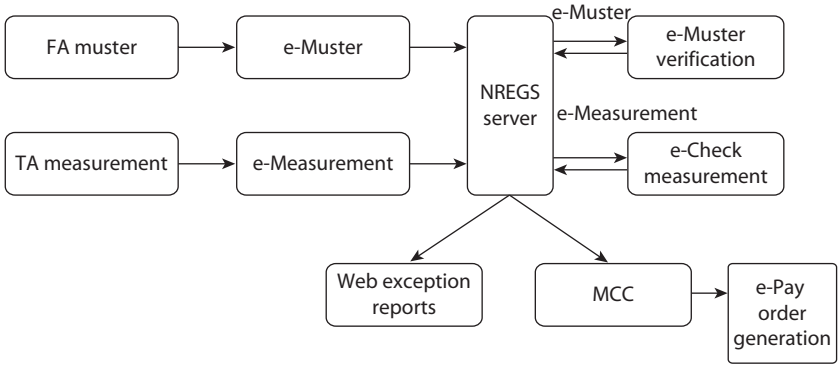
IT-based innovations enabling real-time monitoring include the Electronic Muster and Measurement System (eMMS), the Electronic Fund Management System (eFMS), and smart card payment methods. The implementation experiences of these interventions are discussed below, followed by an overview of the program's institutional setup.

### *Electronic Muster and Measurement System*

Obtaining live data from the worksite on a day-to-day basis is seen as an effective way to achieve program transparency and has led to the design and development of the eMMS. This system features a mobile-phone-based technology that has been designed for managers in the field. It consists of a host of mobile applications, including e-Muster, e-Measurement, e-Muster Verification, and e-Check Measurement, which are deployed on the mobile phones of all the field managers. Figure 10.2 presents a flow chart of the eMMS.

Mobile phones of field assistants contain data concerning job cards, work groups, and works in a village. The assistants use the e-Muster module by gathering workers' daily attendance records and sending

**Figure 10.2 The Electronic Muster and Measurement System**




*Note:* FA = field assistant; TA = technical assistant; NREGS = National Rural Employment Guarantee Scheme; MCC = Mandal Computer Center.

confirmation via mobile phone each day to the program's central server. These details are immediately updated and made public.

Muster information is also sent randomly by short message service (SMS, or text messaging) from the central server to the mobile phones of verification officers. These texts act as a trigger for random spot checks at project locations. The verification officers' mobile phones use the e-Muster verification application and are equipped with a global positioning system (GPS) to further ensure that spot check information is coming from the correct locations.

Similarly, technical assistants in the field make use of the measurements module in the eMMS to capture measurements of work done by a group of workers in a given week. GPS coordinates are simultaneously captured and uploaded to the server as a check. Once these measurements are sent to the MGNREGS server, the server sends them to the mobile phones of the appropriate officials to verify the measurements. These officials go to the worksites and make use of the e-Check Measurement module to verify measurements and upload the results to the server.

Transfer of all of the above data is done either by SMS or by general packet radio service. The technical officers are also expected to upload photographs of the projects they cover every week. All information, including photographs, is in the public domain. Information can be requested by anyone at any time through a simple SMS request.

### *Wage Payments through Smart Cards*

Given its emphasis on transparency, the Government of Andhra Pradesh decided to disburse wage payments in the villages through a biometric identification process with the help of smart cards issued by technology firms. This process makes use of fingerprint technology. Since every individual has a unique set of fingerprints, the technology is reliable and can cater to the needs of illiterate beneficiaries, including those living in remote areas far from banking institutions and other infrastructure.

The smart card payment process begins with the bank or financial institution enrolling the participants. This involves identifying the beneficiaries, collecting their fingerprints and a passport-sized photo, and so forth, in the village where the workers are located. After the identification work has been completed, each beneficiary is issued a smart card and a bank account. Once an e-pay order is generated, a worker's payments are electronically credited to his or her account. After the fund transfer has been completed, the bank arranges for cash to be provided to the

workers via a community service provider at the village level through a business correspondent hired for this purpose by the bank.

Wage disbursement is performed at a designated public place such as a school or local government office. The community service provider is equipped with a smart card reader featuring a fingerprint scanner and portable operations terminal equipment networked to the bank server so that any transaction made is directly updated in the bank's database. When the beneficiary approaches for wage payment, the smart card is inserted into the reader to establish his or her identity. Depending on the amount available in his or her account, payment is made and a receipt generated for accountability and transparency purposes. To date, 6 million workers have been enrolled and issued smart cards.

The bank receives 2 percent of the wage amounts as its commission; this is shared with the banking correspondent and the community service provider. A strong MIS is being developed to monitor timely disbursement of wages to workers using the data uploaded by the portable operations terminal devices at the village level.

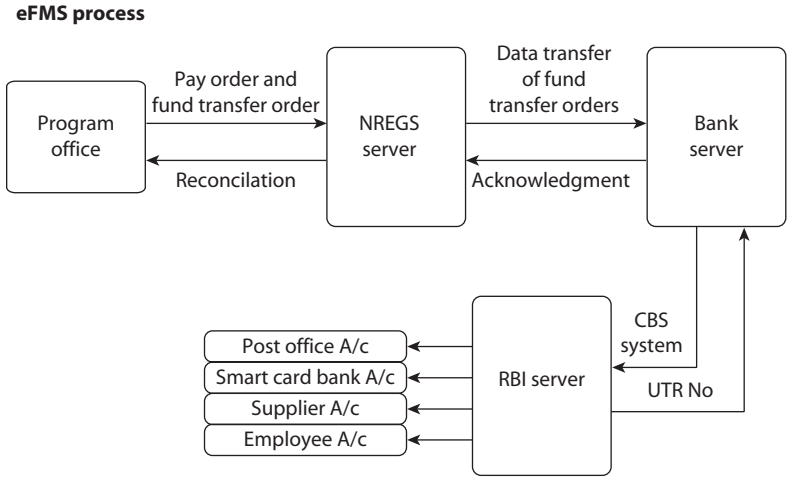
### *Electronic Fund Management System*

An eFMS has been introduced to ensure a smooth flow of funds in over 1,400 block offices, thereby ensuring timely availability of funds when needed. The eFMS was established to ensure efficient fund management. By linking all field offices with the central server and to bank servers, the eFMS enables all types of payments in the program. Depending on the payments raised by each of the expenditure offices in the state, the money is debited from the central account of the department at the state capital and deposited in the appropriate field bank account. No expenditure is allowed outside the MGNREGS software or outside the eFMS. Officers are allowed to hold one bank account in MGNREGS in the field to meet certain expenses that cannot be transacted through the eMMS, such as petty expenses, income tax payments, and so forth.

Figure 10.3 shows how the pay orders are uploaded from the field to the system server and to bank servers, and finally deposited in accounts across the state. The system uses the network of banks established by the country's leading bank, the Reserve Bank of India (this network comprises all banks and accounts in the country, linking them to a central server under the Reserve Bank's control).

The process begins when the program officer uploads a fund transfer order for a group of wage seekers (or for a supplier or a single employee) to the system server. The server collects all the orders generated that day

**Figure 10.3 The Electronic Fund Management System**




*Note:* NREGS = National Rural Employment Guarantee Scheme; RBI = Reserve Bank of India; CBS = Core Banking System; UTR No = Unit Transaction Number.

from all the expenditure offices in the state and forwards them to the bank server. The bank server interacts with the server for the Reserve Bank of India in the core banking system to establish the identity of the recipient bank and bank branch and settles the transaction. The Reserve Bank of India's server sends the bank server a unique transaction number for each transaction. The bank server then transfers the funds to the individual accounts as per the request specified in each fund transfer order. An acknowledgment is generated and sent back to the system server that can be used to prepare MIS and reconciliation reports. The status of each account is noted on the Web so that any payee can check the status of his or her fund transfer order to know where it is and whether it has been deposited.

Several verification mechanisms are incorporated into the process. First, if an order exceeds specified ceiling amounts, the information is sent to the director at the state capital for further approval after verification if required. Second, each program officer has been given a digital signature key for the purpose of uploading the fund transfer orders to the server from his or her office computer; this is the equivalent of a written signature on a check. Third, an MoU has been signed between the bank and the department to perform the transactions and to handle any security issues in the eFMS. No commission or charges are paid to any bank for

this purpose. Fourth, at the state level, three financial consultants have been designated to monitor the system and perform troubleshooting on a daily basis.

### *Institutional Arrangements*

Various officials have been designated to execute the program at various levels (table 10.4).

All officials from the village to the state level undergo training on the scheme and on software and website maintenance. Whenever a new version of the software is released, the salient features are discussed in monthly review meetings. The state-level officers inform the district-level officers of new features via videoconferences. Field officials receive the information at the district level and sometimes at the block level through special trainings or during the monthly review meetings.

Computer technicians/account assistants are assigned to each computer center. They are expected to have a business degree with a postgraduate diploma in computer applications. Each computer technician attends a five-day orientation program on the program's salient features and on the use of the software. Exercises are administered to familiarize them with the transactions. The computer technicians are called upon once every month or two to update the software.

## Lessons Learned and Conclusions

The use of IT in monitoring a vast program such as MGNREGS enables progress to be quickly assessed, in turn enabling rapid removal of any roadblocks to implementation. An incidental benefit is that IT-based monitoring can provide some checks against corruption and leakage, as every dollar spent on the program can be tracked using the transaction-based MIS. Various monitoring reports can be developed to extract data from the MIS. Effective fund management using IT supports effective implementation and thus better program performance. Key lessons learned include the following:

- A strong IT team of three to four people within the implementing agency should be engaged to work closely with the software technical service provider to develop and maintain the software and to develop biometric wage payments.
- Continuous monitoring is required to handle troubleshooting issues and software updates.

**Table 10.4 Institutional Arrangements**

| *Administrative geographical area* | *Responsible official* | *Type of functions to be performed* |
|---|---|---|
| Village *panchayat*: 3–5 habitations or villages in rural areas covering a population of 2,500–5,000 | Field assistant | Receives worker requests, initiates projects, maintains muster rolls, provides worksite facilities, coordinates with payment agencies |
| Village | Consumer service provider | Bank agent responsible for disbursement of wages to workers via biometric devices |
| Cluster of 5–7 village *panchayats* | Technical assistant | Mark outs at worksite, technical supervision, taking measurements, collection of muster rolls from field assistants |
| Block (*mandal*): 18–25 village *panchayats* | Computer technicians | Responsible for data entry; generation of job cards, estimates, pay orders; maintenance of documents and backup of data |
| | Program officer | Team leader at the block level responsible for overall supervision |
| | Additional program officer | Assists the program officer in program coordination and monitoring at the block level |
| Cluster of 5–7 blocks | Assistant project director | Responsible for overall supervision; serves as a link between district and block administration |
| District: 40–50 blocks | District program coordinator | Responsible for overall district administration, including other development programs; manages all sanctions for works and procurement; provides overall leadership and direction to the program |
| | Additional district program coordinator | Responsible for overall supervision and troubleshooting; assists district program coordinator in program delivery |
| State: 22 rural districts | State program coordinator | Responsible for overall program in the state; also in charge of a few more rural development programs |
| | MGNREGS director | Senior officer dedicated to assist the state program coordinator with policymaking, implementation, and administration related to the program |

- Strong coordination is required among the various stakeholders. In the case of biometric-based payments, coordination is needed between banks and their service providers and between business correspondents and technical service providers on the program side.
- A clear MoU between banks and the department is needed before the work begins. An MoU is also required for the department and all service providers, such as the IT company that develops the software, bankers, payment agencies, and so forth. The service deliverables and the number of programmers to be employed by the software service provider should be covered in the MoU.
- Standard procurement procedures and strong provisions in the MoU will aid in achieving transparency and avoid future problems and bottlenecks that could occur during implementation. Ownership of the software source code should be defined in the MoU so that the governments involved are not permanently dependent on the service provider for upgrades and fixes.
- Gathering political support in advance will help in meeting costs and in ensuring acceptance and support through any initial "teething problems."
- Software requires continuous changes as new requirements emerge over time.
- Internet connectivity at the local level is necessary for a robust transaction-based MIS.

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CHAPTER 11

# India: Implementing Social Audits

In August 2005, the Indian Parliament passed what is now known as the Mahatma Gandhi National Rural Employment Guarantee Act (MGNREGA), which mandates the provision of 100 days of guaranteed employment (unskilled manual work) to any rural household in India. The passage of the act saw the culmination of a lively debate, with many (including the act's most ardent supporters) predicting that corruption and poor service delivery mechanisms could together undo any potential benefits the act could bring to the poor. One of India's most well-known economists suggested that the likelihood of money reaching the poor would be higher if we "simply drop the money by helicopter or gas balloon into rural areas" than route it through employment programs (Aiyar 2004).

These concerns over corruption and poor delivery stem from India's past experience with delivering welfare programs to the poor. Experience indicated that the greatest beneficiaries of rural employment programs were private contractors who received work orders and, together with the

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local political bosses, fixed muster rolls to produce inflated figures and misappropriate funds. As a result, most targeted participants in these programs rarely accessed the minimum wage. According to estimates from an India-wide study of rural employment programs, 65 percent of those who participated in these programs were paid between Rs 30 and 60 per day. This is far less than the minimum wage set by the government. An important reason for this appalling scenario has been the lack of transparency and accountability in delivery systems that has allowed corruption to proliferate unchecked.

In response to the corruption problem and to ensure that benefits reach those who need them, a number of transparency and accountability measures have been built into the Mahatma Gandhi National Rural Employment Guarantee Scheme (MGNREGS). For instance, contractors are explicitly banned, all rural households are entitled to a job card on which employment and wage details must be entered, muster rolls are to be kept on the worksite and read out in public at the time of payment, payments are to be made in the presence of community members, and copies of the muster roll are to be made available for inspection by any interested person. Most crucial of all, section 17 of the MGNREGA mandates the regular conduct of social audits in the *gram sabha* (local self-government entities).

Pioneered by the Mazdoor Kisan Shakti Sangathan (MKSS—Organization for the Power of Laborers and Farmers) in Rajashtan in the mid-1990s, social audits are a process by which citizens come together to review and monitor government actions on the ground and use the mechanism of a public hearing to place accountability demands on the government. The legal mandate to conduct social audits under the MGNREGA acted as a catalyst for some state governments and nongovernmental organizations (NGOs) to take innovative steps toward institutionalizing social audits in the delivery system. The most successful of these efforts has been in Andhra Pradesh, which today is the only state government in the country to have developed a detailed institutional system for the regular conduct of social audits on MGNREGS works. Between 2006 and March 2011, at least one round of social audits had been conducted in all of the state's 656 *mandals* (the lowest administrative unit, comprising of a collection of 21 local self-government units at village or local level, named *gram panchayats*). Ninety-five percent had conducted two rounds of social audits, and 60 percent had completed three.[1] This case study documents the Andhra Pradesh experience.

## Context: History and Evolution of Social Audits in India

Social audits were pioneered in the mid-1990s by the MKSS organization in the northern state of Rajasthan. The MKSS began its work in the early 1990s on issues of land redistribution and minimum wage regulation in government-sponsored drought relief works in the state. The movement encountered large-scale corruption in these programs, which in the absence of access to official government records, proliferated unchecked. As a result, the movement began demanding government records and information related to local development works and framed the notion of the "right to information."[2]

With the support of sympathetic officials, or by pressuring local officials, the MKSS was successful in accessing copies of official government records. These records were then analyzed and verified with residents of relevant villages and finally shared with the general public. In this regard, the MKSS experimented with the idea of a public hearing, at which the details of official records were read out loud to the assembled villagers. Local residents at the receiving end of fraudulent practices were invited to give testimony, as were government officials and local politicians who were then given an opportunity to publicly defend their actions.

The MKSS's vision of the social audit is framed in a larger discourse of participative, rights-based democratic action that governs its activism. For the MKSS, the social audit is not just an anticorruption tool, it is a platform on which citizens can be empowered to directly exercise their democratic rights.

Academic research on the social audit emphasizes the link between social audits and democratic action. Neera Chandahoke, for instance, argues that the public hearing performs three functions intrinsic to democracy: it produces informed citizens, it encourages citizens to participate in local affairs through the provision of information and social auditing, and it helps create a sense of civic responsibility by bringing people together to address issues of collective concern. In sum, the social audit empowers citizens with information and enables them to exercise their rights by creating a vehicle with which they can engage with government and demand accountability for their rights and entitlements (Chandahoke 2007).

The first public hearing organized by MKSS was held in December 1994. Its focus was on a small set of development works carried out between 1993 and 1994 in the in Pali District. Names of people who were supposed to have worked on these development projects were read

out at the hearing, and people identified "ghost" workers and fake entries. Attendees testified against the claims made in the government records, and based on these testimonies, a first information record was filed against errant officials.

The MKSS organized another four hearings over the next year, honing and refining its social audit methodology through each. Typically, each hearing was preceded with a demand for accessing government records from local officials (usually the block development officer). Once the records were accessed, the MKSS along with residents of the area where the audit was being conducted would verify the information they contained. This process of verification would create general public interest in the audit and serve as a catalyst for mobilizing people to attend the hearing. The hearings were usually presided over by a well-known personality to ensure that neutrality was established and maintained throughout the process.

Concurrent with the audits, the MKSS spearheaded a wider struggle for the right to information. In 1995, 1996, and 1997, large-scale public sit-ins were organized in Beawar and Jaipur, Rajasthan, to demand a right-to-information law. The sit-ins generated significant public support for the enactment of such a law in the state. Consequently, in 1997, the Rajasthan government issued a gazetted notification giving citizens the right to obtain and inspect copies of government records for development works implemented by local governments. This is widely acknowledged as the first step toward establishing a right-to-information law. Such a law was finally enacted in Rajasthan in 2000. Five years later, spurred by a national-level coalition of activists, journalists, and other prominent citizens, the Indian Parliament passed the national Right to Information Act; this in turn helped enable the social audit process to take root across India.

Close on the heels of the information act was the enactment of MGNREGA. This act is a watershed in the evolution of the social audit process, as it gave social audits a legal sanction at the national level. Together, the two acts enabled access to government records, giving impetus to the conduct of social audits in MGNREGA.

Since the launch of MGNREGS in February 2006, social audits have been conducted in many parts of the country. These audits have taken different forms and had different outcomes. In states including Rajasthan, audits have been conducted by civil society organizations independent of government. In fact, in Rajasthan, efforts by civil society to work with the state government to institutionalize social audits have largely been

resisted. Following a series of corruption scandals in 2007–08, the government of Odisha initiated a civil society–led social audit process for MGNREGS, but the process has not been repeated since. In the program's early days, civil society activists organized mass social audits (demonstration audits) in different parts of the country to try and kick-start the social audit process in different states. Andhra Pradesh is the only state that has taken steps to institutionalize the process and to undertake regular social audits through the government machinery.

## MGNREGS and Social Audits in Andhra Pradesh

Like most of India, Andhra Pradesh had a dismal record of implementing rural employment programs. Research on food-for-work programs in the state reveals an all-too-familiar story of large-scale misappropriations by contractors, local political bosses, and officials. These abuses are well documented in a study on Rs 3 billion worth of food-for-work programs conducted by Deshingkar and Johnson between 2001 and 2002. The study reported on the widespread presence of contractors in all study villages. The contractors made illegal profits by inflating employment figures, submitting inflated proposals for works, and claiming rice quotas for incomplete works. In some instances, they went so far as to claim funds for old works that had been constructed under a different program. The research exposed the nexus between the contractors and the local political bosses—in five out of six cases, village and ward officials or their family members doubled as contractors. Consequently, large amounts of funds were pilfered, and workers were denied their wages (Deshingkar and Johnson 2003).

The political climate was ripe for a serious rethinking of the corruption problem when MGNREGS was first launched in the state in February 2006. An extremely efficient and committed top-level bureaucracy—in particular, the principal secretary for rural development, whose department was responsible for implementing MGNREGS in the state—was ready to experiment with innovative ideas to plug all potential sources of leakage.

The first step in this direction was to computerize the entire MGNREGS implementation process. With the help of an information technology company—Tata Consultancy Services—the government of Andhra Pradesh developed an end-to-end management information system (MIS) through which job cards, work estimates, and payment orders are issued. The data are collected and input at the *mandal* level and

consolidated at the state level. Information on each job card holder, including number of days worked and total wages received, is accessible through the MIS. All data are public and available for scrutiny. To streamline payment processes, wages are paid directly through workers' post office or bank accounts. Chapter 10 provides a detailed case study of this experience.

But e-governance is no panacea. The Andhra Pradesh government recognized that in order to tackle corruption it was critical to attack it at its roots, for which local monitoring and verification are critical.

About the same time as the Andhra Pradesh government was struggling with how to address corruption, civil society activists in India, many of whom had played a defining role in the legislation for MGNREGS, had begun to focus on developing systems to undertake social audits. The first such audit was organized in Dungarpur, Rajasthan, in February 2006, implemented by a network of civil society activists in partnership with the Dungarpur district administration. The objective was to demonstrate the feasibility of conducting large-scale audits for MGNREGS and to simultaneously train civil society activists and other interested parties on how to conduct a social audit.[3] It culminated in a large public hearing attended by numerous officials and politicians, including the principal secretary for rural development of Andhra Pradesh who, inspired, took steps to initiate a formal social audit process in the state.

### *The Early Years (2006–08): Laying the Foundation for Social Audits*

The social audit process in Andhra Pradesh was initiated in March 2006 with a pilot on 12 sites of the National Food for Work Program, the precursor to MGNREGS.[4] The government of Andhra Pradesh collaborated with the MKSS in this initiative; the MKSS trained officials and interested activists and worked with the government to design the pilot audits. The objective of the pilots was to learn from experience and to develop a cadre of trained resource persons who could manage the implementation of social audits in the state. The pilot audits provided the momentum necessary for the bureaucracy to consider the idea of institutionalizing the social audit process so that audits could be conducted regularly on all MGNREGS works in the state.

The institutional space for developing a team and managing social audits in the state was found in the Strategy and Performance Innovation Unit (SPIU), sponsored by the state's Centre for Good Development and the U.K. Department for International Development, and set up under the state's Rural Development Department and mandated with

implementing governance reform innovations. The SPIU director, a state civil servant, was given charge of implementing the social audit. An MKSS activist joined the director to provide social audit expertise and develop the methodology.

The first step in institutionalizing the audit was to create a pool of trained social auditors. Efforts were initially focused on training NGO frontline staff and other civil society activists to this end. However, concerns regarding NGO coverage and neutrality led the team to experiment with the idea of village social auditors (VSAs). The VSAs were youth from MGNREGS beneficiary families who, the audit team felt, would have a stake in the process and thus be actively involved both in conducting the audit and using lessons learned from it to continue monitoring after the audit was finished.

By December 2006, the SPIU had put in place a 25-member state resource team. With the exception of the SPIU director, all other staff was recruited from outside the government system as contract employees. In addition, 260 district-level resource persons were trained, 20 per district. They, in turn, were tasked with developing the cadre of VSAs to conduct the audit at the village level. Over time, this pool of VSAs has become a human resource base for the state social audit teams, and many have been given jobs as district-level resource persons.

Steps were also taken by the Rural Development Department to legitimize the process. Between 2006 and 2008, the department issued a series of government orders related to the institutional structure of the social audit and mandating the presence of key government officials at the public hearings. Orders were also issued to ensure that all relevant government records were given to the social auditors at the time of the audit. Training and information sessions were held with officials and elected representatives at the *mandal* and district levels in an effort to bring frontline officials onboard.

### *The Consolidation Phase (2008–10): Institutionalizing Social Audits*

By 2008, social audits had gained momentum not just in Andhra Pradesh but across the country. During this phase, the state government continued to build on its training model, focusing on training officials and elected representatives. At about this time, the government of India launched the second phase of MNREGS and rolled it out in the entire country.

The first challenge for the social audit was thus to scale up from 13 districts to the entire state. But the social audit champions faced an

even bigger challenge. The country was set to have elections in 2009, and this opened the possibility of a rollback of the process with a change in the political climate. The champions began to explore ways of further institutionalizing the social audit process and of insulating it from the bureaucratic and political changes typical in any government. Eventually, a decision was taken to house the social audit in an entity that would fall within the ambit of the Rural Development Department but at the same time remain insulated from it. Consequently, in May 2009, the Society for Social Audits Accountability and Transparency (SSAAT) was established by government order. Housed under the Rural Development Department, the SSAAT has an independent board and is now entirely responsible for the conduct of social audits in the state.[5] Although the society faced some transition problems and personnel shifts in its early days, government commitment to social audits did not waiver. These changes did slow the process of undertaking social audits and consolidating the SASST.

In May 2010, the current SASST director—the MKSS activist who had worked closely with the SPIU—took over the society's leadership, and shifted the social audit process focus toward building a structure to redress grievances.

### *The Present (2010 Onward): Focus on Redressing Grievances*

In the initial years of the social audit process, Andhra Pradesh experimented with VSAs conducting follow-up inquiries after the audits to ascertain if action was indeed being taken in light of audit findings. However, even though the relevant officials were obliged to attend the public hearings at which the audit findings were read and were mandated to follow up on these findings within a specified period of time, grievance resolution remained weak. For one thing, final responsibility for taking action rested with the officials. On the other hand, the expanding scale of the scheme and the need to conduct audits every six months meant an increasing workload for the auditors, making it virtually impossible for them to conduct audits as well as track follow-up. Under these circumstances, it was critical that grievances be acted upon with some urgency, so people could retain their faith in the process.

In December 2010/January 2011, the new principal secretary of rural development ordered the creation of a separate vigilance cell, which was mandated to follow up on all actionable decisions taken at the end of the public hearing. (Some grievances could be resolved at the public hearing itself and thus were not classified as actionable.) Also within the purview

of the Rural Development Department, the cell was given a space that was *independent* of both SSAAT and the team implementing MGNREGS. With the creation of this cell, social audits in Andhra Pradesh entered a new phase. The social audit essentially became a fact-finding process and, more important, a platform for people to voice their grievances, while the vigilance cell was given the work of following up and ensuring that these grievances were redressed.

## Implementation Structure of Social Audits in Andhra Pradesh

This section describes the management structure and systems through which social audits are accomplished and grievances redressed in Andhra Pradesh. For further information refer to Aiyar, Soumya, and Salimah (2011).

### *Management Structure of Social Audits*

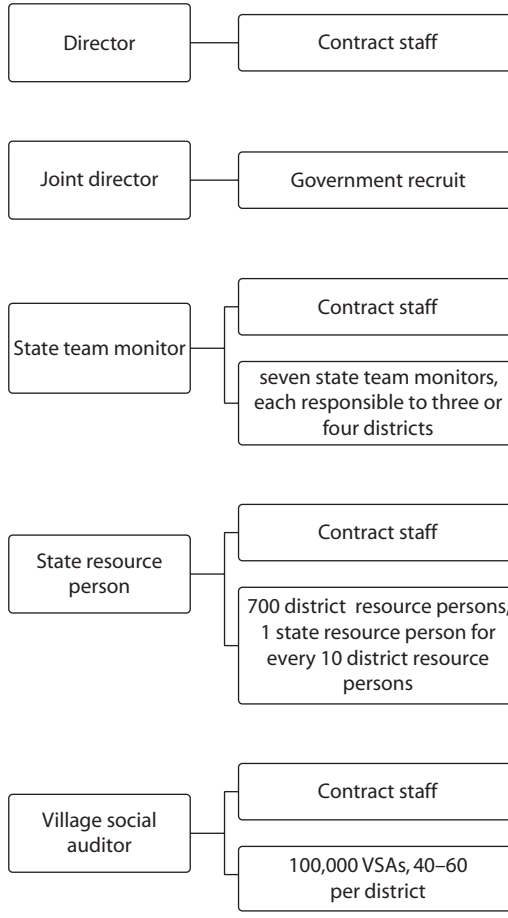
Interestingly, many staff members including the SSAAT directors have been drawn from activist groups and NGOs around the country. This has been important both in ensuring that the right kind of expertise is brought in and that the public perception of objectivity is maintained (figure 11.1.)

The state team monitors are responsible for the overall management of the social audit in a cluster of districts. The work includes scheduling the audits, generating reports on the audits (rapid social audit reports), staffing, training, and other human resource issues.

The state resource person leads the social audit process in the district, supported by a team of 10 district resource persons. These latter are responsible for managing the actual conduct of the audit, which includes identifying the auditors, training them, and interacting with the *mandal*-level officials to organize logistics and the public hearings.

The social audit itself is undertaken by the VSAs recruited by the district resource persons. The qualifying criteria for a VSA is that he or she belongs to a wage-seeker family that has worked under MGNREGS for at least 10 days, is at least a high school graduate, and is over 18 years of age. In addition, a written test is administered at the time of selection. At present, the SSAAT has a resource base of 100,000 VSAs across the state. To avoid conflicts, the VSAs are not allowed to conduct audits in their native village, and there is a maximum limit of five social audits any VSA can undertake. (This rule can be relaxed in exceptional circumstances.) The VSA is paid Rs 100 per day plus a travel allowance.

**Figure 11.1 Society for Social Audits Accountability and Transparency (SSAAT) Management Structure**

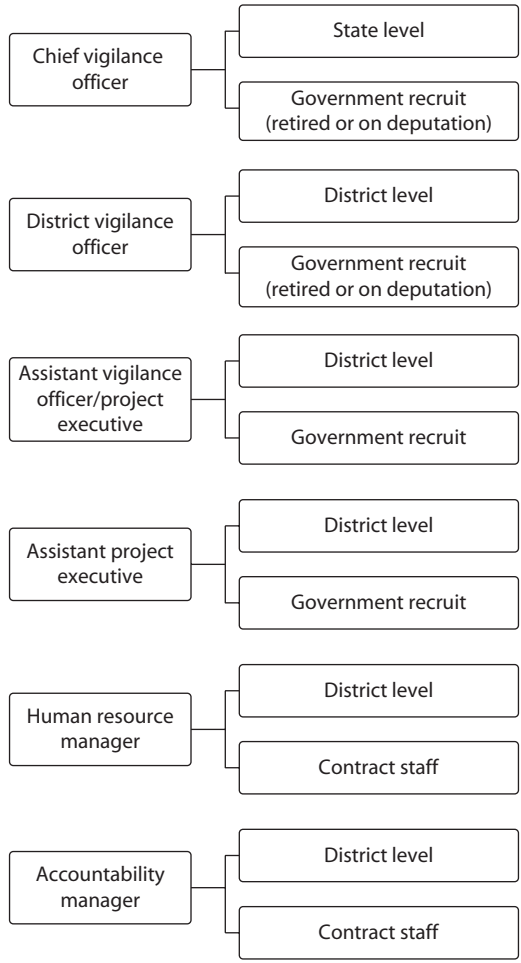



### *Management Structure for Redressing Grievances*

In 2010, Andhra Pradesh introduced a vigilance cell in the Rural Development Department to ensure follow-up and enforcement of social audit findings.

A chief vigilance officer heads the redress of grievance system. This officer is directly accountable to both the commissioner and the principal secretary of rural development (figure 11.2). In 2011, a new post for a district vigilance officer was created to facilitate direct redressing of

**Figure 11.2 Management Structure of the Vigilance Cell**




grievances and follow-up of the social audit at the district level. People filling this post are usually state cadre officers who have retired from the government. To qualify, they must pass a written test, be in good physical condition, and have a good reputation. No district vigilance officer can be posted in his or her native district. The district officers report to the chief vigilance officer at the state level and to the program director at the district level.

The major responsibilities of the vigilance cell include issuing "show cause" notices and initiating criminal investigations or other inquiries arising from social audit findings. The term "vigilance" is somewhat misleading, as the cell does purely follow-up action work.

## Implementation Process of Social Audits in Andhra Pradesh

Much preparatory work goes into the conduct of the social audit. The dates and timing of the audits are determined by a quarterly calendar prepared by the state team monitors. Prior to the audit, a letter requesting records—specifically muster rolls (worksite attendance registers) and measurement books—is sent to the *mandal parishad* (or local) development officer (MPDO). On receipt of these letters, the MPDO is mandated to provide information to the district resource persons and inform *panchayat* members of the upcoming audit.

Prior to November 2010, the social audit team had to request all data from the MPDO. Now most MGNREGS data is obtained directly from Tata Consultancy Services, the information technology company that manages the state's MGNREGS database.[6] The company aggregates all village-level data into books that can consist of 10,000 records in three volumes, with about 1,000 pages for each village.

The social audit takes approximately 10–12 days.

- *Day 1*. The district and state resource persons collect the requested data from the MPDO. This is followed by a *mandal*-level meeting with the elected representatives from all *panchayats* to apprise them of the forthcoming audit in their villages. The district resource persons then begin to recruit VSAs.

- *Days 2–4*. Once the VSAs have been recruited, they go through a two-day training conducted by the district resource persons at the *mandal* level. This training includes information about the MGNREGS, the Right to Information Act, and the nonnegotiables of a social audit. They are trained on how to apply for information under the Right to Information Act. Parallel to the trainings, meticulous research is conducted, and all official records pertaining to the MGNREGS works, including muster rolls, technical sanctions, utilization certificates (financial records), bills, and vouchers, are scrutinized and consolidated into manageable and easy-to-understand formats. Cases can be booked against relevant officials of the implementing agency should they refuse to share records.

- *Days 5–8*. Armed with these documents, the VSAs go to the villages to conduct the actual audit over a 3- to 4-day period. During this time, auditors stay in the villages assigned to them. They go from house to house cross-verifying official records, examining the worksites, and gathering information from wage seekers. They also record statements of wage seekers and collect evidence if they find discrepancies. The auditors then convene an assembly where findings from the audit are shared. Local politicians, *panchayat* members, local officials, and, most important, the field assistants participate in these meetings. The meetings begin with an information-sharing session in which details on legal entitlements under MGNREGA are shared with the public. This often serves as a catalyst for discussion and debate on the state of a scheme's implementation. During these meetings, names of wage seekers and amounts due them are publicly read out. This information triggers a detailed discussion among participants on different aspects of implementation and grievances therein.

- *Days 9–10*. After the *gram sabha*, the VSAs and district resource persons consolidate all *gram sabha* reports for the *mandal*-level public hearing. The reports are put in a draft decision-taken format; this includes a village-wide summary of all findings and actionable issues and complaints identified in the social audit as well as issues that have been resolved at the *gram sabha* level. The draft report can be between 400 and 1,000 pages long.

- *Day 10, 11, or 12*. On the last day of the social audit, a public hearing is held at the *mandal* level. The public hearing is a nonnegotiable in the social audit and is to be held regardless of circumstances. The responsibility of organizing and financing the hearing rests with the MPDO. The hearing is presided over by the program director or the assistant program director. Attendance of all implementing officials is mandatory. Typically, the attendees include wage seekers from the villages in the *mandal*, the social audit team, the branch postmaster or the superintendent postmaster, key implementing officials, members of the vigilance cell, elected representatives, and an independent district-level ombudsman. Attendance ranges from 200 to 800 people.

At the hearing, village issues and complaints are read out (this again is nonnegotiable), wage-seeker testimonies are verified, and the implicated officials are given an opportunity to respond. The presiding officer makes decisions on what actions have to be taken by the implementing agency

to address the issues and/or complaints. These are summarized in a final decision taken report, which contains the following information:

- Name of district and *mandal*
- Date of the social audit public hearing
- Number of social audit team members present at the public hearing
- Officers present at the public hearing
- A summary table of all issues and/or complaints identified, by village; with the person responsible, the amount involved, and the decision taken recorded for each.

The presiding officer signs the decision-taken report to attest to its accuracy. If for any reason a public hearing is not held or is held and officials do not attend, the draft report (or the decision taken format) is deemed final. These reports can be found on the social audit website.

### *After the Audit*

Within 24 hours of the social audit, signed copies of the decision taken report are sent to key officials (the project executive/district vigilance officer, the MPDO, and the program director) for follow-up. A copy of the report is also sent to the data entry company to ensure quick computerization of the social audit findings. The original is retained by the SSAAT.

At the district level, responsibility for follow-up lies with the program director and the district vigilance officer. Within 3 days of report receipt, these officials send a report of their own for approval of actions to be taken. Once this is approved, follow-up is initiated. This includes issuance of show cause notices (implicated staff are given 15 days to respond as well as an opportunity for a personal hearing) and of charge memos, and initiation of criminal investigations. District vigilance officers are expected to issue these notifications within 7 days for approval. If they fail to do so, disciplinary action is taken against them. In addition, a letter is sent by the program director to the MPDO to initiate action in all other cases, such as cases in which monies are to be recovered and implementation processes are to be streamlined.

While there are no strict deadlines for action taken, the government has put together several key processes for monitoring follow-up. These include a watch register at the *mandal* level, which documents specific follow-up actions taken, and monthly follow-up meetings conducted by the vigilance cell in coordination with the social audit team and relevant officials from the implementing agency. On the first Friday and Saturday

of every month, the chief vigilance officer convenes a review meeting. While the Friday meeting is limited to the vigilance cell, the Saturday meeting includes the audit team and relevant officials from the implementing agency to discuss follow-up action. The principal secretary of rural development chairs this meeting.

Action taken reports are uploaded on an intranet within the SSAAT website. While the MPDO updates these reports as and when actions are taken at the *mandal* level, the vigilance cell approves final changes to these reports. Finally, the SSAAT team prepares a monthly rapid social audit report and shares it with the principal secretary of rural development. Another dimension of the grievance redressing process is an independent ombudsman at the district level who reports to the principal secretary of rural development and is himself/herself a retired government official. The position was created under the MGNREGA. The ombudsman attends the *mandal*-level public hearings and can conduct an inquiry at his or her own discretion. He or she can also receive complaints independent of those that arise in a social audit. However, the ombudsman does not give the implicated person an opportunity for response, nor does he or she take the remarks of the presiding officer into consideration when deciding awards. The principal secretary for rural development conducts a review with all ombudsmen once every two months.

## Lessons Learned and Conclusions

Andhra Pradesh has a carefully designed institutional system for conducting regular social audits. The very fact that this system exists and that social audits are conducted regularly with a high degree of compliance to social audit rules is itself a testament to its success. Andhra Pradesh is the only state in India to have institutionalized social audits.[7] A variety of political and strategic factors contribute to this circumstance, notably the existence in the state of champions who have leveraged political will to institutionalize social audits.

In the early days, unsurprisingly, social auditors encountered resistance both from politicians and bureaucrats at the local level. To create political support and quell the opposition, the then-principal secretary for rural development and the director of the SPIU interacted regularly with the chief minister, sharing details of social audit findings. These interactions went a long way toward ensuring that the political hierarchy supported the process. Interviews revealed that the chief minister

considered social audits a vehicle through which frontline bureaucrats could be held accountable, which in turn could act as a check against the existing contractor, political elite, and bureaucrat nexus at the grassroots level.

At the same time, the director of the SPIU was careful to engage regularly with the frontline bureaucracy to address concerns and ensure that they did not feel threatened by the social audit process. Through these interactions, the director sought to build confidence and credibility among frontline officials and win their support.

The greatest strength of the social audit lies in the nature of its implementation in the state. Government officials at the highest level support the process, and this ensures that all key officials from the program director to the *mandal* officer attend the public hearings. In sharp contrast to the implementation of many government programs, most officials on the frontline seem aware of the details of how a social audit is conducted and attest to the fact that the audits are conducted in compliance with the rules and norms set by the state government. Even the audits' critics agree that the process has taken root in Andhra Pradesh and is an important mechanism for improving government delivery at the grassroots level.

The audits have been successful in bringing to the fore critical issues related to MGNREGS implementation in the state. Analysis of issues recorded in the decision reports showcase the range of issues brought up through the social audit. These include issues related to corruption, such as misappropriation of funds, misrepresenting muster rolls, poor administration (e.g., delays in wage payments), difficulties in getting job cards and applying for work, lack of facilities at worksites, and caste discrimination at worksites. The social audits help in pinpointing specific officials responsible for cases of corruption and poor administration. They also highlight best practices and serve as a vehicle for bringing out positive stories of implementation.

The audit process has had important effects on MGNREGS efficacy. In the program's early days, the World Bank undertook a survey of 840 MGNREGS beneficiaries to examine the effects of the social audit. The survey was administered three times over a six-month period: once before the audit, once one month after, and once six months after. Survey results showed that the audit had a significant effect on beneficiaries' awareness levels. When asked, "Have you heard of MGNREGS?" in round one, only 39 percent of respondents answered positively. This rose to a dramatic 98 percent in rounds two and three. The audit also had

some effect, albeit not as dramatic, on implementation processes. For instance, the study found that job card entries increased from 39 percent in round one to 99 percent in round two. Similarly, knowledge about wage payment slips and what they are meant for rose from 62 percent in round one to 92 percent and 96 percent in subsequent rounds. A direct consequence of this was that beneficiaries better understood that payment slips are linked to the quantity of wages received—figures rose from 49 percent in round one to 60 percent in round three. Finally, the survey found that the audit had some impact on people's perceptions of government officials. Over 90 percent of respondents said they felt more comfortable approaching various officials after the social audit. When asked why, 60 percent said that the increased awareness about different aspects of the program gave them the confidence to approach the relevant authorities.[8]

The public hearings also result in some amount of immediate redressing of grievances. Once a complaint is made, the presiding officer decides on actions to be taken based on the complaint. These complaints are then followed up with action by the vigilance cell. To illustrate the scale of action, as of March 31, 2011, in a random sample of 13 districts, 6,199 officials have been dismissed, 616 have been suspended, 411 have had cases filed against them, and another 2,583 have been subject to inquiries.[9]

Perhaps the most powerful aspect of the social audit public hearing is that it has resulted in misappropriated funds being identified; in some cases, errant officials have returned money to beneficiaries in full public view. According to data collected by the social audit team since the start of the process, Rs 235 million out of Rs 1 billion in misappropriated funds have been recovered either at the public hearings or through the vigilance process.

The scale of redress remains a challenge for Andhra Pradesh. Data on 13 sample districts show that action has been taken against just about half of the officials implicated during the social audits (9,809 officials as against 19,488 officials). Moreover, according to anecdotal evidence from the social audit team, there are cases where, despite dismissals, errant officials have found ways of reinstating themselves in the system. In terms of financial recoveries, thus far the enforcement mechanism has recovered about 23 percent of the total misappropriated funds revealed through the audits. This suggests that the scale of reprisal is relatively low—arguably too low to be considered effective. Weak redressing of grievances poses severe risks for the social audit process, as in the absence of effective redress, people are starting to lose faith in the process.

Preliminary fieldwork highlights some process limitations that require mention. Critics of the social audit argue that VSAs lack technical qualifications and often misunderstand what beneficiaries say during the audit. Regardless of whether these criticisms are valid, they do highlight a fundamental problem the audit process faces: the social audit is, by its very nature, confrontational and creates friction between auditors and bureaucrats. State bureaucracies have to confront the imperatives of social audits and reconcile them with departmental loyalty on the one hand and what are often contradictory pulls and pressures from the state and central political and administrative leadership on the other. Additionally, social audits by design focus on the frontline, which has the potential of creating a sense of being discriminated against, which also can create friction between auditors and bureaucrats.[10] This friction opens the process to risks of opposition over time.

The biggest challenge to social audits going forward remains who should conduct the audit? The current design requires a significant human resource base. While this is necessary to run audits of this scale, it also brings up important questions about the efficacy of creating what is virtually a parallel bureaucracy to run audits. For the moment, the system is protected by the particular constellation of actors at the helm, but in the long term, the system runs the risk of being routinized and reduced to a procedural check-box process that seems to plague social audits in most states. The ultimate goal of the audit process should be to evolve into a people-led system. The SASST is currently experimenting with different ways of accomplishing this, but the process is beset with challenges. At what point should the audit process begin to change its structure and move away from creating a bureaucracy to evolve into a people's audit? And what would be the role of government in ensuring enforceability? These are the challenges for the future of social audits.

## Notes

1. Data obtained, from rapid social audit reports as of March 31, 2011, are available at http://125.17.121.162/SocialAudit/.
2. For a detailed analysis of the evolution of the right-to-information movement and social audits, see Goetz and Jenkins (2001) and Mukhopadhyay (2005). Also see the MKSS website, www.mkssindia.org.
3. See Sivakumar (2006) and Akella and Kidambi (2007) for a detailed account of this social audit.

4. Note that, originally, MGNREGA was implemented in only 13 of the state's 23 districts, in accordance with the program's mandate of being rolled out in the most needy districts in its first phase. In 2008, MGNREGA was extended to all districts in the country.
5. The society model has been common in Andhra Pradesh and provides the "housing" for most of its innovations in social sector reform.
6. The database can be found at www.nrega.ap.gov.in, accessed June 2012.
7. In late 2009, the government of Rajasthan attempted to put in place an institutional structure similar to the Andhra Pradesh model for conducting regular social audits. To kick-start the process, a large social audit was organized by the Rozgar and Soochna Abhiyan (a network of civil society activists in the state) to train over 1,000 district and state resource people on conducting social audits. However, in the aftermath of the audit, local political leaders and frontline bureaucrats rallied together to oppose social audits. The case eventually went to the Rajasthan High Court, which issued a stay order against social audits of this nature being conducted.
8. For a detailed analysis of this study, see Aiyar and Samji (2009).
9. Data obtained from Rapid Social Audits report at: http://125.17.121.162/SocialAudit/ (Accessed March 2011). Districts in the sample are all first-phase MGNREGS districts.
10. The authors are grateful to Shekhar Singh for these insights.

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CHAPTER 12

# Ethiopia: Use of Impact Evaluation

Ethiopia's flagship Productive Safety Net Program (PSNP) is one of the most highly evaluated programs in the world. Given its innovative approach and scale, its evaluations generate a great deal of interest in the international community as a source of lessons that can be learned by countries implementing similar programs. This case study describes how impact evaluations have been used to measure progress toward Ethiopia's main objectives for PSNP during the period 2006–11.

The case study underscores the potential for impact evaluation to assess whether program objectives have been achieved, and to promote overall credibility and transparency. Notably, the findings of such evaluations on program implementation will allow for midcourse corrections and will help redesign key parameters of the program if needed. In the case of PSNP, this potential has been achieved through the establishment of robust monitoring mechanisms and underlying data focused not only on input and output indicators but also on outcome indicators. Such a solid monitoring and evaluation (M&E) system has enabled evaluators to combine quantitative and qualitative approaches and produce a rich picture of program impact. The experiences and findings described here

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about both PSNP and impact evaluation are of significance both within and outside the Ethiopian context.

The case study reviews and summarizes the findings of selected targeting and impact evaluations to describe how PSNP has evolved over time. It is a review of work done by others, and no originality is claimed. The chapter does not discuss methodologies in detail, nor does it critique the limitations of the data sources. The discussion focuses on the reported impacts related to targeting performance and setting the wage rate as well as on labor market and household effects on income, assets, and food security.

The chapter is organized as follows: The "Program Context" section provides a short description of the program and its components. The "Overview of Selected Impact Evaluation Studies: Methods and Data" section provides a summary of the data collected for some of the most common evaluation methodologies used. The "Program Targeting Performance" section discusses how effective targeting has been under PSNP. "The Cash Transfer Modality: Beneficiary Preferences, Timeliness, and Local Market Effects" section explains the level, modality, and timeliness of PSNP transfers. The "Program Impact on Household Well-Being" section discuses some of the main findings of program impact on household well-being (income, assets, and consumption). The "Unintended Effects" section expands on unintended effects and other key findings regarding secondary impacts. The final section offers a summary of lessons learned and conclusions. In light of these findings, the chapter also provides a short assessment of how the program has evolved over time.

## Program Context

The Government of Ethiopia launched PSNP in 2004 to provide transfers to chronically insecure households with the objective of ensuring food consumption and preventing asset depletion in a way that stimulates markets, improves access to services and natural resources, and rehabilitates and enhances the natural environment (World Bank 2010). PSNP represents an innovative attempt by the Government of Ethiopia to shift away from responding to chronic hunger by emergency appeals and toward a proactive response that relies on using predictable resources to address a predictable problem. The two main components of PSNP are a public works program that provides countercyclical employment on mostly rural infrastructure and land rehabilitation projects, and a direct support component that provides unconditional cash or food transfer to

vulnerable households that have no able-bodied members to participate in public works.

One important point to note about the PSNP is the enormous amount of consultative work done prior to finalization of the program. In particular, donor harmonization and coordination preceded program finalization; to ensure such harmonization throughout the life of the program, a Joint Coordination Committee was established in 2006. This committee is supported by a Donor Coordination Team established in 2008 with an approved structure and nine staff members (World Bank 2010). The World Bank has provided an Adaptable Lending Program loan of $480 million. PSNP is now extended until 2015.

PSNP's two components are largely intended to reach chronically food-insecure households. The Program Implementation Manual defines chronically food-insecure households as follows:

- Households that have faced continuous food shortages (usually three months of food gap or more) in the past three years and received food assistance prior to the commencement of PSNP
- Households that have suddenly become more vulnerable as a result of a severe loss of assets and are unable to support themselves
- Any household without family support or other means of social protection support.

Based on these criteria, communities identify participants for inclusion in PSNP. Once selected, households are assigned to either the public works or direct support component depending on the presence of able-bodied members in the household who can participate in public works.

Despite the focus on chronic food insecurity, the system has evolved to address transitory food insecurity as well. Regional and *woreda* contingency budgets have been established to respond to unexpected emergency needs.[1] In the initial phase of PSNP (2005–06), these budgets were used to respond to an increase in the number of food-insecure households above the *woreda*'s base list.[2] It was not until 2007 that contingency budgets evolved into instruments to cover households that fell into transitory food insecurity due to the failure of small (*belg*) rains or to food price inflation (World Bank 2010).

Another evolution of the program has been its responsiveness to different target groups. In 2006, the government launched a pilot program to tailor PSNP to pastoral regions. These areas are prone to weather-induced shocks, conflict, and market failures. Given the particular needs

and characteristics of pastoral households, the pilot aimed to test different implementation approaches in 21 *woredas* and to obtain feedback that would guide the scale-up of PSNP in these regions. The final PSNP roll-out to all pastoral areas will use the lessons now being learned in the current pilot (World Bank 2010).

Households are expected to graduate from the program once they are food-sufficient, which is defined as "when a household is able to feed itself for 12 months in a year, in the absence of program support, as well as being able to withstand modest shocks" (Government of Ethiopia 2010). The program manual states that a household's food security status is assessed using a set of predetermined, regional, asset-based benchmarks tailored to local conditions. These include the status of household assets including land holdings, quality of land, food stocks, income from nonagricultural sources, and support/remittances from relatives or the community. Once beneficiaries have been identified for graduation, they remain in the program for one additional year.

### *Link to Other Programs*

PSNP began as a component of Ethiopia's Food Security Program (FSP). FSP was designed under the framework of Ethiopia's Poverty Reduction Strategy with the aim of helping chronically food-insecure households achieve a level of food security necessary for an active and healthy life (Food Security Coordination Bureau 2004). The current components (2010–14) of the FSP are PSNP, the Household Asset Building Program (HABP), Complementary Community Investments, and the Resettlement Program. Together, these components constitute a broad government strategy to help households move out of food insecurity.

HABP came to replace what used to be the Other Food Security Program (OFSP). In an initial stage, PSNP complemented OFSP in order to help beneficiaries achieve graduation. OFSP encompassed an array of interventions, including access to credit and savings, support for crop and livestock production, assistance with the installation of water and irrigation systems, and promotion of off-farm income-generating activities. The government began targeting OFSP packages to PSNP participants in 2006; the goal was to reach an annual coverage of 30 percent of PSNP beneficiaries with the OFSP for a period of three years (World Bank 2010). In practice, however, only a few PSNP households had consistent access to OFSP (Berhane et al. 2011a). To address the low coverage and other implementation issues, the OFSP was completely redesigned into the current HABP. HABP switched to a

demand-driven extension system, and it increased access to financial services and credit. Among the main HABP objectives are diversification of income sources and an increase in productive assets for food-insecure households in chronically food-insecure *woredas* (Berhane et al. 2011a). The rollout of HABP began in 2009, and PSNP beneficiaries are prioritized to receive this program. Since PSNP is complemented by HABP, this chapter specifies the impact for households that receive only PSNP transfers and for households that receive payments jointly from PSNP and OFSP/HABP.

### *The Food Security Program Monitoring and Evaluation System*

The establishment of a robust M&E mechanism has been an important component in facilitating impact evaluations under PSNP. In 2004, the Government of Ethiopia worked on an M&E plan that established the basis for a system that would track and evaluate progress for the entire FSP. This ensured a systemic approach to producing a continuous stream of quality information and avoided duplication of effort through individual program-specific M&E systems. The FSP M&E plan determined the type and frequency of data government would generate. Donors would then use the data to meet their individual requirements. This plan did not, however, create an agreed-upon logical framework for managing the program; this logframe was developed separately and used as an anchor around which future impact evaluations could be devised. (See appendix G for the PSNP logframe.)

## Overview of Selected Impact Evaluation Studies: Methods and Data

One of PSNP's main strengths is its ability to measure program impact over time. This case study reports on the findings of eight separate impact evaluations conducted from 2006 to 2011:

- The Impact of Ethiopia's Productive Safety Nets and Household Asset Building Programme: 2006–2010 (Behane et al. 2011b)
- Targeting Food Security Interventions When "Everyone Is Poor": The Case of Ethiopia's Productive Safety Net Programme (Coll-Black et al. 2011)
- Cash Transfers and High Food Prices: Explaining Outcomes on Ethiopia's Productive Safety Net Programme (Sabates-Wheeler and Devereux 2010)

- Impacts of the Productive Safety Net Program in Ethiopia on Livestock and Tree Holdings of Rural Households (Andersson, Mekonnen, and Stage 2009)
- An Impact Evaluation of Ethiopia's Productive Safety Nets Program (Gilligan et al. 2009)
- Ethiopia's PSNP: 2008 Assessment Report (Devereux et al. 2008)
- The Impact of Ethiopia's Productive Safety Net Programme and Its Linkages (Gilligan, Hoddinott, and Taffesse 2008)
- Ethiopia's Productive Safety Net Programme (PSNP): Trends in PSNP Transfers within Targeted Households (Devereux et al. 2006).

These studies are enumerated in appendix I, with an accompanying summary of each evaluation's methodology and results. Even though process evaluations are not part of the scope of this chapter, a brief review regarding payment issues is also included, since the level and timing of the transfers directly affect impact. Before reviewing the specific findings of the evaluations, it is useful to highlight some methodological and data issues related to them.

Despite the interest of donors in a sophisticated impact evaluation at the outset of PSNP, the government was unwilling to consider a randomized design because of the requirement that eligible households would have to be excluded from the program (World Bank 2010).[3] At the same time, some government program managers questioned the rigor of participatory approaches, which could provide rapid assessments of program implementation. These and other concerns led program designers to adopt an impact evaluation methodology that would survey PSNP and non-PSNP households in chronically food-insecure *woredas*. While this approach would produce robust evidence on program processes and impacts, it had two drawbacks:

- It required the use of advanced econometric techniques to assess program impact, as a randomized approach was not used and sampling was done in PSNP *woredas* only.
- It required a separate impact evaluation for public works, given that sampling was only undertaken in communities with PSNP public works (World Bank 2010).

To carry out evaluations, the Government of Ethiopia conducted biannual household surveys in 2006, 2008, and 2010. About 3,336 households from 66 *woredas* served by PSNP constitute the panel data. From

this total, 3,140 households were surveyed every other year (Berhane et al. 2011b). The first set of evaluations was carried out in 2006, which became the baseline. The following rounds were done using panel data collected in 2008 and 2010. These are not the only data used in the PSNP evaluations; several, particularly those done in the early stages of the program, rely on their own data (Andersson, Mekonnen, and Stage 2009; Devereux et al. 2006, 2008).

The availability of this longitudinal data has been critical to the measurement of program impact over time and the conduct of different types of evaluations. The basic principle of program impact assessment is the comparison of the relevant mean outcomes of beneficiary with nonbeneficiary households. To avoid selection bias when beneficiary households are systematically different from the nonbeneficiary households, a valid comparison or control group is required. Because PSNP beneficiaries were not randomly selected, most evaluations have used matching methods to construct valid control groups in order to match control households (without the program) with beneficiary ones based on observable characteristics.

Once a valid control group had been constructed, several studies used a difference-in-difference or double-difference method to analyze impact before and after the program (from baseline in 2006 to 2008 and 2010) and with and without the program (difference in outcome between beneficiaries and nonbeneficiaries). The double difference of the above gives the net program impact. Berhane and colleagues in a 2011 evaluation applied a slightly different approach to the selection of control groups. Given that by 2010 a larger number of households had been selected to the program, the fact that the fewer remaining households had not received PSNP transfers after six years of program implementation meant that they were not really comparable with beneficiary households. To overcome this bias, the study used as a control group the households that had received only one year of PSNP payments. This made an excellent counterfactual, since these households fulfilled the eligibility criteria to participate in the program (same characteristics as the rest of beneficiary households), but the amount of payments was so minimal as to be irrelevant: a median transfer of Br 186 compared to a median of Br 3,370 for households that received payments during the five years (Berhane et al. 2011a).[4] The authors also used an extension of propensity score matching methods developed by Hirano and Imbens (2004) to analyze the impacts associated with longer program participation. The estimates are referred to as a dose-response function, where the "dose" is the number of years a

household has access to the program and the "response" is the impact caused by the level of transfers.

## Program Targeting Performance

Most evaluations focus on PSNP's targeting performance. Given the large scale of the program, it is important to ensure that program resources are effectively reaching chronically food-insecure households. This section reviews the main findings of these evaluations in this regard and identifies targeting challenges and priorities that have been derived from impact evaluation. The current targeting approaches under the PSNP public works component are summarized in box 12.1.

**Box 12.1**

### Summary of Targeting Approaches under the PSNP Public Works Component

PSNP beneficiaries are targeted using a combination of geographical, community-based, and administrative targeting methods. The first level of targeting is geographical, with only the 319 *woredas* (out of a possible 710) identified as food insecure included in the program. These *woredas*, which are located in 8 of the 11 regions of the country, were relatively easy to identify given Ethiopia's long experience with food insecurity and emergency food aid. Though most of those living in extremely food-insecure *woredas* could qualify to participate and derive benefits from PSNP, budget constraints required targeting those households most in need.

At the start of the program in 2004, the government proposed to cover about 5 million chronically food-insecure individuals. This number was estimated based on the average number of people who required food aid in the past year. The number of eligible beneficiaries in each region and *woreda* was determined based on records of food aid recipients. Budget limitations meant that a "PSNP quota" had to be assigned in the selected chronically food-insecure *kebeles*. The program struggled to limit coverage to 5 million people, and the number of households selected was usually larger than the assigned quota. By October 2005 the government and donors agreed to increase program coverage to 8.29 million people. In addition, community-based targeting mechanisms were widely

*(Continued next page)*

**Box 12.1** *(continued)*

established, and improved targeting guidelines introduced. These actions helped prevent further misunderstandings as had occurred in Amhara, where the poorest of the poor had been excluded from the program in order to ensure that households graduated into food security. Many of those excluded from the safety net, particularly the young and landless, were targeted for resettlement. Part of these challenges was attributable to the introduction of new systems in a very short time. Following guidance from the federal government, Amhara used the 20 percent program contingency to cover the poorest of the poor before undertaking a substantial retargeting of the program (World Bank 2010).

The selection of individual beneficiaries involves a complex process that combines some objective criteria with community judgment and screening. Those who qualify and become participants are eligible to receive a six-month transfer, which is determined by household size. Each household member is allotted five days of work per month for a six-month period. Thus, a five-member household with an able-bodied adult is eligible to receive work under the public works component for 25 days per month for 6 months.

Officials from regional and *woreda* levels follow targeting criteria specified in the Program Implementation Manual to determine quotas based on the allocation of previous aid, agro-ecological conditions, malnutrition, average size of landholdings, and estimated number of chronically food-insecure household in the administrative areas (Berhane et al. 2011a).

Evaluations have found that PSNP is well targeted and that program implementation is improving over time. As early as 2006, Devereux et al. identified efficient targeting using labor constraints as a targeting indicator. Beneficiary households were found to have less labor capacity than nonbeneficiaries, and they were also engaged in activities that generated low returns. Findings illustrated the different demographic characteristics between beneficiary and nonbeneficiary households—the former include more households headed by females and older people. The authors estimated an inclusion error of food-secure households in PSNP of 10.6 percent and an exclusion error of food-insecure households of 71.0 percent. Thus, even though PSNP is well targeted, it is still very limited in its ability to meet food-insecurity needs. Subsequent evaluations have pointed to improved targeting guidelines and a better understanding of the process among stakeholders, which has led to improvements in targeting outcomes.

For example, Coll-Black et al. (2011) found that PSNP is well targeted to poor and food-insecure households and that, overall, targeting guidelines are followed. Some regional variations in targeting were observed given that the guidelines allow for community-based criteria. Overall, a greater understanding of the targeting criteria by communities was observed across regions in the 2010 evaluation. See World Bank (2010) and Berhane et al. (2011a) for similar findings.

PSNP is found to be well targeted compared to international experiences. Coll-Black et al. (2011) assessed the targeting performance of PSNP in relation to other countries using the Coady-Grosh-Hoddinot indicator developed in a study that included 78 safety net programs around the world. For those countries, Coady, Grosh, and Hoddinot (2004) obtained a median value of 1.25 (1 = neutral targeting, >1 = progressive targeting, <1 = regressive targeting). Using data for all PSNP regions and households in the poorest decile, Coll-Black et al. obtained a value of 1.69. In addition to reflecting progressive targeting, this result indicates that PSNP has a better targeting performance than the world's average and the best targeting of all similar programs in Africa. The authors found little evidence of elite program capture across regions. Table 12.1 summarizes PSNP's values by region and decile.

Even though targeting evaluations are positive, impact evaluations have helped identify some challenges and priorities with respect to targeting.

The first main challenge is the identification of eligible households based on the food gap.[5] As noted by Devereux et al. (2008), the differences between the poorest households and those slightly further up the list are very small, which makes it difficult for people to know whether targeting is correct and fair. Furthermore, a high caseload of eligible

**Table 12.1 Coady-Grosh-Hoddinott Indicator Values by Program Region**

| *Region* | *Decile/quintile* | | |
|---|---|---|---|
| All PSNP transfers (public works and direct support) | Poorest decile | Poorest quintile | Poorest two quintiles |
| All regions | 1.69 | 1.46 | 1.26 |
| Tigray | 2.05 | 1.68 | 1.49 |
| Amhara | 1.14 | 1.04 | 1.10 |
| Oromiya | 2.68 | 2.15 | 1.66 |
| Southern Nations, Nationalities, and People's Region | 0.82 | 0.91 | 0.77 |

***Source:*** Adapted from Coll-Black et al. 2011.
***Note:*** Deciles/quintiles are based on predicted per capita consumption.

households and scarce PSNP resources can make it difficult to identify whether targeting has been done correctly, potentially leading to exclusion errors of households with large food gaps. This issue has been addressed via two mechanisms: by redefining PSNP targeting criteria to define chronic food insecurity as a food gap of three months or more and the receipt of food aid for three consecutive years, and by strengthening community participation in the selection process.

The second main challenge is recognizing that food needs are dynamic and can vary significantly by season and year. Originally, PSNP was designed to address chronic food insecurity and had no ambition to address acute food insecurity (Devereux et al. 2008). Given the high incidence of shocks, dealing with transitory food insecurity has become a priority. The program has taken four steps to address this issue (World Bank 2010).

- Annual retargeting was introduced, designed to correct for inclusion and exclusion errors and thus take into consideration changes in the relative welfare position of households.
- A contingency budget of 20 percent was added to the program to cover additional households that are currently transitorily food insecure but might become chronically food insecure during the course of the program.
- The emergency response system would continue to monitor and cover emerging food insecurity in non-PSNP *woredas*.
- A risk-financing facility has been established to respond to transitory needs in chronically food-insecure *woredas*.

The risk financing facility is based on four pillars: contingent financing provided by a World Bank grant, an early warning system that triggers the risk-financing budget, contingency planning in *woredas* to expedite implementation and the release of risk-financing resources, and institutional capacity to ensure that PSNP can effectively scale up the transfers to needy households. These pillars allow the operationalization of the response. Once the contingency and risk-financing resources are triggered, PSNP scales up in *woredas* according to the same contingency plans used by the emergency response system (World Bank 2010).

The third main challenge identified in impact evaluations regards fairness and transparency in the selection of beneficiary households; steps have been taken to improve the process. In their 2011 study, Coll-Black et al. reported that community understanding of targeting criteria based

on poverty-related factors had improved across most regions. The study did not find family connections or friendship as being major factors in a household's likelihood to receive PSNP benefits, except in Oromiya. Besides strengthening community participation, the government created an appeals/grievance committee in 2007 at the *kebele* level that can overturn targeting and graduation decisions based on complaints received from households. The number of appeals to the committee has decreased as the program has evolved (Berhane et al. 2011a; World Bank 2010); Berhane et al. attribute this to a sense that the chances of successful appeal were limited, discouraging the use of the mechanism.

## The Cash Transfer Modality: Beneficiary Preferences, Timeliness, and Local Market Effects

The form of wage payment—in food or in cash—has remained an area of concern. The program manual clearly states that the government's preference is to shift gradually from an in-kind (food) to a cash payment system. Because the type of transfer may affect well-being in different ways, this section discusses issues that have surfaced through impact evaluations on this theme.

When PSNP was launched in 2006, the fixed wage rate was Br 6 (about $0.50 in terms of purchasing power parity per day). This rate was based on a food equivalent of 15 kilograms of cereal per household member per month. The wage rate is expected to cover about 40 percent of a member's food needs. By design, the wage rate is generally lower than the market wage for unskilled labor; in some areas, it is estimated to be only 50 percent of the market wage rate. As a result of increases in food prices, the wage rate was hiked to Br 8 per day in 2007, to Br 10 in 2009, and to Br 14 by 2012.

### *Beneficiary Preferences: Food and/or Cash*

As noted, the Government of Ethiopia has espoused a strong preference to move toward cash payments in the belief that cash injection may encourage investment in agriculture and stimulate growth. It is important to reconcile this vision with beneficiary preferences. The international food price crises during 2007 and 2008 led to considerable erosion of purchasing power from cash wages, and not surprisingly, workers began demanding wages in food. For this reason, the option for payment in food has remained under PSNP. The question about food versus cash preferences was asked in the 2006, 2008, and 2010 surveys. Even though

responses vary across regions, Berhane et al. (2011a) report several commonalities. First, beneficiary preferences shifted away from cash between 2006 and 2008 during the food crisis. This trend reversed between 2008 and 2010, except in Tigray. The preference for cash is higher among public works participants than direct support beneficiaries; in all regions except the Southern Nations, Nationalities, and People's Region, less than 25 percent of direct support beneficiaries would prefer more than half their payments in cash. Tigray beneficiaries have a higher preference for food; Southern Nations, Nationalities, and People's Region beneficiaries have a higher preference for cash.

Econometric analysis (based on a panel data set for 2006 and 2008) conducted by Sabates-Wheeler and Devereux (2010) confirmed positive program effects on income growth and food security only when payments are made in food or mixed food plus cash, but not when payments are made in cash. Income gains of participants who received payments in cash have significantly been eroded by food price inflation, mainly because there is an inevitable lag in the adjustment of food wage to food price.

Most *woredas* currently receive a mix of cash and food transfers. As a matter of policy, the program is still trying to move in the direction of wage payments in cash, ensuring the monetary wage is indexed to food prices.

### *Timeliness of Wage Payments*

Assessments carried out during the early phase of PSNP implementation found that the wage payment process was cumbersome with major sources of delay. According to Gilligan et al. (2009), timeliness of payments improved between 2006 and 2007 across all regions, but worsened in 2008. The most alarming cases of arrears were reported in some *woredas* in Amhara, Oromiya, and Tigray, where a substantial number of beneficiaries had received only one payment despite their reports of having worked each of the first five months of the year. Devereux et al. (2008) found that, despite some improvements, delays were still evident, mainly due to bureaucratic wrangling on measurements, approval, reporting processes, and so forth. Wage arrears and delayed payments compromise the program's main aim, reduction in household food gaps; also, unpredictability of payments affects households' ability to plan ahead in such areas as investing in new seeds or livestock.

Evidence from 2010 data indicates that payment predictability remains a major concern. Predictability has improved, but beneficiaries

indicate that there is still uncertainty regarding payment dates. Wide regional differences exist with regard to payment timeliness. The best-performing *woredas* take up to 21 days to complete payment activities, while the worst can take up to two months. Reasons for this difference include a lack of training in the payroll attendance sheet system, absence of front-loaded transfers, and poor transportation (Berhane et al. 2011a). Beneficiaries' concerns about the predictability of payments were evidenced in the qualitative studies. Members in 24 out of 30 focus groups noted that payments were not made regularly and that they did not know when the payment would arrive. In order to cope, some households have had to borrow money, as one of the interviewed beneficiaries noted. Improving the timeliness and predictability of cash/food wage payments remains an important PSNP focus.

### *Local Market Effects*

Impact evaluations point largely to indirect effects of cash transfers on local markets. When beneficiaries were paid entirely in cash, cash demand for food—and hence food prices—increased, and supplies became scarce in Oromiya. Local traders sharply increased food prices. This market price behavior is one of the reasons participants expressed a preference for food as wage. These findings are disappointing from the perspective of one objective of PSNP—to shift the delivery of social assistance in rural Ethiopia away from food aid toward cash transfers—but can be interpreted as an entirely rational response to the combined effects of high food price inflation, deteriorating household food security, and the weakness of rural commodity markets (Sabates-Wheeler and Devereux 2010). Moreover, converting cash into food in remote places might involve some transaction costs that the poor were unwilling or unable to bear.

## Program Impact on Household Well-Being

The main objective of PSNP is to make a measurable difference in the food security situation of participating households and smooth their consumption. To measure PSNP impact on chronically food-insecure households, evaluations focus on the outcome indicators specified in the PSNP logframe. This section focuses on three indicators of household well-being: food security (measured by food gap and caloric availability), level of asset holdings, and level of household income.

The overall findings suggest that while the program is broadly providing some "core protective benefit of smoothing household consumption,"

as measured by the self-reported household food gap, the impact varies depending on several factors, particularly the level of transfer benefits received (Berhane et al. 2011b). There have been differences in implementation across regions. To deal with these issues, particularly the differences in timing and levels of transfers, evaluators have taken different approaches to defining program participation. For example, Berhane et al. (2011b) used a dose function, in which the number of years a household has received payments represented differences in program participation. They also differentiated between PSNP-only beneficiaries and beneficiaries of both PSNP and OFSP/HABP. In an early evaluation using only 2006 data, Gilligan, Hoddinott, and Taffesse (2008) defined three types of participation: receiving any money for participating in public works, receiving at least half of eligible payments for public works, and receiving both PSNP and OFSP. Gilligan et al. in a 2009 study defined participation as having received at least Br 100 in payments over the first five months of 2006, 2007, and 2008. In general, the degree of impact is higher the closer the program is implemented as designed. When PSNP is combined with OFSP/HABP, its impact is greater: food security improves, asset accumulation is faster, and yields increase.

The results described in this section correspond only to the transfers made to households and not to the assets built by PSNP. Since the public works activities generate community assets, the benefits are likely to be received by all households in the community regardless of program participation. The use of quasi-experimental methods to measure the impact on community assets is not possible because no data are available to enable comparison of communities with PSNP assets to those without them.[6]

### *Impact on Food Security*

In general, evaluations have found positive program impact in food security across the years, though the degree of impact varies. In Berhane et al. (2011b), the difference-in-difference estimation showed an improvement in food security for program participants. Receiving public works payments for five years yields an increase of 1.05 months of food security compared to having received no transfers. This improvement was experienced by all regions, and the results were statistically significant in all regions. This indicator increases to 1.53 months of food security when joint payments are received from PSNP and OFSP/HABP. The study did not find evidence of improvements in caloric availability at the household level. However, the double-difference impact of receiving five years of

payments compared to only one year shows an increase of 0.152 children's meals during the lean season. No impact was found in adults' meals during the lean season.[7] The dose responses estimates are illustrated in tables 12.2 and 12.3.

Previous evaluations using the panel data 2006–2008 also found positive impacts in food security despite the context of rising food crisis and drought. Gilligan et al. (2009) found that the public works component of PSNP had modest but positive effects. Food security improved by 0.40 months, and livestock holdings increased by 0.28 tropical livestock units (TLUs). Beneficiaries perceived that their welfare had improved. Using different and smaller panel surveys for 2006 and 2008, Devereux et al. found similar results. When comparing past and current beneficiaries to nonbeneficiaries, the proportion of past beneficiary households that experienced food shortages fell from 94 percent in 2006 to 59 percent in 2008; the proportions also fell for current beneficiaries, from 89 percent

**Table 12.2 Estimated Program Impact on Beneficiary Household Months of Food Security**

| *Number of years household received payments* | *Estimate of impact* | *Standard error* | *t statistic* | *Statistical significance* |
|---|---|---|---|---|
| 1 | –0.25 | 0.150 | –1.67 | * |
| 2 | 0.13 | 0.118 | 1.10 | n.s. |
| 3 | 0.21 | 0.107 | 1.96 | ** |
| 4 | 0.38 | 0.082 | 4.63 | *** |
| 5 | 0.801 | 0.086 | 9.31 | *** |

*Source:* Adapted from Berhane et al. 2011b.
*Note:* Data are calculated from household survey. * = significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level; n.s. = not significant. Sample size is 1,512 households.

**Table 12.3 Estimated Program Impact on Number of Lean-Season Child Meals**

| *Number of years household received payments* | *Estimate of impact* | *Standard error* | *t statistic* | *Statistical significance* |
|---|---|---|---|---|
| 1 | –0.063 | 0.064 | –0.98 | n.s. |
| 2 | 0.044 | 0.041 | 1.07 | n.s. |
| 3 | –0.083 | 0.040 | –2.08 | ** |
| 4 | –0.186 | 0.050 | –3.70 | *** |
| 5 | 0.089 | 0.047 | 1.91 | * |
| Difference between 5 and one years | 0.152 | | 2.71 | *** |

*Source:* Berhane et al. 2011b.
*Note:* Data are calculated from household survey. * = significant at the 10 percent level; ** = significant at the 5 percent level; *** = significant at the 1 percent level; n.s. = not significant. Sample size is 1,306 households.

to 57 percent. While the proportions also fell for nonbeneficiaries, the decrease was markedly smaller: from 67 percent in 2006 to 47 percent in 2008. The beneficial impacts were more pronounced on past and current beneficiaries than for nonbeneficiaries (Devereux et al. 2008).

Gilligan, Hoddinott, and Taffesse (2008) found that households that received at least half of the amount of PSNP payments experienced improvements in food security measured by the increment of mean calorie availability and the reduction of the likelihood of having low caloric intake. For households that received both PSNP and OFSP benefits, the programs increase their food security, and the beneficiaries are more likely to borrow for productive purposes, use improved agricultural technologies, and establish their own off-farm businesses.

### *Impact on Asset Levels*

PSNP has a positive impact on households' level of assets. Berhane et al. (2011b) measured how the level of public works transfers changes the level of livestock holdings and the value of productive assets or tools. They found that five years of program participation raises livestock holding by 0.38 TLU relative to receiving only one year of benefits. However, significant differences exist across regions. For example, in Amhara, beneficiary households that received payments for five years experienced an increase of 1.62 TLUs relative to those households that only received payments for a year; there is no impact in Tigray (Berhane et al. 2011b).

The estimates reflect improvements in the value of productive assets regardless of the number of years of program participation; as a result, the difference-in-difference impact is not statistically significant. When the analysis is disaggregated by region, Oromiya reported an increase in the value of productive assets of Br 112; this result was statistically significant at the 1 percent level (Berhane et al. 2011b). Joint PSNP and OFSP/HABP payment leads to an increase of 1.0 TLU and Br 133 in productive assets relative to the households that did not receive any payments.

Gilligan et al. (2009) found that program impact on asset accumulation is greater for households with access to both PSNP and OFSP. According to the study, a high level of transfers leads to a 14.3 percent higher growth rate in the value of livestock holdings.

Devereux et al. (2008) found that the average value of assets of current and past PSNP participants was lower than those of nonbeneficiaries. However, the assets of participants have registered a faster *growth rate*

(148 percent) than those of nonbeneficiaries (132 percent) over the 2006–08 period. Note that the average increase in asset value was largely due to an increase in the *number* of households; the mean value *per asset owned* has not increased much in real terms.

An interesting study done by Andersson, Mekonnen, and Stage (2009) takes a specific look at two types of assets—livestock and tree holdings—to determine if PSNP affected a household's investment in productive assets. They found no indication that this happens. To the contrary, the data show that the number of trees planted increased for beneficiary households. The authors also found that, to deal with shocks, households are more likely to disinvest in livestock but not in trees. While the increase in forestry takes place as a result of PSNP, having access to both PSNP and credit through OFSP leads to an increase in livestock holdings.

### *Impact on Income*

Assessing the impact of the program on household incomes is complicated by several factors, including variations in beneficiary status: current beneficiary, past beneficiary, households with and without benefits from the livelihood support program (OFSP package), and so on. Findings are also complicated by the need to assess whether income growth *accelerated* with participation in PSNP compared to the incomes of nonparticipants. The main finding of Devereux et al. (2008) is that, compared with nonparticipants, there has been a significant and positive income growth for both current and past beneficiaries of PSNP. Incremental income is pronounced for the very poor groups in the lower income quintile, suggesting that PSNP has had a significant and desirable pro-poor bias.

Devereux et al. (2008) also found that the impact on incomes of both beneficiaries—PSNP and PSNP plus OFSP—has been positive. However, studies have found no statistically significant difference between the two groups in terms of income growth. OFSP on its own has had very little impact on agricultural productivity, but when implemented in combination with PSNP, the results were much better, with maize yields registering a 35 percent increase. Also, joint beneficiaries of PSNP and OFSP, over the past 12 months, worked on average seven days more and earned on average Br 20 more in income per household member than public works program–only participants.

It is interesting that nonbeneficiaries actually faced a reduction in real income, presumably due to the high increase in food prices.

## Unintended Effects

Impact evaluations can provide interesting insights not only on the *direct* impacts on households and communities, but also on some *indirect*, if unexpected, impacts on household responses to safety net programs.

### *Impact on Households' Incentives to Undertake Income-Generating Activities*

One important issue in public works programs is whether participation in the program would preclude participation in other normal economic activities. Evaluations have shed some light on this issue. In Tigray (which had the largest sample size), households that received payments of at least Br 90 per person for PSNP work during 2005–06 significantly enhanced their nonfarm business activities but reduced their entry into the wage labor market. This result may reflect a disincentive effect: PSNP participants were less likely to enter wage employment because they were receiving transfers. An alternative interpretation is that access to PSNP may have been displacing entry into wage employment, with beneficiaries opting to work for PSNP instead. It is worth stressing that the data on which this finding is based are limited to two *woredas* in a single region.

Gilligan et al. (2009) and Berhane et al. (2011b) did not find evidence that participation in PSNP reduces the probability of a household starting an off-farm business, undertaking wage employment, or working on the family farm. The former study found that public works transfers crowd out private transfers (to a small degree) if they are regular. The latter study did not find any evidence in this regard.

### *Impact on Distress Sales*

Another interesting issue is whether PSNP has prevented distress sales of livestock and other assets by participating households when faced with an unforeseen shock. In other words, is PSNP playing both a promotional and a protective role? Because the data are drawn from four regions of Ethiopia, one of which (Amhara) experienced serious failure of *belg* rains in 2008, it is possible to assess whether participation has had a protective role. In Amhara, food and cash crop production were substantially reduced, and livestock deaths were reported by many respondents in the region sample. PSNP participants in this region experienced a fall in real income in 2008, suggesting that PSNP is not sufficiently robust to protect household livelihoods against several unforeseen shocks. Amhara

participants did enjoy higher levels of food security in 2008, notwithstanding a fall in their real income, mainly because they received emergency food aid following the failure of *belg* rains (see the "Overview of Selected Impact Evaluation Studies: Methods and Data" section for more on contingency budgets and risk financing). Berhane et al. (2011b) also found that distress sales declined between 2006 and 2010. On the other hand, Gilligan et al. (2009) found that households that receive irregular payments are more likely to report distress sales.

### *Impact on Agricultural Productivity*

Berhane et al. (2011b) looked into the impact of joint PSNP and OFSP/HABP payments on agricultural productivity. They found that participating five years in PSNP and also receiving OFSP or HABP payments allowed households to produce 147 kilograms more grain. Having access to the two programs led to yields that were 297 kilograms per hectare higher than households with access only to PSNP. In addition, having access to both programs raises the probability of investing in fencing by 22.6 percent and of stone terracing by 13 percent, relative to households that do not receive transfers.

### *Impact on Environmental Restoration*

An issue that is often raised is whether public works activities meet the standards set by the country's environmental policy framework. Clearly, some activities such as prevention of soil erosion, natural resource regeneration, flood prevention measures, and so on will have significant positive environmental benefits. To the extent possible, every public works activity needs to be reviewed and approved by the environmental agency, and one would expect no serious environmental hazards to flow from these activities. This expectation is confirmed by a 2009 study undertaken by M.A. Consulting Group and Prospect Development Consult on behalf of the World Bank and the Government of Ethiopia to look at the environmental impacts of PSNP public works. The study notes that considerable progress has been made in community watershed rehabilitation and that policies and institutions are in place to continue the good work. There has been a significant and visible increase in wood and herbaceous vegetation cover, and "the rapid regeneration observed by the consultants is one of the most striking impacts of the program, and is also one of the most important." However, the absence of a spatial database for public works program activities renders a good analysis of environmental impacts difficult. The study recommends a spatially

based management information system on program activities. While there has been an expansion of irrigated areas, the study points out that the potential health hazard of an increase in the incidence of malaria due to mosquitoes breeding in ponds at low altitudes has been ignored, and requires immediate attention.

## Lessons Learned and Conclusions

PSNP constitutes one of the best examples of good practice in terms of designing and implementing program evaluations. The commitment from government and donors to build a robust M&E system and conduct high-quality evaluations despite weak institutional capacity has resulted in significant knowledge about program implementation. Some important conclusions follow.

### *Impact Evaluations Have Informed Program Design*

Evaluations have provided feedback that has been incorporated to improve program performance and impact. Some of the key findings directly related to program design (as summarized in World Bank 2010) follow:

- There are regional variations in program implementation and therefore differences in impact. When implemented as designed, the program has proven to be an effective safety net. Implementation—and thus impact—varies across regions and *woredas*.
- Results are highly correlated with timely delivery of transfers. Unpredictability of payments remains a major concern, since it affects households' consumption and their ability to plan ahead in undertaking risks such as investing in seeds or livestock. Some households have had to rely on loans or even the sale of assets to cope with payment delays. In cases where payments have been made on time, the impact is significant. Uncertainty of payments thus undermines the main objective of PSNP: reducing food insecurity.
- PSNP impact is greater when it is linked to other food security interventions. Evaluations point out that greater impacts on food gap, asset holdings, and income growth are reported when PSNP beneficiaries also received transfers and services from OFSP and HABP. PSNP can also enhance the impact of other food security programs. By improving food security, PSNP allows beneficiaries to take more risk and make long-term investments.

### *PSNP Is Reaching the Poor*

Evaluations have shown that targeting has been relatively efficient in reaching the poorest households. Some eligibility conditions and requirements—notably identification of the food gap at the household level, and the requirement that every eligible household must provide five days of work for each member of the household—have proven to be difficult in practice. While the former condition of eligibility led to a larger number of eligible households than could be supported by available resources, the latter condition eventually led to a capping of total labor input to 20 days per five-member household, with a cash transfer given for the remaining 5 days. Thus, PSNP is rendered less a short-term employment creation program but more a food-security-enhancement program. PSNP has also proven to be more efficient in dealing with chronic food insecurity but less efficient in addressing transitory food insecurity. Realizing that food needs are dynamic, the program designed the risk-financing facility in 2008 to protect households against unforeseen shocks and to prevent transitory food-insecure households from becoming chronically food insecure.

### *The Modality of Payments Can Affect Program Impact*

Food price increases during 2006 and 2008 influenced program design and household welfare in different ways. Households soon began to prefer food to cash for payment, thus compromising one of the objectives of the program: to monetize and make cash payments. An attempt has been made to index wages to food price increases, although households still prefer food to cash during an inflationary period. Evaluations have indeed found that, in the context of unprecedented inflation, food transfers or a mix of cash and food are preferred to cash transfers since they enable higher levels of income growth, asset accumulation, and self-reported food security.

### *PSNP Is Having a Positive Impact on Food Security*

Evaluations have shed light on the impact the program is having on outcome indicators such as food, asset holdings, and income growth in chronically food-insecure households. Despite regional differences, the reported impact is positive for all three indicators:

- *Food security.* Evaluations have shown that PSNP increases food security for beneficiary households. The impact is affected by the timing and level of transfers and whether households receive benefits from other food security programs (OFSP or HABP). Compared with

nonbeneficiaries, PSNP beneficiaries are much less likely to experience a food shortage.

- *Asset holdings*. PSNP has a positive impact on household accumulation (usually measured in livestock units). Program beneficiaries are also less likely to be involved in distress sales than are nonbeneficiaries.
- *Income growth*. Compared to nonbeneficiaries, beneficiaries experienced a significant and positive income growth.

Thus, the major objective of PSNP—to improve food security of households in chronically food-insecure *woredas*—has been accomplished.

## Notes

1. A *woreda* is an administrative division equivalent to a district. *Woredas* are composed of *kebeles*.
2. An unexpected increase of food-insecure households could be the result of corrections for inclusion errors (including successful appeals), an increase in the food gap due to drought or other covariate shocks, an increase in grain prices, and/or localized shocks that affect households in chronically insecure *woredas*.
3. For in-depth information on impact evaluation design, see Gertler et al. (2011).
4. Berhane et al. (2011b) describe their methodology as follows: "Taking the difference between the impact estimate of a change in an outcome (the "before" and "after") for a household receiving, say, five years of payments ("with") and the impact estimate of a change in an outcome for a household receiving one year of payments (the "without" because, to re-iterate, these households essentially receive nothing) yields our double-difference estimate of program impact".
5. The food gap is measured by the number of months a household is unable to satisfy its food needs.
6. To learn about the impact of community assets, see MA Consulting Group and Prospect Development Consult (2009).
7. In the same study, Berhane et al. (2011b) found that direct support also improves food security. For example, increasing payments from Br 500 to Br 2,500 leads to an increase of two months in food security.

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CHAPTER 13

# Cambodia: Institutional Coordination and Donor Harmonization in a Postconflict Setting

Like all safety net interventions, the success of a public works program strongly depends on the institutional coordination arrangements that surround it. There are different types and degrees of institutional coordination, all of which have a bearing on program implementation. For example, programs may require effective *intersectoral* coordination (among, say, the planning, labor, and social welfare ministries) and *administrative* coordination (across federal, state, and municipal government agencies as well as community and donor structures).

Cambodia has emerged from long years of conflict that caused considerable damage to its rural infrastructure and significant hardship to families in both rural and urban areas. Following the democratic elections of 1993, the need to rebuild infrastructure and to offer families a way out of poverty resulted in a call for a nationwide public works intervention. This triggered the involvement of a range of development partners in financing and implementing labor-intensive programs, with the twin benefits of

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creating temporary employment and generating public assets. Institutional coordination proved critical to ensuring a successful intervention in which stakeholders' objectives were aligned toward a common goal.

This chapter explores the institutional arrangements that underpin Cambodia's public works programs. A defining feature of the government's strategy regarding public works has been its tailoring of an institutional framework that builds on national systems and complements decentralization objectives. This case study explores the approaches taken to ensure smooth institutional coordination and considers the lessons arising from these experiences.

## Context

Cambodia suffered three decades of civil war. Although the Khmer Rouge regime ended in 1979, the country's civil conflict lasted until 1998. This period of crisis resulted in the neglect of the country's physical and social infrastructure, its economic capacity, and its human and social capital, particularly in rural areas. Its transport infrastructure, which is considered the foundation for the country's development, was extensively damaged. Following the Paris Peace Agreement signed in 1991, Cambodia began moving from war toward peace, from a culture of continued conflict to a culture of compromise, dialogue, and reconciliation. During this transition, however, myriad problems hindered the country's development, including a lack of access to social services such as health care and education, and an underdeveloped rural sector, which meant that 85 percent of rural residents had an inadequate food supply.

In response to these challenges, a strategy for a National Program for Rehabilitation and Development of Cambodia was developed, adopted, and implemented. Its objective was "Striving to achieve sustainable growth with equity and justice" (RGC 1994). The document declared a war on poverty, with development of the country's rural areas seen as critical to raising the living standards for the majority of the Cambodian population. Rural development was also seen as making an important contribution toward national integration, reconciliation, and security. The country's National Strategic Development Plan 2006–10 and its subsequent update for 2009–13 built on this platform of stability, peace, and economic development and outlined goals and plans for sustainable and solid progress in an integrated manner with a clear pro-poor, pro-rural focus.

A cornerstone of the government's medium-term strategy was to use public works interventions to promote better transport services in rural areas through well-maintained primary and feeder roads. Road transport is the dominant mode of transportation in Cambodia, accounting for 65 percent of all passenger traffic and 70 percent of all cargo traffic, with rail and river transport sharing the rest (ADB 2002). Road condition surveys in 2002 concluded that almost 70 percent of the nation's roads were in either poor or bad condition. Given the need to create employment opportunities and instill social cohesion, the development of public works programs gave a prominent role to improving transport services and overall rural development. Beginning in 1993, the government and its development partners put in place public works initiatives, giving high priority to the rehabilitation and reconstruction of transport networks, including bridges, roads, railroads, and small-scale irrigation facilities, and to building and maintaining community assets such as rural water supply and sanitation facilities.

Early initiatives included food-for-work programs supported by the World Food Programme and labor-based appropriate technology (LBAT) initiatives promoted by the International Labour Organization. More recent programs included cash-for-work operations by the Asian Development Bank (ADB). Most of these were stand-alone efforts providing critical goods and services, responding to emergency needs, and, to some extent, contributing to the rehabilitation of the rural infrastructure and food security. To date, more than 30 million workdays have been thus created, paying $1 per day in cash and food; and more than 200 local small-scale contractors have been involved in the rehabilitation and maintenance of rural infrastructures nationwide. By the end of 2003, accessibility to rural areas that had previously been difficult to reach had been improved with the rehabilitation and construction of more than 22,000 kilometers of roads.[1]

The success of the economic and rural development initiatives can be seen on many fronts. Infrastructure development, investment in rural areas, and other pro-poor efforts of the government have contributed to a steady decline of poverty levels. Preliminary analysis of data from the 2007 Cambodia Socioeconomic Survey suggests an overall decrease in the poverty level from 34.7 percent in 2004 to 30.1 percent in 2007—a reduction of more than 1 percentage point per year.[2] The data further suggest that poverty rates have declined at all subnational levels: in Phnom Penh (to 0.8 percent from 4.6 percent), other urban areas

(21.9 percent from 24.7 percent), and rural areas (34.7 percent from 39.2 percent). Also, direct and indirect employment of many previously unemployed, unskilled people has resulted in young people moving into centers of growth and remitting funds home to help families in rural areas.

Early experiences in designing and implementing public works programs have put social protection priorities high on the country's development agenda. Driven in part by the recent impacts of the global financial crisis, the Cambodian government has been proactive in trying to mitigate future uncertainties and risks for the poor and vulnerable—notably by broadening the country's scope of social protection. In 2011, Cambodia's Council of Ministers approved a National Social Protection Strategy (NSPS). Through technical consultations with development partners and civil society within the Interim Working Group on Social Safety Nets throughout 2009 and 2010, five main long- and medium-term objectives were identified for the NSPS in order to achieve the Millennium Development Goals.

- The poor and vulnerable receive support, including food, sanitation, water, shelter, and so forth, to meet their basic needs in times of emergency and crisis.
- Poor and vulnerable children and mothers benefit from social safety nets to reduce poverty and food insecurity and enhance the development of human capital by improving nutrition and maternal and child health, promoting education, and eliminating child labor, especially its worst forms.
- The working-age poor and vulnerable benefit from work opportunities to secure income, food, and livelihoods while contributing to the creation of sustainable physical and social infrastructure assets.
- The poor and vulnerable have effective access to affordable quality health care and financial protection in case of illness.
- Special vulnerable groups, including orphans, the elderly, single women with children, people living with disabilities, people living with HIV and/or tuberculosis, and so forth, receive income, in-kind and psychosocial support, and adequate social care.

## Institutional Coordination Approach for Public Works Programs

Beginning in 1996, with the assistance of the United Nations Development Programme and other international and nongovernmental

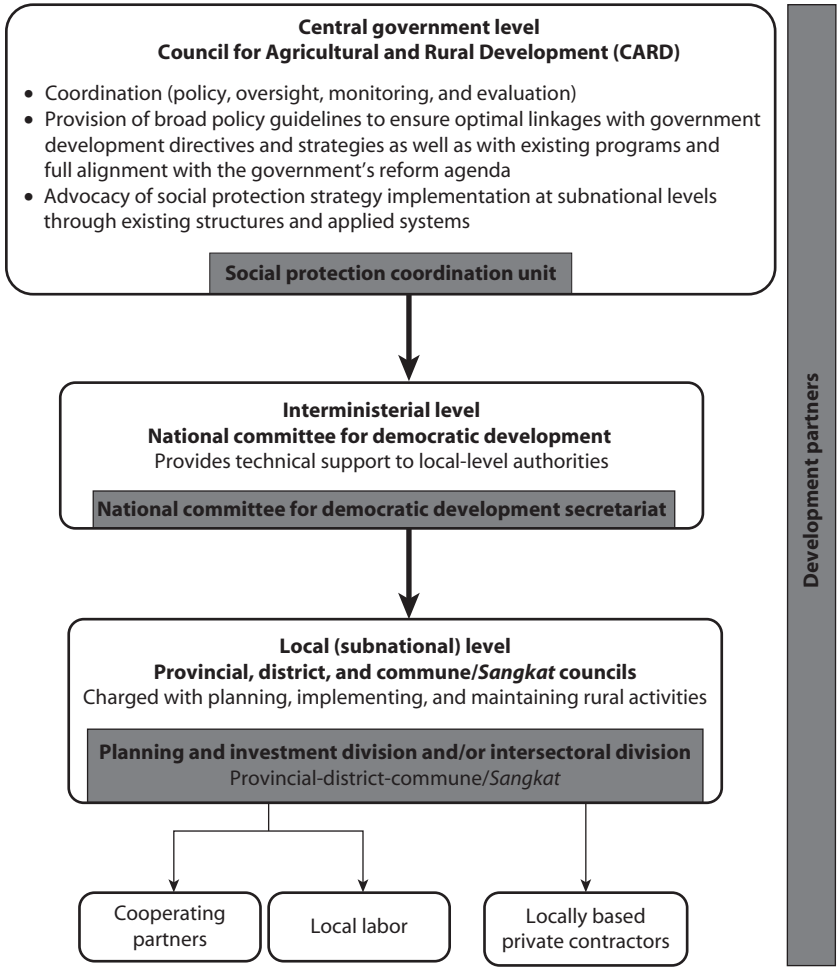
organizations, the Cambodian government initiated a detailed rural development structure and sought resources to strengthen its components. This resulted in the establishment of an interministerial entity, the Council for Agricultural and Rural Development (CARD), as an advisory body at the national level; and provincial, district, and commune/*sangkat* councils as subnational focal structures to assist in planning, implementing, and maintaining rural activities. A two-phase pilot program, Seila (Foundation Stone), which ran from 1996 to 2005, provided valuable lessons for developing systems and tools for decentralization in planning and financing rural development activities. In 2006, Seila was integrated into the government's decentralized structure. Building on experiences with Seila, elections for commune/*sangkat* councils were held in February 2002. Figure 13.1 describes the institutional arrangements supporting decentralized public works program delivery in Cambodia.

At the national level, institutional responsibility for developing strategic choices on program design rests with CARD. This centralized responsibility facilitates implementation by various ministries, as CARD has mandated establishment of interministerial coordinating mechanisms to monitor implementation of not only public works programs but also of all other social safety net programs aimed at strengthening food security and the nutritional status of vulnerable population groups. While technical support comes from line ministries, responsibility for program implementation rests with district and local authorities. The Cambodian government is committed to reducing poverty and improving the functioning of safety net programs through local development, which requires significant capacity enhancement at the local level. The government has thus strived to improve the adoption of policy at local levels. District authorities are given a greater role in direct implementation of services at the local level where capacity is limited.

The main institutional design features include the following:

- A focus on using government systems and existing resources to plan for public works programs
- A priority on integrating public works planning with government decentralization objectives
- Building horizontal linkages across programs and departments for a coordinated approach to program design and implementation
- Careful coordination with donors to bring diverse interests, resources, and procedures under a common approach.

**Figure 13.1 Institutional Arrangements in Cambodia's Public Works Program**




## Implementation Experiences at Different Levels: Interministerial, Decentralized, and Donor

### *Interministerial Level*

Several ministries are engaged in the implementation of public works programs. Implementation of physical infrastructure projects at the subnational level is the responsibility of line ministries such as the Ministry

of Rural Development, the Ministry of Public Works and Transport, and the Ministry of Water Resources and Meteorology. Coordinating roles and responsibilities among ministries can be challenging, especially given the multidimensional nature of public works and social protection programs.

Perhaps one of the most challenging areas of coordination among ministries (and across regions) is the level of the wage rate under public works programs. The main reason for the difficulty in harmonization is that different ministries have different types of projects, which vary in nature from heavy to light work, with the wage rate differing accordingly. For example, in road construction, stone cutting is considered heavy work, and is paid correspondingly higher wages than is grass seed spreading, which is considered light work. Until 2008, public works programs paid unskilled wage rates ranging from CR 5,000 to 8,000 ($1.20–2.00). Following the global financial crisis and food and fuel price hikes, the wage rate has risen, and may have to be increased throughout the country. The average wage rate for unskilled labor in rural areas is currently CR 11,561, rising 0.8 percent annually. The urban wage is marginally higher, at CR 11,651 ($2.85).

In 2010, CARD established the Social Protection Coordination Unit to implement the NSPS. The unit also acts as an explicit coordination mechanism facilitating cooperation among line ministries, relevant institutions, subnational administrations, development partners, civil society, and the private sector. Its key tasks include the following:

- Taking the lead and coordinating consultation dialogues with development partners, line ministries, and stakeholders involved in the development, dissemination, and implementation of social protection
- Estimating the costs for implementation of social protection in Cambodia
- Organizing forums, workshops, and consultative meetings to disseminate the NSPS
- Assessing the human resource development needs among line ministries and stakeholders involved in implementation of the NSPS
- Developing the training package, curricula, and short- and medium-term training courses for line ministries and, particularly, the subnational-level institutions involved in implementation of the NSPS
- Harmonizing and aligning the NSPS with other legal frameworks of line ministries and the Cambodian government as a whole
- Coordinating dialogues with other government and development partner technical working groups

- Collaborating and coordinating with other CARD thematic working groups
- Developing the workplan for the dissemination, monitoring, and evaluation of social protection programs
- Collaborating and coordinating with other stakeholders to develop the progress report on NSPS implementation for the central government.

### *Decentralized Level*

The government's decision to decentralize and assign full implementation authority to the provinces has in effect created independent works agencies (one in each province), and thereby managed to quickly establish an impressive implementation capacity at the provincial and lower levels of administration. This capacity was further strengthened by the involvement of locally based private contractors, the construction industry, and service providers.

To support this process, detailed guidelines for implementation were established, governing such issues as policies for rural roads and projects targeting ethnic minorities. Integrated rural accessibility planning has been implemented, and small-scale contractors have been developed and trained. LBAT has proved to be a technically viable and economically competitive option for rehabilitating physical infrastructure in a decentralized context. A central tenet of the LBAT philosophy is the emphasis given to the use of in-country resources such as local builders and contractors, locally manufactured tools and equipment, existing government institutions at the local level, and—last but equally important—the local human resource base. As available data indicate, LBAT has significantly benefited the local population, generating employment and income in the short run and access to marketplaces and services in the long run.

One important area of coordination and capacity development at the local level relates to beneficiary selection and targeting. Cambodia has broadly followed area and geographic targeting and self-selection, drawing on some good experience from past public works program implementation in the country. For example, the self-targeting of road and irrigation schemes implemented by the Ministry of Rural Development and funded by the International Labor Organization, ADB, and the German development bank Kreditanstalt für Wiederaufbau (KfW) showed that it could lead to gender equity and could be implemented easily within a short time frame. The World Food Programme's geographic targeting of food assistance or aid for recovery and rehabilitation are good examples of successful targeting, as they have been based on

systematic detailed information from a geographic database (poverty and food insecurity and vulnerability mapping). Household targeting could be followed in some projects using identification lists of the poor, but this would have to be a nationwide initiative and would require much time and money. The central government has mandated continuing the process of identifying poor families in the country, with the lists to be updated every 2 years. It is a good starting point. Once these lists are drawn for the entire country, targeting of the poor would become relatively easy, not only for public works, but for all other programs, especially if combined with geographic mapping.

The reality is that, despite efforts at coordination and ensuring a harmonized design, capacity and local governance still remain a problem among stakeholders at provincial, district, and grassroots levels. There are three areas of constraint for implementation of public works programs: budgeting, planning, and program monitoring. Presently, there is no clear national budget allocation for supporting public works. Although the government allocates national budgets to all 1,621 communes/*sangkats* to implement annual activities, there are no clear instructions provided in terms of prioritizing funds for public works. Up to now, planning processes have often been vertical and poorly integrated with other programs. While reform efforts are addressing this, it will take some time for subnational councils to be ready to fulfill all planning functions. The situation is similar for implementation and monitoring of public works programs; the central government lacks a national management information system and monitoring system for social safety net programs. Public works programs need to be coordinated with other social safety net programs at the local level.

Since 2002, improving the functioning of local (district and commune) authorities has become a priority in policy reform. To this end, the government developed the National Program for Subnational Democratic Development 2010–19. The plan was developed in a broadly participatory manner, including a series of policy dialogues involving government ministries, subnational administration councilors and officials, civil society organizations, and development partners. The process was time consuming, but it has ensured that the plan has been broadly based and accepted. Under the new design, the following has occurred:

- Districts and municipalities gained ownership over the administration of programs and access to funds. The role of the provincial administration is to provide a strategic framework within which districts and

municipalities can make local plans and local decisions, put in place and maintain appropriate and enabling mechanisms for the oversight of human resources, and build the capacity of local systems to function efficiently and effectively.

- The central government has completed the establishment of institutional structures at all national and subnational administrative levels. By establishing elected councils at subnational administrative levels, opportunities and mechanisms can be created to enable councils to decide on the destiny of their own communities through participatory consultations with the people in their localities; and to enable the citizens in these localities to have a voice in securing better and responsive public service delivery, materials, means, and infrastructure in order to rapidly and equitably meet the requirements of local development and contribute to the alleviation of poverty.

### *Community Level*

The establishment of elected commune/*sangkat* councils has shown a number of positive results:

- The councils have gained legitimacy as the people's representative organ, leading to a changed line of accountability and the rechanneling of development assistance to the councils to address local needs.
- A participatory planning and budgeting procedure has allowed people to participate and express their preferences in terms of community needs.
- The decentralization program has contributed to security and peace building, and to physical infrastructure improvement leading to economic growth.
- Reform at the commune/*sangkat* level has in turn strengthened, stabilized, and legitimized the central government.
- The commune/*sangkat* councilors, who come from different political parties and ideologies and were in some cases formerly enemies, are now working together to develop their localities.

These results have largely been achieved through the creation of the Commune/Sangkat Fund (CSF), which has facilitated an increase of budget flows to subnational levels. The central government has used the Provincial Rural Development Committee as a multisectoral mechanism

at the subnational level to support commune/*sangkat* program/project planning, budgeting, and implementation.

The CSF has been designed as a permanent government program. It operates across the entire country, covering all 23 provinces and the capital, with works activities in all communes/*sangkats*. The CSF is one of the central government's main programs for developing good governance and sustainable public service delivery at the subnational level (Johannessen 2010).

By government decree, the share of the national budget allocated to the CSF increased from 1.5 percent of current domestic revenues in 2002 to 2.7 percent in 2008. The fund has enabled the commune/*sangkat* councils to respond directly to the priorities and needs of their local citizens through participatory planning and project management. According to data for 2002–06 from the Commune Project Database, the CSF funded nearly 5,000 water points (including drilled wells and community ponds); over 7,000 kilometers of earth and laterite commune roads (including structures); 730 primary school rooms; and numerous small-scale irrigation, agriculture, environment, and health-related schemes. The executive committee of the Provincial Rural Development Committee has supported the communes/*sangkats* in managing projects and executing contracts and agreements in accordance with good governance principles.

Additional financial resources have been accompanied by increased efforts to build capacity at the subnational level. Thousands of commune/*sangkat* councilors and clerks, provincial officials, and focal persons have been trained in the principles of democratic development and participatory planning and budgeting. In 2008, for example, training was provided to 2,454 central officials and focal persons (of whom 493 were women); 8,373 provincial/municipal officials (1,059 women); 7,612 commune/*sangkat* councilors (1,225 women); and, 2,485 commune/*sangkat* clerks (212 women).[3]

### *Donor Level*

Donors have played an important role in rural development in Cambodia. Over the past 20 years, as many as 20 major donor-supported initiatives were implemented in the country, mainly with the objective of reintegrating societal factions, improving food security, responding to emergency situations, and improving livelihoods of poor Cambodians. Donors have helped to move the public works agenda forward by

institutionalizing labor-based technologies and developing procedures for implementation. Some of the most active donors in Cambodia include ADB, the International Labour Organization, KfW, and the World Bank.

Before the establishment of the Social Protection Coordination Unit, coordination mechanisms in Cambodia were largely informal. In this context, technical working groups were created consisting of representatives of different ministries such as the Ministry of Rural Development, the Ministry of Public Works and Transport, and the Ministry of Water Resources and Meteorology. Technical committees were formed at the national and provincial levels as well; these were comprised of representatives from line ministries and development partners. Since most of their public works projects have been implemented in a decentralized framework, donor experience of public works sheds light on institutional issues and country status with regard to donor and government coordination.

Currently, coordination at the national level is facilitated through an informal platform comprising representatives of nine development agencies and the government. The overall objective of this Social Protection Core Group is to coordinate dialogue on social protection among development partners. The group has been tasked with the following:

- Gather and share information related to social protection
- Decide on the agenda of the Interim Working Group
- Track technical progress of the social protection agenda
- Assign relevant members/institutions to have technical communication/contact with other specific stakeholders who have requisite information or who can clarify issues
- Support and review the Social Protection Coordination Unit workplan and budget.

While there is no equivalent mechanism at decentralized levels, the central government in December 2009 advised all 24 provinces and 185 districts in the country to establish provincial and district technical facilitation committees. These committees are responsible for oversight and coordination with all stakeholders—including government (line ministry representatives), donors, and nongovernmental organizations—to develop workplans and implement projects at the respective level. Box 13.1 describes how donors use these various mechanisms to coordinate safety net support in Cambodia.

**Box 13.1**

### Asian Development Bank Addresses Needs of Cambodian Poor in Cambodia's Decentralized Context

ADB, in response to a June 2008 request from the Cambodian government, provided a grant and a loan for a new project to meet emerging needs in the countryside around the Tonle Sap Great Lake. The Emergency Food Assistance Project provided short-term transitional support to help the government of Cambodia meet unexpectedly high expenditures for safety net programs for the poor and vulnerable affected by higher food, fuel, and agricultural input prices. The project is financed by the government's expanded compensatory safety net programs for the consumption and production of food by the poor and vulnerable in selected rural areas of seven provinces in the Tonle Sap Basin and in selected urban slums of Phnom Penh. The project has three components: compensatory consumption support, productivity enhancement support, and capacity development for emergency response to the food crisis and project management. It is implemented as follows:

- The Ministry of Economy and Finance serves as executing agency; it has established a central project management unit led by a project director to oversee project implementation.
- The National Food Security Task Force provides policy guidance to the central project management unit on project implementation.
- Provincial project management units, led by the respective provincial governors of the target provinces, organize project activities.
- The Ministry of Rural Development, the Ministry of Water Resources and Meteorology, the Ministry of Agriculture, Forestry, and Fisheries, the Ministry of Education, Youth, and Sports, the Ministry of Women's Affairs, the Ministry of Commerce, and the National Committee for Disaster Management are the project's implementing agencies.
- Development committees at the commune/*sangkat* and village levels play important roles in the identification of target groups and distribution of food and inputs.

## Lessons Learned and Conclusions

This chapter has analyzed the complex issues bearing on interministry and inter-institutional coordination, donor harmonization, and coordination between national and subnational governments.

- The standard of living of the poor is significantly related to physical infrastructure rehabilitation and maintenance. Their level of poverty tends to be reduced when the roads or other social public structure are in place. Public works programs contribute to their ability to access and stakeholders' ability to provide both social services and economic opportunities (for example, markets and jobs). Public works programs are considered as social safety net instrument for realizing the above objective.
- The establishment of national-level institutions such as CARD have gone a long way toward anchoring public works programs in nationally owned development strategies, yet more needs to be done.
- Donor partners are helping to strengthen CARD, which has now become the anchor for coordination of all activities pertaining to both policy development and implementation logistics of safety net programs.
- Targeting issues still need to be resolved, and better harmonization of policy is needed, especially among different subnational governments.
- Limitations of and barriers to social safety protection in public works programs still exist with regard to constructive engagement with the government. These deficiencies remain, even though engagement with subnational governments, line ministries, and donor partners has increased since LBAT, food for work, and cash for work guidelines were first accepted and implemented by line ministries in 1999. These limitations stem from a number of factors, including lack of clarity on conceptual approach and policy support.
- Public works program monitoring and evaluation was designed based on program objectives and donor perspectives. Indicators established for public works programs cover a range of issues and topics. CARD conducts oversight through technical support and organizes independent midterm reviews of the NSPS based on indicators set up in the monitoring framework for all programs, including public works. The challenge facing the monitoring and evaluation process is that each line ministry and agency establishes its own indicators and designs its monitoring and evaluation system following its own mandate and policy guidelines; these may or may not conform to the national NSPS-mandated indicators. Clearly, this situation requires improvement, and effective systems need to be in place to monitor programs.

## Notes

1. Other public works program achievements highlighted by the Ministry of Rural Development for the1996–2003 period include construction of the

following: 1,867 (23,311 linear meters) bridges; 5,619 culverts; 40,500 point wells; 679 kilometers of dikes; 452 kilometers of canals; 1,848 reservoirs; 6,412 ponds; 1,414 classrooms; and 16 rural markets. As noted, over 30 million workdays of employment have been generated from various rural infrastructure projects and other activities in community development, training, and capacity building, such as establishing local development committees and training their members, conducting food security and nutrition activities and private contractor development, and creating rural credit schemes (rice bank, in-kind bank, village revolving credit and savings, etc.) (ADB 2002).

2. Note that the 2007 survey covered only 3,600 households, while the 2004 survey covered 12,000.
3. Data obtained from National Committee for Sub-National Democratic Development (NCDD) Annual Report 2008.

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CHAPTER 14

# Liberia: Launching Public Works in Response to a Crisis

Cash for work programs were one of the main responses implemented by African governments following the recent food, fuel, and financial crisis (Wodon and Zaman 2010). The main objective of these programs was short-term poverty reduction: helping the poor cope with the various shocks by increasing their net earnings through paid community-level work. Secondarily, the programs also helped build, repair, or maintain local infrastructure. It is unclear whether these cash for work programs reached their intended beneficiaries—the poor who were especially affected by rising prices. It is also unclear whether these programs generated other, potentially long-term, beneficial impacts. And, given the administrative and other costs of implementing the programs, it is unclear whether a sufficiently large share of their initial budget allocations materialized as additional net income for beneficiary households.

This case study explores the performance of Liberia's Cash for Work Temporary Employment Project (CfWTEP), implemented as a response to the 2007–08 food crisis. Drawing on quantitative and qualitative data, the case study looks at key implementation challenges and outcomes in

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mounting a public works program in response to a crisis and in a context of fragility.

In summarizing design elements and feedback from program implementation, this chapter draws on two previous World Bank analyses: a quantitative assessment primarily intended to analyze program results such as targeting performance and patterns of wage usage among participating households (Backiny-Yetna et al. 2011b), and a qualitative analysis that included summary results from stakeholder interviews and focus group discussions with both program participants and nonparticipants (Making Enterprises Inc 2010)

## Context: The Food Crisis in Liberia and Cash for Work as a Response

### *Food Insecurity, Poverty, and Unemployment in Liberia*

Liberia was particularly susceptible to the worst effects of the 2007–08 food crisis. Despite its significant potential for agricultural production, the country relies heavily on imported food, and poverty is widespread, especially in rural areas.

The impact of the crisis on rice—the staple crop of the Liberian diet—provides a clear illustration of why a quick response was necessary (Wodon 2012). When the crisis began, roughly 60 percent of the rice consumed nationwide was imported; in the capital area of greater Monrovia, that figure reached 99 percent. When global commodity prices rose, Liberians felt the effects immediately and acutely. A United Nations Joint Assessment (2008) of the crisis found a 40 percent year-over-year increase (2007–08) in the price of rice in Monrovia, despite the suspension of import tariffs. Analysis based on consumption patterns also suggested that the increase in food prices might have a very large impact on the poor.

The food crisis compounded an already vulnerable situation. With an annual per capita gross domestic product estimated at $222, Liberia's poverty is endemic. Nationwide, 68 percent of the population falls below the poverty line, and 48 percent is below the extreme poverty line (Backiny-Yetna et al. 2011a). When the crisis struck, Liberia was just 4 years removed from a 14-year civil conflict. The war had devastated an economy that was already on the decline and—in a nation with only 3.5 million residents—had claimed the lives of more than 250,000 people.

Estimates of the level of unemployment in Liberia are imprecise, but assessments based on nationally representative household surveys suggest that unemployment and underemployment affect approximately 20 percent

of the population (World Bank 2010). Of the population that is considered employed, the vast majority performs low-paying, informal work with little security or opportunity for escaping poverty. Youth are the hardest hit by unemployment, and the highest levels of unemployed youth are found in urban influx areas such as Monrovia.

### *Mounting the Cash for Work Program*

The CfWTEP was financed under a grant agreement between the World Bank and the government of Liberia, as part of the Global Food Crisis Response Program. It was introduced alongside a series of other crisis response interventions fashioned by the Bank in partnership with the government, including a school food program and support for agricultural production. The program was designed to provide short-term employment and income for households hit hard by rising food prices. Specifically, it sought to mitigate the short-term effects of the food crisis by creating 680,000 days of temporary employment for 17,000 beneficiaries. The pilot was rolled out in 2009 at a reasonably high scale, given the existing needs of the population. By June 30, 2010, the program had reached all 17,000 intended beneficiaries.

Despite the short time frame within which the program was designed and weak national capacity for implementation, Liberia has through the CfWTEP mounted a successful response to the crisis. Based on the success of the early implementation experiences, a second-generation initiative—the Youth Employment Skills (YES) Project—to scale up the intervention and reach 45,000 beneficiaries was approved by the Board of Directors of the World Bank on June 26, 2010. The YES Project began July 1, 2010, and will continue through June 30, 2013.

Responsibility for overall implementation of the CfWTEP was assigned to the Liberia Agency for Community Empowerment (LACE), an autonomous not-for-profit organization established in 2004, directly accountable to the Liberian president. Over the CfWTEP's life, LACE oversaw the implementation of 34 projects in 15 counties, each with 500 beneficiaries. Coordination of the projects was undertaken by community facilitators working in local nongovernmental organizations (NGOs) or community-based organizations. The project activities were deliberately labor intensive and included work such as clearing roadside brush and backfilling of potholes. All projects required simple skills and low-risk manual labor; this ensured that project workers could be selected from the beneficiary communities. Each worker was paid a daily wage of $3, for a total of $120 for 40 days of work. Payment was made in U.S. dollars

and disbursed on a monthly basis through a commercial bank. Forty-six percent of the total number of workers were female. Table 14.1 presents the county-by-county breakdown of projects, beneficiaries, and wages.

As of this writing, LACE has disbursed almost all ($2,876,924) of the $3 million allocated for the CfWTEP, or 95.9 percent of the program budget. Of the total expenditures incurred as of August 25, 2010, 70.7 percent ($2,035,445) was spent on wages for workers; an additional 14.1 percent was allocated to goods and related project costs, including vehicles, motorbikes, tools, and bank commission fees for worker payments ($412,146). Consultancy and training expenses, including payment of the community facilitators, represented 3.7 percent of total expenditures ($109,897). Program management expenses totaled 11.1 percent of the budget ($319,455).

The program's operational guidelines clearly outlined the types of activities that could be undertaken as projects in rural and urban communities. Projects had to be simple and could not be imposed on communities by the community facilitators, local authorities, or LACE. Worksite teams each were to include 500 workers and 1 supervisor per project. Workers were divided into teams varying in size from 20 to

**Table 14.1 Program Projects, Beneficiaries, and Wages by County**

| *County* | *Number of projects* | *Number of beneficiaries* | | | *Wage disbursements ($)* |
|---|---|---|---|---|---|
| | | *Male* | *Female* | *Total* | |
| Bomi | 3 | 840 | 660 | 1,500 | 180,060 |
| Bong | 2 | 524 | 476 | 1,000 | 119,554 |
| Gbarpolu | 1 | 220 | 280 | 500 | 60,010 |
| Grand Bassa | 2 | 510 | 490 | 1,000 | 121,579 |
| Grand Cape Mount | 1 | 330 | 170 | 500 | 60,080 |
| Grand Gedeh | 2 | 615 | 385 | 1,000 | 119,239 |
| Grand Kru | 3 | 872 | 628 | 1,500 | 178,098 |
| Lofa | 3 | 953 | 547 | 1,500 | 179,277 |
| Margibi | 2 | 300 | 700 | 1,000 | 120,078 |
| Maryland | 2 | 504 | 496 | 1,000 | 118,200 |
| Montserrado | 3 | 645 | 855 | 1,500 | 178,979 |
| Nimba | 3 | 1,043 | 457 | 1,500 | 180,194 |
| River Cess | 2 | 650 | 350 | 1,000 | 119,767 |
| River Gee | 3 | 759 | 741 | 1,500 | 180,180 |
| Sinoe | 2 | 465 | 535 | 1,000 | 120,160 |
| Total | 34 | 9,230 | 7,770 | 17,000 | 2,035,455 |
| % male and female participation | | 54 | 46 | 100 | |

***Source:*** LACE.

100 people, with a leader for each workgroup. In urban communities, the public works activities were limited to street sweeping and cleaning; drainage clearance; painting of public buildings, street walls, and crosswalks; and rehabilitation of recreational spaces, schools, health clinics, and other community buildings. In rural communities, activities were limited to clearing of brush along access roads, clearing public agricultural land (or clearing land for any other purpose that would serve a community or public need), breaking rocks for road rehabilitation, cleaning and replacing culverts, and drainage clearance along roads.

Project activities were undertaken because of the perceived benefit to the communities or implementers. Considerations in project selection included the following:

- *Maximizing community participation through labor-intensive projects.* Heavy machinery was not encouraged because of capital-to-labor intensity ratios.
- *Designing projects that did not divert community members from productive opportunities or appropriate coping mechanisms.* To support this goal, projects were organized around task-based work and situated in close proximity to communities.
- *Facilitating simple and quickly executable projects within the program's time frame and capacity constraints.* Projects such as road rehabilitation and rubbish cleaning helped address existing problems in the affected communities. Rehabilitated roads improved movement of people and goods; clearing potholes and refilling them with dirt helped improve community health by reducing the risk of malaria.

## Measuring Progress: Impact Findings and Feedback

Qualitative and quantitative evaluation, while identifying some areas for improvement, found the CfWTEP to be a successful effort, especially in light of the speed with which the intervention was developed and implemented.[1] The program's 680,000 workdays were completed in approximately 20 months. The target of 30 percent female participation was met and exceeded, even though this participation was uneven across counties, ranging from 30 to 70 percent. Though there were no hard targets for youth participation, the program was successful at engaging young people: nearly 60 percent of participants were classified as youth (defined in Liberia as those up to age 35). Table 14.2 provides the complete breakdown of workers by age.

**Table 14.2 Distribution of Program Participants by Age**

| *Age* | *% of participants* |
|---|---|
| 18–24 | 12.4 |
| 25–34 | 46.7 |
| 35–44 | 23.7 |
| 44+ | 17.2 |
| Total | 100.0 |

*Source:* LACE.

**Table 14.3 Distribution of Program Participants by Consumption Quintile**

| *Consumption quintile* | *% of participants* |
|---|---|
| Q1 (poorest) | 15.2 |
| Q2 | 40.6 |
| Q3 | 28.7 |
| Q4 | 11.2 |
| Q5 (wealthiest) | 4.2 |
| Total | 100.0 |

*Source:* Backiny-Yetna et al. 2011b.

As detailed below, the CfWTEP wages and projects provided positive dividends for participants and their communities.

### *Targeting*

Roughly 80 percent of CfWTEP participants could be defined as poor, indicating a generally successful targeting process. Quantitative methodologies used a variety of indicators (wealth, assets, and estimated consumption level) and matching techniques to assess targeting performance; these found that the share of participants estimated to be poor varied from 60 to 90 percent, with an estimate of about 80 percent being the most likely (Backiny-Yetna et al. 2011a).

This fairly good performance is partially attributable to the overall high level of poverty in the country. With 68 percent of the total population considered poor, Liberians in the second and even third consumption quintiles meet the program's targeting criteria. Table 14.3 shows the distribution of program participants by consumption quintile. The program seems to have been successful at preventing significant inclusion errors, but somewhat weak in reaching the lowest quintile; this weakness is likely

due—at least in part—to the first come, first served nature of the targeting at the community level. Although this mechanism ensured that individuals from better-off households were not likely to be favored, some of the poorest individuals might not have been able to participate given their location in more isolated areas of the country.

Findings from the qualitative survey suggest that, to a large extent, the positive targeting outcomes could be attributed to the degree of flexibility afforded to the targeting process, which allowed communities to complement targeting methods with their own mechanisms. For example, communities not only refined their own criteria but were also involved in encouraging the participation of vulnerable households. Given the high demand for program participation, communities complemented the first come, first served approach to program participation (as in Gran Bassa, Montserrado, and Nimba) with these community mechanisms.

Qualitative findings also reveal a high level of awareness and acceptance of the program's basic eligibility criteria, which indicates the importance of outreach and sensitization as well as clearly defined program guidelines to facilitate targeting. The only people completely prohibited from participation were pregnant women and those on the government payroll. The program also had, as noted above, a quota requiring at least 30 percent female participation, whereas in reality a female participation rate of 46 percent overall was achieved. Feedback from female beneficiaries indicated that the task-based nature of work activities allowed greater flexibility in participation.

Aside from the gender quota, enforcement of the other program criteria (identification of vulnerable households, timely information dissemination, and inclusion of disabled populations) was uneven and unclear. Feedback from local leaders and community members suggests that the community facilitators did not hold any discussions with them to develop criteria for selecting workers from vulnerable households, nor did they make any effort to identify such households. Even where community leaders were involved, the selection process appeared to lack transparency, and selection mechanisms favored the better-informed and -connected community members.

Some limitations of flexible targeting approaches were evident throughout implementation, including excess demand for program participation, weak capacity for identifying the most deserving beneficiaries, limited access to the neediest regions, and seasonally imposed obstacles to completing labor-intensive work.

### *Wages*

Evaluation findings provided encouraging results about the possible long-term impact of the program on livelihoods and economic opportunity. Survey materials asked participants about how they used their project wages and found that a significant portion of these wages went toward long-term investments in their children's education (31 percent of income was used for educational expenses such as school fees) as well as toward their own future earnings (14.2 percent was used for farm and nonfarm investments). Table 14.4 summarizes participants' reported uses of their wages. These results may be attributable in part to the timing of payments (in some cases, just after school fees were due), but the fact that the income represented a large share of a household's total earnings may have influenced its use in investments.

Overall, there were no major differences in the use of wages earned between male and female participants. Men reported somewhat higher rates of education-based spending than women (32.4 percent compared to 29.3 percent). While men reported equal levels of farm and nonfarm investments (7.3 percent for each), women reported much higher levels of farm-based investment (9.4 percent versus 4.5 for nonfarm investment). Women also reported higher utilization of funds for debt repayment than did men (4.7 percent compared to 2.7 percent). However, none of these differences are statistically significant.

Wage setting was a key challenge for the CfWTEP. The original program design called for wages of $2.50 per day—a level considered to be lower than prevailing market rates. But this plan generated two concerns.

**Table 14.4 Use of Project Income by Households**

| *Use* | *Share of funds (%)* |
|---|---|
| Education | 31.0 |
| Living expenses | 28.0 |
| Health care | 8.4 |
| Farm investment | 8.2 |
| House repair | 8.2 |
| Nonfarm investment | 6.0 |
| Debt repayment | 3.6 |
| Acquiring household assets | 2.9 |
| Informal transfers | 1.3 |
| Funerals | 1.2 |
| Celebrations | 1.1 |
| Total | 100.0 |

***Source:*** Backiny-Yetna et al. 2011b.

Although the wage was technically appropriate given the short-term nature of the work and the context of the food crisis, it was unlikely to have as strong a vulnerability-reduction impact as desired—even if setting a lower wage would have helped in reaching more beneficiaries within the same budget. More fundamentally, from a political economy point of view, in all of Liberia's recent cash for work programs—including the government Jobs and Opportunities Initiative, UN Mission in Liberia projects, and the Liberia Emergency Employment Program—the daily wage had been set at $3. This disparity made it more difficult for LACE and its community facilitators to offer communities a lower wage rate, subjecting them to local suspicion that the 50-cent difference in rates was being siphoned off by the organizations involved. These considerations, together with strong pressure from the government for higher wages, eventually led to a CfWTEP wage rate of $3 per day.

Some concerns have been raised since program implementation regarding the overall affordability of the benefit level. These concerns are lent credence when comparing the daily wage rate offered by the program to those offered for similar work with local concessionaires or public works programs (table 14.5). The concessionaire rates are based on participant-reported local wage rates for unskilled labor in the locations. There is no standard daily wage rate at the community level; wage rates are negotiable and dependent on type of work and economic status of the employer. Local wages are typically a combination of cash, food, and extra benefits such as hot meals. On average, the daily wage rate ranges from $2 to 4, depending on the prevailing exchange rate at the time of the transaction. In urban areas, the unskilled wage level is typically around $3 per day or higher.

Stakeholder consultations undertaken since program implementation reveal a limited appetite to roll back the wage-setting decision, notwithstanding the possible overall benefits that could be realized through expanded program coverage.

### *Payments*

Payment effectiveness is a major design and operational issue, and one that has plagued many previous cash for work initiatives in Liberia. The payment arrangements implemented under the CfWTEP are of particular note. Careful payment design at the outset of program implementation was critical to its success. The program partnered with a commercial bank (EcoBank) that had relatively high penetration throughout the country and the ability to make mobile payments where a local branch

**Table 14.5 Composition of Local Wage Rates in Sample of Counties**

| County | Description of work/ tasks | Daily wage in Liberian dollars | | Daily wage equivalent in US$ | Daily wages paid by UN, NGOs, and other programs ($) |
|---|---|---|---|---|---|
| | | Cash | In-kind | | |
| Grand Bassa | Daily hire for unskilled labor for 8 hours | 100 | 50 | 2.14 | 3 |
| | Cutting grass in private yards | 100 | 50 | 2.14 | n.a. |
| | Washing clothes for household | 50 | 40 | 1.29 | |
| Montserrado | Daily hire for manual unskilled labor for 8 hours | 100 | 50 | 2.14 | 3 |
| Nimba | Daily hire for manual unskilled labor for 8 hours | n.a. | n.a. | n.a. | 3 |
| | Daily hire for unskilled farm labor | 125 | 50 | $2.50 | n.a. |
| Sinoe | Daily hire for unskilled labor for 8 hours | n.a. | n.a. | n.a. | 3 |
| | Clearing of farmland | 300 | n.a. | 4.29 | 3 |

*Source:* Making Enterprises Inc 2010.
*Note:* n.a. = not available.

was unavailable. A range of payment control instruments was introduced to support the process, including a contract for workers, daily attendance sheets, monthly payroll sheets, and identification (ID) cards. These elements established a functioning identification and registration system in which beneficiary information could be tracked. Daily attendance and payroll sheets were maintained by the worksite group leader, and collected on a weekly basis by the local community contractor. In the absence of a nationwide identification system, the introduction of a beneficiary ID card was critical, although some isolated identity theft cases were still reported. Procedures were also put in place to handle recurrent problems such as lost ID cards and absences on payment days. Table 14.6 highlights the main elements of these payment arrangements.

Despite the general success of the payment scheme, some considerations going forward include the following:

- *Data collection given limited technological and human capacity.* Local community facilitators lacked information technology capacity and

**Table 14.6 Elements of the Program Payment System**

| *Element* | *Description and issues* |
|---|---|
| Database of beneficiaries | • All personal information on workers was manually documented; data included name, age, sex, employment duration, and photograph<br>• Data were entered and maintained on a computerized database within the LACE Management Information System Unit |
| Identification mechanisms | • Digital ID cards were issued upon receipt of signed contract<br>• Cards included participant name, position, community, signature, period of validity, and a unique identification number; agency logos were included to protect against fraud<br>• Workers were required to present ID cards at time of payment<br>• Workers were issued a contract for temporary employment |
| Currency | • US$, through direct cash payments from a commercial bank |
| Delivery instrument and point of payment | • Direct cash payments were made at local EcoBank branches or specially commissioned mobile units<br>• Direct cash payments at EcoBank were made in Greater Monrovia and Paynesville, Montserrado County; Ganta, Nimba County; Buchanan, Grand Bassa County; Kakata, Margibi County; Pleebo, Maryland County; Zwedru, Grand Gedeh County<br>• Mobile payments were made in rural Montserrado, Sinoe, Grand Cape Mount, Lofa, Gbarpolu, Bomi, River Cess, rural Grand Bassa, Maryland, rural Grand Gedeh, rural Nimba, River Gee, rural Margibi, and Grand Kru Counties |
| Payment schedule and frequency | • Payments were initially made on a biweekly basis; this was changed to a monthly basis given logistical challenges and the need to establish mobile banking units<br>• Dedicated service agents at EcoBank branches were eventually assigned to only issue beneficiary payments, given the large numbers of participants arriving on payday in Montserrado, Nimba, and Margibi Counties |
| Reporting and reconciliation | • Community facilitators were responsible for processing worker payrolls using the following forms given to them by LACE: daily attendance sheet, workers' payroll form, and table of indicative task rates<br>• Once reviewed by the local NGO the forms were forwarded to the Community Finance Unit at LACE for final verification<br>• Payrolls were reconciled by EcoBank at the end of the payment process, and a monthly bank statement submitted to LACE for reconciliation and accounting purposes<br>• Signed copies of the payrolls were returned with a credit advance for the summation of the uncollected/unpaid amounts by beneficiaries |
| Communication | • LACE notified EcoBank 2 weeks in advance of payment date<br>• EcoBank was linked with local facilitators to coordinate payments<br>• Community facilitators advised workers verbally of payment information (date, time, and place of payment) |

***Source:*** Making Enterprises Inc 2010.

Internet connectivity, which caused difficulties in reconciling payrolls from LACE to EcoBank. Local NGO staff often lacked computer skills and therefore depended on LACE to computerize the payroll before submission to EcoBank. This underscores the need for simple management information systems and procedures to mitigate bottlenecks in data transfer.

- *Limited ability to provide bank services in rural areas, particularly during the rainy season*. For a negotiated service fee, EcoBank currently provides mobile banking services for clients where no bank branches exist.[2] According to LACE, other commercial banks could be used in the future to disburse payments to workers in communities where they have branches but EcoBank does not, provided that the World Bank consents to using multiple banks for a single project. LACE further suggested that electronic payments could be considered as a formal banking infrastructure develops across Liberia in the future. This solution would depend on workers agreeing to receive their wages through savings accounts maintained with commercial banks.

- *Ensuring adequate security, particularly where payments are being made at mobile banking units.* EcoBank was responsible for the safety of its team members and the security of the cash taken into the field. The bank coordinated with the Liberian national police to ensure protection of the team. As the successor program increases in visibility and payment predictability, additional vigilance may be needed in this regard.

### *Institutional Arrangements*

An important ingredient in ensuring the program's smooth implementation was the availability of existing implementation mechanisms to introduce the cash for works operation—namely, LACE and the use of third-party stakeholders such as commercial banks and local NGOs and community organizations in a low-capacity context.

The choice of LACE as the program's implementing partner had a number of advantages. First, LACE had an unparalleled track record in the implementation of community empowerment projects (including the construction of schools, clinics, bridges, and marketplaces) in every county. LACE had broad experience in implementing community-driven projects, which gave it both connections with county and district officials as well as important insights regarding project sequencing. LACE's relationships with district development committees allowed it to establish

networks with local institutions, easing the process of working in rural communities.

Second, LACE's previous experiment with payment disbursements in every county gave it both the experience necessary to consider all payment parameters as well as a good working relationship with EcoBank, the most appropriate vendor for the payment system. Finally, LACE had already implemented several World Bank–funded projects, through which it had had the opportunity to learn the Bank's policies and procedures.

Local authorities were involved with the CfWTEP in a variety of capacities. County superintendents selected the districts in which the projects would be implemented. City mayors and district commissioners selected the communities in which project activities would be implemented. Local community leaders designated the sites for project implementation. Community facilitators supervised the community projects based on the terms of reference in the CfWTEP operational guidelines.

One of the main implementation gaps highlighted by the qualitative evaluation concerned project monitoring. Key issues in this regard included the following:

- Monitoring was constrained by having only two program staff members—the project manager and the project monitoring and evaluation officer. The broad geographic spread of the projects, coupled with bad road conditions, made monitoring even more challenging. To address the staffing shortage, LACE periodically placed two staff members from its regular Community Empowerment Project to provide monitoring and evaluation support.

- The task of monitoring market prices in beneficiary communities to assess the impact of the program on local economies was delegated to the Ministry of Agriculture, but the task was not completed. When asked why changes in market prices had not been monitored as planned, the focal person at the ministry cited a lack of communication with field staff and an overall lack of capacity for monitoring projects in the field. Future projects should either consider alternative means of monitoring market impacts or account for ministry constraints.

- While it did not appear to be a serious concern in this program, provisions should be made for a grievance mechanism to handle disputes between any actors involved in the program, including workers, nonworkers, community facilitators, payment teams, and program staff.

### *Poverty Reduction and Program Cost-Effectiveness*

To assess the overall impact of the CfWTEP on poverty reduction, the World Bank quantitative analysis began by estimating the size of wage losses incurred as a result of program participation. Such losses could have been incurred either by leaving a job to take up work with the program or by paying a substitute worker to cover existing obligations such as child care or farm maintenance while participating in the scheme. The evaluation did not find evidence that significant wage losses had occurred, likely due to the high preexisting levels of unemployment in the project communities. In all, 93 percent of the wages earned through the program were estimated to be net additional wages. Because the benefits of some occupations that program participants may have held is difficult to assess, this estimate may be too optimistic. Still, given the lack of gainful employment for most individuals in Liberia, it is likely that most of the wages obtained through the program contributed directly to additional consumption by households, including investments in human development.

The analysis further showed that the program had reduced the number of participants technically living in poverty by 5 percent. Although this finding means that most program participants remained poor, because they had preprogram levels of consumption substantially below the poverty line, the program did have a sizable effect on reducing the poverty gap among program participants.[3] The analysis found a 21 percent decline in the poverty gap from the baseline on a yearly basis indicating that, while participants were still poor after the program, they were substantially less poor than they had been before it. This result was remarkable, given the short duration of program benefits.

To evaluate the program's cost-effectiveness, the analysts considered three main determinants: the wage share (the total wages paid as a proportion of program costs), the targeting performance (the ratio of wages that reached the poor out of the total wages paid), and the proportionate wage gain (ratio of net wage benefits, accounting for participation opportunity costs, to total wages paid to the poor).[4]

Measured against international markers for similar programs, CfWTEP's performance in each regard was relatively strong. The wage share was estimated at 68 percent, based on program administrative data. Other programs around the world (though all of a larger scale) have had rates ranging from 40 to 85 percent. Liberia's performance on this indicator may be slightly misleading, however, given the very limited role of central government

in project management; this sets it apart from longer-established government-run schemes in which costs are absorbed differently in the calculation.

As noted above, the targeting performance was estimated at 80 percent, putting it on par with similar programs in Ethiopia and Argentina, but above a range of other programs. The proportionate wage gain was also quite high (93 percent), because, as outlined earlier, there were very few other income-generating alternatives available for participants, meaning that displacement of other paid work was quite low. The product of these three ratios produced the final estimate for the program's cost-effectiveness:

$$\frac{\text{Net wage benefits}}{\text{Total government costs}} = \text{(wages to poor + wages to nonpoor)} \times \text{(cost per worker)} \times \frac{\text{wages to poor}}{\text{(wages to poor + wages to nonpoor)}} \times \frac{\text{net wages benefits}}{\text{wages to poor}}$$

$$\text{Program cost effectiveness} = 0.68 \times 0.80 \times 0.93 = 0.51$$

Overall, the cost-effectiveness of the program is the product of the wage share (0.68) times the targeting performance (0.80) times the proportionate wage gain (0.93), or 0.51. Thus the cost of transferring $1 in net wage benefits to a poor participant was $1.96 (including the $1 net wage). This rate is lower than the 0.55 effectiveness standard in Ethiopia's Productive Safety Net Program, but higher than rates seen in many other programs with weaker targeting efficiency. Moreover, this calculation does not attribute any value to the second-round benefits that could accrue to the projects undertaken by CfWTEP labor. If second-round benefits occurring in the future are taken into account, the program's overall cost-effectiveness rating would improve.

## Lessons Learned and Conclusions

While the CfWTEP was intended as a one-off intervention to address the immediate effects of the food crisis, its operational successes are informative for future social protection programming both in Liberia and in other low-income, fragile countries.

- *Overcoming government capacity constraints.* Exceptionally limited government capacity for program implementation and oversight necessitated the use of outside implementers for the CfWTEP. These private actors

(LACE for overall coordination, nongovernmental entities as community facilitators, and EcoBank for payments) offered flexibility and established networks that could be quickly leveraged for program use. Building on existing private capacity rather than creating entirely new networks was essential in ensuring a timely response. The successful development of a private payment scheme was particularly noteworthy in light of the challenges that previous cash for work programs had faced in ensuring safe, timely, and accurate payments in many areas of the country.

- *Utilizing local knowledge and community participation.* The high level of community participation in important CfWTEP decision points was a successful design element that should be replicated in future efforts. Local decision making was facilitated at key steps throughout the process: local government authorities determined the areas where projects would be located, local leaders took a role in defining vulnerability criteria and recruiting vulnerable households for project participation, and the participants themselves selected which projects would be implemented on behalf of their communities.

- *Setting wages in complex local circumstances.* Setting the wage level involved balancing a complex set of social, political, and economic factors. Despite clear indications that the final rate was higher than the local market wage, the traditional economic reasons for lowering it were not as compelling in the Liberian context. For one thing, the government and other implementing partners pressed for the program to maintain consistency with established wage precedents. Fears about the negative impact of a nonconforming rate on project implementation also drove the higher rate.

- *Investing in well-targeted programs.* Analysis found that it costs $1.96 to transfer $1 to a poor person. Given that the objective of the program was to provide temporary relief to help households cope with shocks, this is a good performance—particularly when compared to the impact of certain other programs and policies. For example, on the basis of the rice consumption patterns observed in 2007, it is likely that less than half of the tax cuts implemented on food imports benefited the poor.

- *Implementing "light" evaluations.* The results from the quantitative and qualitative evaluations cited here were obtained rapidly and at a low

cost (the quantitative survey cost only $20,000 to implement in terms of data collection), while maintaining high standards in program evaluation, and were very helpful in shaping future iterations of cash for work operations in Liberia. This outcome suggests that such light evaluation methods can be quite useful in examining programs like the CfWTEP where the intervention is of a short-term nature and capacity is weak. It was also possible to test the robustness of the evaluation findings through triangulation of the results and sources with administrative data collected by LACE. And, because the team that carried out the evaluation worked closely with the team implementing the program, results from the evaluation could be easily fed into the design of the new program.

- *Transitioning to a broader social safety net.* In Liberia, the newly implemented Youth Employment Skills Project is taking these lessons into account. It is the next generation of the CfWTEP, but is not intended exclusively as an emergency response and has added components to improve its long-term value for participants. The YES Project has two primary components. The first, Community Works, provides temporary employment similar to that provided by the CfWTEP for 45,000 individuals. The second component, building on the CfWTEP experience, includes 1 day per week of noncognitive skills development for participants, who are compensated at the same rate as for a regular workday. The YES Project features a few notable program changes from the CfWTEP in that it has a much stronger focus on youth and improved mechanisms for gender inclusion.

## Notes

1. This section examines findings related to major design parameters. For a more in-depth discussion of wider issues including project selection and asset creation, see Andrews et al. (2011).
2. EcoBank charges $1,200 to deliver payments to workers in remote communities where they have no branches, as compared with $1,000 in communities with nearby branches.
3. The poverty gap is the average shortfall of the total population from the poverty line. This measurement is used to reflect the intensity of poverty. The poverty line used for measuring this gap is the widely accepted international standard for extreme poverty, $1.25 per day.
4. See Ravallion (1998) for a discussion of these parameters.

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APPENDIX A

# Data Overview

Data sources cited in this publication are drawn primarily from two sources. First, data are drawn from del Ninno, Subbarao, and Milazzo (2009) who use a cross-country review of experiences with public works. Second, these data are complemented with a survey of programs assembled for the South-South Social Protection Learning Forum: Making Public Works Work, held in Arusha, Tanzania, in 2010.[1] This survey contains self-reported information submitted by participating country delegations. The combination of both data sources generates a rich set of empirical information on design and implementation features of global public works programs.

The information presented by del Ninno, Subbarao, and Milazzo (2009) uses country-specific secondary data and spans a period of 20 years. Specifically, the information was collected for 43 countries and 49 different public works programs. In Argentina, Bangladesh, India, Indonesia, Malawi, and Peru, information was collected for more than one program. The type of secondary information collected came from various sources—for example, project documents, published and unpublished studies, websites, and others. The data, which are summarized in table A.1, detail the program's starting year, the objective of the program (antipoverty, external shock, seasonal, bridge to informal employment,

employment guarantee, etc.), and targeting approach. The type of work performed under the program and the cost of labor (or labor intensity) are also presented. The data gathered for Making Public Works Work includes some of the above features from del Ninno, Subbarao, and Milazzo (2009), but are taken as a snapshot of current programs under implementation in 2009; this information is summarized in tables A.2–A.7. The survey aimed to gather data on key implementation parameters; it covers program features (status and key objectives), coverage (geographic distribution, number of beneficiaries, timing), targeting (types of population, methodologies, gender quotas), types of projects, benefit levels (wage setting, payment modalities, delivery mechanisms), and financing and institutional arrangements, as well as data on monitoring and evaluation and management information system features. The survey covered 53 different public works programs in 42 countries.

However, using the information from both datasets presents a few limitations: data are not consistent or standardized because they use different sample sizes and methods of collection. The data drawn from the survey is self-reported inasmuch as it could contain subjective biases. Despite these limitations the data is still useful to delineate general cross-country patterns and factors accounting for programs' effectiveness.

Summary tables of the public works programs contained in both datasets are included below.

## Programs Included in "How to Make Public Works Work: A Review of the Experiences"

**Table A.1 Characteristics of Public Works Programs**

| *Country* | *Program* | *Region* | *Starting year* | *Type of work performed* | *Objective* | *Targeting method* | *Labor intensity* |
|---|---|---|---|---|---|---|---|
| Botswana | Labour Intensive Public Works Project (LIPWP) | Africa | 1978 | Maintenance of dirt roads. | Seasonal | Self-targeting | 78% |
| Cape Verde | Frente de Alta Intensidade de Mão de Obra (FAIMO) | Africa | Early 1980s | Rural roads, infrastructure for soil and water conservation. | Seasonal | Self-targeting | — |
| Ethiopia | Ethiopian Productive Safety Net Program (PSNP) | Africa | 2005 | Soil fertility restoration, and improvement of land productivity, access to market infrastructures, and access to drinking and irrigation water. Improvement of public infrastructure. | Antipoverty | Other | — |
| Madagascar | HIMO (FID) | Africa | 2000 | Rehabilitation and reconstruction of infrastructures after natural disasters. | Seasonal | Other | 80% |
| Malawi | Malawi Social Action Fund (MASAF) Public Works | Africa | 1995 | Rural road maintenance. | Antipoverty | Combination | >40% |
| Malawi | Region Infrastructure Maintenance Program (CRIMP) | Africa | 1999 | Construction and maintenance of roads, irrigation infrastructure, flood control infrastructure. Environmental protection activities, reforestation, soil conservation and water retaining infrastructure. | Bridge | Other | — |
| Somalia | Action Contre la Faim (ACF)'s cash for work | Africa | 2004 | Water catchments' rehabilitation (mainly used to provide drinking water for animals). | Seasonal | Other | — |
| South Africa[a] | Expanded Public Works Program (EPWP) | Africa | 2004 | Maintenance of infrastructure and environment, social and economic employment opportunities. | Antipoverty | Combination | — |



*(continued next page)*

**Table A.1** *(continued)*

| *Country* | *Program* | *Region* | *Starting year* | *Type of work performed* | *Objective* | *Targeting Method* | *Labor intensity* |
|---|---|---|---|---|---|---|---|
| Tanzania | TASAF Public Works Program Component | Africa | 2000 | Construction and rehabilitation of basic health care facilities, schools, boreholes, dams, latrines, shallow wells, and economic infrastructure. | Seasonal | Combination | 40% |
| Zambia | Public Works | Africa | 2002 | Construction, repair, rehabilitation, and maintenance to public assets (roads, sanitation and drainage structures) in rural and urban districts affected by drought. | Antipoverty | Combination | >60% |
| Indonesia | Padat Karya (labor creation program) | E. Asia & Pacific | 1998 | Construction, renovation, and repair of roads, infrastructure, agriculture drainage, irrigation system. Cleaning slum areas, maintenance of sewerage. | One-time shock | Combination | ~41% |
| Indonesia | Mercy Corps' CFW program | E. Asia & Pacific | 2005 | Clean-up and reconstruction in areas hit by the tsunami. | One-time shock | Other | >60% |
| Korea, Rep. | Public Work Projects | E. Asia & Pacific | 1998 | Infrastructure maintenance, social services, environment protection, and information technology projects. | One-time shock | Other | 70% |
| Thailand | SIP | E. Asia & Pacific | 1998 | Community development works. | One-time shock | Combination | ~16% |
| Bulgaria | From Social Assistance toward Employment | Eur. & Cent. Asia | 2002 | Social works, construction, renovation, and environmental cleanup. | Bridge | Other | — |
| Poland | PW | Eur. & Cent. Asia | 1992 | Construction and rehabilitation of a water supply system, a gas grid, a telephone network, a sewage treatment plant. | Bridge | Other | — |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Slovenia | PW | Eur. & Cent. Asia | Early 1990s | Environmental and rural programs, and municipal services, also including providing child care and assistance to the elderly, education and culture. | Bridge | Other | — |
| Argentina | Trabajar | L. Amer. & the Caribbean | 1996 | Infrastructure construction and maintenance. | One-time shock | Combination | ~60% |
| Argentina | Jefes & Jefas | L. Amer. & the Caribbean | 2002 | Community services, construction, rehabilitation, and maintenance of small infrastructure facilities, and the execution of productive projects (on a pilot basis). | One-time shock | Combination | ~40% |
| Bolivia | PLANE (Red de Protección Social)(RPS) | L. Amer. & the Caribbean | End of 2001 | Cleaning, maintenance, construction of infrastructures. | One-time shock | Combination | — |
| Chile | Direct Employment Program | L. Amer. & the Caribbean | From 1993 | Cleaning, improvement, and maintenance of social infrastructures, and environment protection. | One-time shock | Other | — |
| Colombia | Empleo en Acción (Red de Apoyo Social) | L. Amer. & the Caribbean | 2001 | Maintenance and construction of urban and social infrastructure. | One-time shock | Other | — |
| Mexico | Programa de Empleo Temporal (PET) | L. Amer. & the Caribbean | 1995 | Maintenance and construction of rural infrastructure, mainly rural roads. | One-time shock | Other | 50% |
| Peru | "A Trabajar Urbano" | L. Amer. & the Caribbean | 2002 | Cleaning, maintenance, and construction of infrastructures. | One-time shock | Combination | >75% |
| Peru | "A Trabajar Rural" | L. Amer. & the Caribbean | 2002 | Rehabilitation, maintenance, and improvement of basic infrastructures (schools, health centers, rural roads) | One-time shock | Combination | ~50% |

*(continued next page)*

**Table A.1** *(continued)*

| *Country* | *Program* | *Region* | *Starting year* | *Type of work performed* | *Objective* | *Targeting Method* | *Labor intensity* |
|---|---|---|---|---|---|---|---|
| Uruguay | Programa de Actividades Comunitarias | L. Amer. & the Caribbean | 2003 | Maintenance, construction, and rehabilitation of urban and social infrastructure (schools, health centers), environmental protection. | One-time shock | Combination | — |
| Algeria | l'Indemnité pour Activité d'Intérêt Général (IAIG) | Mid. East & N. Africa | 1994 | Community-based activities, such as reforestation. | One-time shock | Self-targeting | 80% |
| Egypt, Arab Rep. | PWP (SF for development project) | Mid. East & N. Africa | 1993 | Maintenance, construction, rehabilitation, and repair of irrigation and drainage canals, rural roads, and public infrastructure. Collection and disposal of solid waste, and cleaning the canal. | Antipoverty | Other | 30% |
| Morocco | Promotion Nationale | Mid. East & N. Africa | 1961 | Construction and rehabilitation of rural infrastructures (roads, water supplies, schools, health centers) and environmental conservation works (reforestation). Alleviate the negative effects of droughts. | Antipoverty | Combination | 75% |
| Yemen, Rep. | Public Works Programs | Mid. East & N. Africa | 1996 | Construction, rehabilitation, and extension of community infrastructure. | One-time shock | Combination | 43% |
| Afghanistan | Labor Intensive Works Program (LIWP) | S. Asia | 2002 | Road construction, rehabilitation of rural infrastructures. | Antipoverty | Combination | 70–80% |
| Bangladesh | Rural Maintenance Program | S. Asia | 1983 | Rural road maintenance. | Bridge | Other | — |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Bangladesh | Food for work | S. Asia | 1974 | Rural roads construction. | Seasonal | Self-targeting | 60–70% |
| India | Jawahar Rozgar Yojana JRY | S. Asia | 1989 | Construction of rural economic infrastructure and community assets. | Antipoverty | Other | 60% |
| India | Maharashtra Employment Guarantee Scheme | S. Asia | 1979 | Construction of rural infrastructure, water conservation, soil conservation and land development works and environmental protection, reforestation, roads, flood protection schemes. | Guarantee | Self-targeting | 60–70% |
| India | NREGA | S. Asia | 2005 | Renovation of water bodies, irrigation works, drought proofing, flood control and protection, rural connectivity, and land development. | Guarantee | Self-targeting | 60% |
| Pakistan | Income Generating Project for Refugee Areas (IGPRA). | S. Asia | 1984 | Reforestation, catchment management, repair and improvement of irrigation and drainage systems, flood protection and river training, and road improvement. | Antipoverty | Combination | 60% |

***Source:*** del Ninno, Subbarao, and Milazzo 2009.
***Note:*** World Regions: Africa, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia. bridge = bridge to self-employment; — = not available.

## Programs Included in the Survey Conducted at the Social Protection South-South Learning Forum: Making Public Works Work (2010)

**Table A.2 Program Scope**

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Geographical scope* |
|---|---|---|---|---|---|
| Africa | Burkina Faso | Food Security Support Program | A | 2009 | Nationwide |
| Africa | Cameroon | Agricultural Competitiveness Strengthening Project | A | 2010 | Nationwide |
| Africa | Cote d'Ivoire | Post-Conflict Assistance Project: Labor-Intensive Public Work Sub-Component | A | 2009 | Nationwide |
| Africa | Congo, Dem. Rep. | Social Emergency Action Program (PASU in French) | A | 2005 | Nationwide |
| Africa | Ethiopia (1) | Productive Safety Net Program (PSNP) | A | 2005 | Regional |
| Africa | Ethiopia (2) | Ethiopian Protection of Basic Services (PBS) | A | 2008 | Regional |
| Africa | Ghana (1) | Community Based Rural Development (CBEDP) | A | 2004 | Regional |
| Africa | Ghana (2) | Ghana Social Opportunity Project (SOP) | P | 2010 | Nationwide |
| Africa | Kenya | Kazi Kwa Viajana Program (KKVP) | A | 2009 | Nationwide |
| Africa | Liberia (1) | Cash for Work Temporary Employment Project (CfWTEP) | A | 2008 | Nationwide |
| Africa | Liberia (2) | Liberian Emergency Employment Program/Liberia Employment Action Program | A | 2006 | Nationwide |
| Africa | Madagascar | Emergency Food Security and Reconstruction Project | A | 2009 | Nationwide |
| Africa | Malawi | Malawi Social Action Fund/Public Works Program | A | 2009 | Nationwide |
| Africa | Mali (1) | Agricultural Sector Support Program (PASAM in French) | A | 2008 | Regional |
| Africa | Mali (2) | Public Works Program | A | 2006 | Nationwide |
| Africa | Rwanda | Vision 2020 Umurenge Program (VUP) | A | 2008 | Nationwide |

| *Geographical location* | *Timing* | *Maximun days allowed per worker* | *Annual number of. beneficiaries (2009)* | *% of female* | *Annual no. of HH benefited* | *Coverage (% of total population)* |
|---|---|---|---|---|---|---|
| — | Seasonal | — | — | — | — | — |
| Rural | Year-round | — | — | — | — | — |
| — | Year-round | 132 | 3,036 | 24 | — | 0.02 |
| — | Year-round | — | 13,799 | 16 | — | — |
| Rural | Year-round | — | 7,600,000 | 10 | 1,272,513 | 10 |
| Rural | Year-round | — | — | — | — | — |
| Rural | — | — | — | — | — | — |
| — | Year-round | — | — | — | — | — |
| — | Year-round | — | 300,000 | — | — | — |
| — | Year-round | — | 11,000 | 45 | 1,800 | 0.32 |
| — | Year-round | — | — | — | 80,000 | 2.30 |
| Rural & urban | Year-round | — | 50,000 | 50 | 50,000 | 0.20 |
| — | Year-round | — | 223,333 | 45 | 223,333 | 1.72 |
| — | Year-round | — | — | — | — | — |
| Rural | Year-round | 120 | 6,860 | 47 | 980 | — |
| — | Year-round | — | — | — | 23,550 | 16 |

*(continued next page)*

**Table A.2** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Geographical scope* |
|---|---|---|---|---|---|
| Africa | South Africa | Expanded Public Works Program | A | 2004 | Nationwide |
| Africa | South Sudan | Capacity Building Institutional and Human Resource Development Project | A | 2007 | Nationwide |
| Africa | Tanzania | Tanzania Social Action Fund II (TASAF) | A | 2005 | Nationwide |
| Africa | Togo | Public Works with High Labor Intensity | P | 2010 | Nationwide |
| Africa | Uganda | Northern Uganda Social Action Fund 2 | A | 2009 | Regional |
| Africa | Comoros | Community Development Support Fund (FADC in French) | A | 2010 | Nationwide |
| Africa | Zimbabwe | Public Works Program | A | | Nationwide |
| E. Asia & Pacific | Cambodia | Emergency Food Assistance Project | A | 2008 | Regional |
| E. Asia & Pacific | Indonesia (1) | National Community Empowerment Program (PNPM Mandiri) | A | 2007 | Nationwide |
| E. Asia & Pacific | Indonesia (2) | Urban Poverty Project | A | 1999 | Nationwide |
| E. Asia & Pacific | Lao PDR (1) | Poverty Reduction Fund | A | 2003 | Regional |
| E. Asia & Pacific | Lao PDR (2) | Protracted Relief and Recovery Operation and Emergency Operations | A | 2000 | Regional |
| E. Asia & Pacific | Lao PDR (3) | Rural Roads Program | A | 2000 | Nationwide |
| E. Asia & Pacific | Papua New Guinea | Public Works Program | P | 2010 | Regional |
| E. Asia & Pacific | Solomon Islands | Rapid Employment Program | P | 2010 | Regional |
| E. Asia & Pacific | Vietnam | Public Works Program for Poor Unemployed or Underemployed Labourers | P | 2011 | Regional |
| Eur. & Cent. Asia | Armenia | Paid Public Works | A | 2004 | Nationwide |
| Eur. & Cent. Asia | Kosovo | Kosovo Public Works Program | P | 2010 | Nationwide |

| *Geographical location* | *Timing* | *Maximun days allowed per worker* | *Annual number of. beneficiaries (2009)* | *% of female* | *Annual no. of HH benefited* | *Coverage (% of total population)* |
|---|---|---|---|---|---|---|
| Rural & urban | Year-round | — | 55,000 | 40 | — | — |
| — | Year-round | — | 2,000 | 50 | 1,000 | — |
| — | Year-round | — | — | — | — | — |
| Rural | Year-round | 40 | 25,000 | 50 | — | 1 |
| — | Year-round | 22 | 300,000 | 30 | 50,000 | — |
| Rural | Year-round | 45 | 3,750 | 50 | — | — |
| — | Seasonal | — | — | — | 400,000 | — |
| Rural | Year-round | — | 2,824 | 43 | 1,298 | — |
| Rural & urban | Year-round | — | — | — | — | — |
| Urban | — | — | — | — | — | — |
| Rural | Year-round | — | 660,540 | 49 | 118,283 | 12 |
| Rural | Year-round | — | 143,000 | 55 | 28,000 | 0.50 |
| Rural | Year-round | — | 200,000 | 55 | 38,000 | 4 |
| Urban | Year-round | — | — | — | — | — |
| Urban | Year-round | 50 | — | — | — | — |
| Rural | Year-round | — | — | — | — | — |
| — | Year-round | 26 | 4,824 | 25 | — | 16 |
| — | Seasonal | 66 | 2,000 | 10 | 2,000 | — |

*(continued next page)*

**Table A.2** *(continued)*

| Region | Country | Name of the program | Status (active, planned, closed) | Year (start, planned, closed) | Geographical scope |
|---|---|---|---|---|---|
| Eur. & Cent. Asia | Latvia | Workplaces with Stipend emergency Public Works Program (WWS) | A | 2009 | Nationwide |
| Eur. & Cent. Asia | Macedonia, FYR | Organizing Public Works | C | 2009 | Nationwide |
| Eur. & Cent. Asia | Moldova | Moldova Social Investment Fund (MSIF) | A | 1998 | Nationwide |
| Eur. & Cent. Asia | Uzbekistan | Public Works Employment Program | A | — | Regional |
| L. Amer. & the Caribbean | Argentina | Trabajadores Constructores | A | 2007 | Nationwide |
| L. Amer. & the Caribbean | El Salvador | Program for Temporary Income Support (PATI in Spanish) | A | 2009 | Regional |
| L. Amer. & the Caribbean | Grenada | Debushing Program | A | — | Nationwide |
| L. Amer. & the Caribbean | Haiti (1) | National Project of Community Participation Development (PRODEP in French) | A | 2005 | Regional |
| L. Amer. & the Caribbean | Haiti (2) | Regional Transportation and Development Project | A | 2008 | Regional |
| Mid. East & N. Africa | Djibouti | Social Assistance Pilot Program on Labor and Human Capital | P | 2010 | Nationwide |
| Mid. East & N. Africa | Yemen, Rep. (1) | Public Works Program -Yemen | A | 1996 | Nationwide |
| Mid. East & N. Africa | Yemen, Rep. (2) | Labor Intensive Works (LIW) Program - Social Fund for Development | A | 2008 | Nationwide |
| S. Asia | Bangladesh (1) | Employment Generation Program for Hardcore Poor | C | | Nationwide |
| S. Asia | Bangladesh (2) | 100 Days Employment Generation Program | C | 2008-2009 | Nationwide |
| S. Asia | Nepal | Rural Community Infrastructure Works (RCIW) Program | A | 1995 | Regional |
| S. Asia | Sri Lanka | Emergency Northern Recovery Project (ENReP) | A | 2009 | Regional |

***Source:*** Social Protection South-South Learning Forum. 2010. Making Public Works Work; data available at http://go.worldbank.org/W9MSDVUSA0.
***Note:*** World Regions: Africa, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia. HH = household; — = not available.

| *Geographical location* | *Timing* | *Maximun days allowed per worker* | *Annual number of. beneficiaries (2009)* | *% of female* | *Annual no. of HH benefited* | *Coverage (% of total population)* |
|---|---|---|---|---|---|---|
| — | Year-round | 132 | 663,000 | 50 | — | 3 |
| — | Seasonal | 132 | 4,983 | 12 | 4,983 | — |
| Rural & urban | Year-round | — | 112,000 | 50 | 60,000 | 5 |
| Urban | Year-round | — | 110 | 77 | 110 | — |
| Rural & urban | Year-round | — | 10,000 | — | — | — |
| Urban | Year-round | 20 | 40,000 | 30 | — | — |
| — | Year-round | 30 | 380 | 59 | — | — |
| Urban | Year-round | — | 450,000 | 33 | — | — |
| — | Year-round | — | 38,000 | 4 | 17,250 | 10 |
| Rural & urban | Year-round | — | 75,000 | 30 | | — |
| Rural & urban | Year-round | — | — | — | — | — |
| Rural & urban | Year-round | 100/ HH | 574,093 | 50 | 82,000 | 2.60 |
| Rural | Seasonal | 80 | 1,200,000 | 33 | — | 8 |
| Rural | Seasonal | 100 | 2,000,000 | 60 | 2,000,000 | 1.50 |
| Rural | Seasonal | — | — | 30 | 50,000 | 1.5 (total HH) |
| — | Year-round | — | — | — | — | — |

**Table A.3 Targeting Methods**

| *Region* | *Country* | *Name of the program/project* | *Year (start)* | *Geographical* | *Administrative* | *PMT* | *Self-select* | *Community based* | *Community mechanisms* | *Grievance mechanism* |
|---|---|---|---|---|---|---|---|---|---|---|
| Africa | Burkina Faso | Food Security Support Program | 2009 | X | — | — | — | X | Beneficiary ranking | Yes |
| Africa | Cameroon | Agricultural Competitiveness Strengthening Project | 2010 | X | — | — | — | — | — | — |
| Africa | Cote d'Ivoire | Post-Conflict Assistance Project: Labor-Intensive Public Work Sub-Component | 2009 | X | — | — | — | — | — | Yes |
| Africa | Congo, Dem. Rep. | Social Emergency Action Program (PASU in French) | 2005 | — | — | — | — | X | — | Yes |
| Africa | Ethiopia | Productive Safety Net Program (PSNP) | 2005 | X | X | — | — | X | Beneficiary ranking | Yes |
| Africa | Ghana | Ghana Social Opportunity Project (SOP) | 2010 | X | — | — | — | X | — | — |
| Africa | Kenya | Kazi Kwa Viajana Program (KKVP) | 2009 | X | — | — | — | X | Beneficiary ranking | No |
| Africa | Liberia (1) | Cash for Work Temporary Employment Project (CfWTEP) | 2008 | X | — | — | X | — | — | Yes |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Africa | Liberia (2) | Emergency Employment Program/Liberia Employment Action Programme | 2006 | — | — | — | — | X | Beneficiary ranking | Yes |
| Africa | Madagascar | Emergency Food Security and Reconstruction Project | 2009 | X | — | — | X | X | Beneficiary ranking | Yes |
| Africa | Malawi | Malawi Social Action Fund/Public Works Program | 2009 | — | — | — | — | X | Beneficiary ranking | Yes |
| Africa | Mali (1) | Agricultural Sector Support Program (PASAM in French) | 2008 | — | X | — | — | X | Beneficiary ranking | Yes |
| Africa | Mali (2) | Public Works Program | 2006 | X | — | — | — | X | — | Yes |
| Africa | Rwanda | Vision 2020 Umurenge Program (VUP) | 2008 | X | — | — | — | X | Beneficiary ranking | Yes |
| Africa | South Africa | Expanded Public Works Program | 2004 | — | X | — | — | X | Beneficiary ranking | |
| Africa | South Sudan | Capacity Building Institutional and Human Resource Development Project | 2007 | — | X | — | — | X | Beneficiary ranking | Yes |
| Africa | Tanzania | Tanzania Social Action Fund II (TASAF) | 2005 | X | X | — | — | X | Beneficiary ranking | Yes |



*(continued next page)*

**Table A.3** *(continued)*

| *Region* | *Country* | *Name of the program/project* | *Year (start)* | *Geographical* | *Administrative* | *PMT* | *Self-select* | *Community based* | *Community mechanisms* | *Grievance mechanism* |
|---|---|---|---|---|---|---|---|---|---|---|
| Africa | Uganda | Northern Uganda Social Action Fund 2 | 2009 | X | — | — | X | X | Beneficiary ranking | Yes |
| Africa | Comoros | Community Development Support Fund (FADC) | 2010 | — | — | — | X | X | Beneficiary ranking | Yes |
| Africa | Zimbabwe | Public Works Program | — | — | — | — | X | X | Beneficiary ranking | Yes |
| E. Asia & Pacific | Cambodia | Emergency Food Assistance Project | 2008 | X | — | — | X | X | Beneficiary ranking | No |
| E. Asia & Pacific | Indonesia (1) | National Community Empowerment Program | 2007 | X | — | — | — | X | Beneficiary ranking | — |
| E. Asia & Pacific | Indonesia (2) | Urban Poverty Project | 1999 | X | — | — | — | X | Beneficiary ranking | — |
| E. Asia & Pacific | Lao PDR (1) | Poverty Reduction Fund | 2003 | X | — | — | — | X | Beneficiary ranking | Yes |
| E. Asia & acific | Lao PDR (2) | Protracted Relief and Recovery Operation and Emergency Operations | 2000 | X | — | — | X | — | — | No |
| E. Asia & Pacific | Lao PDR (3) | Rural Roads Program | 2000 | X | — | — | — | X | — | No |
| Eur. & Cent. Asia | Armenia | Paid Public Works | 2004 | — | X | — | — | — | — | Yes |

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|---|---|---|---|---|---|---|---|---|---|---|
| Eur. & Cent. Asia | Latvia | Workplaces with Stipend emergency Public Works Program (WWS) | 2009 | — | — | — | X | — | — | Yes |
| Eur. & Cent. Asia | Macedonia, FYR | Organizing Public Works | 2009 | — | X | — | — | X | — | Yes |
| Eur. & Cent. Asia | Moldova | Moldova Social Investment Fund (MSIF) | 1998 | X | — | — | — | X | Beneficiary ranking | No |
| Eur. & Cent. Asia | Uzbekistan | Public Works Employment Program | — | — | X | X | — | X | Beneficiary ranking | Yes |
| L. Amer. & the Caribbean | Argentina | Trabajadores Constructores | 2007 | — | X | — | — | X | Beneficiary ranking | Yes |
| L. Amer. & the Caribbean | El Salvador | Program for Temporary Income Support (PATI in Spanish) | 2009 | X | — | — | X | X | Beneficiary ranking | Yes |
| L. Amer. & the Caribbean | Grenada | Debushing Program | — | X | — | — | X | — | — | Yes |
| L. Amer. & the Caribbean | Haiti (1) | National Project of Community Participation Development | 2005 | X | — | — | — | X | Beneficiary ranking | Yes |
| L. Amer. & the Caribbean | Haiti (2) | Regional Transportation and Development Project | 2008 | | — | — | — | X | — | Yes |



*(continued next page)*

**Table A.3** *(continued)*

| *Region* | *Country* | *Name of the program/project* | *Year (start)* | *Geographical* | *Administrative* | *PMT* | *Self-select* | *Community based* | *Community mechanisms* | *Grievance mechanism* |
|---|---|---|---|---|---|---|---|---|---|---|
| Mid. East & N. Africa | Yemen, Rep. (1) | Public Works Program—Yemen | 1996 | X | — | — | — | X | Beneficiary ranking | No |
| Mid. East & N. Africa | Yemen, Rep. (2) | Labor Intensive Works (LIW) Program—Social Fund for Development | 2008 | X | — | — | X | X | Beneficiary ranking | Yes |
| S. Asia | Bangladesh (1) | Employment Generation Program for Hardcore Poor | — | X | X | — | — | X | Beneficiary ranking | Yes |
| S. Asia | Bangladesh (2) | 100 Days Employment Generation Program | 2008 | — | — | — | — | X | Beneficiary ranking | — |
| S. Asia | Nepal | Rural Community Infrastructure Works (RCIW) Program | 1995 | — | — | — | — | X | Beneficiary ranking | — |
| S. Asia | Sri Lanka | Emergency Northern Recovery Project (ENReP) | 2009 | — | — | — | X | X | Beneficiary ranking | — |

***Source:*** Social Protection South-South Learning Forum. 2010. Making Public Works Work; data available at http://go.worldbank.org/W9MSDVUSA0.
***Note:*** World Regions: Africa, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia. — = not available.

**Table A.4 Payment Mechanisms**

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Payment modality* | *System of payment* | *Amount daily wage (US$)* | *Amount of piece rate* | *Frequency of payment* | *Delivery mechanism* |
|---|---|---|---|---|---|---|---|---|---|---|
| Africa | Cameroon | Agricultural Competitiveness Strengthening Project | A | 2010 | Cash | Piece rate | — | — | Every 15 days | Cash |
| Africa | Cote d'Ivoire | Post-Conflict Assistance Project: Labor-Intensive Public Work Sub-Component | A | 2009 | Cash | Daily and piece rate | 5.00 | \$5 $m^3$ excavation; \$4 $m^2$ road cleared | Every 15 days | Electronic transfer |
| Africa | Congo, Dem. Rep. | Social Emergency Action Program (PASU in French) | A | 2005 | Cash | Daily wage | 3.00 | — | Monthly | Cash |
| Africa | Ethiopia | Productive Safety Net Program (PSNP) | A | 2005 | Cash and food | Daily wage | 0.70 | — | Monthly | Cash |
| Africa | Ghana | Ghana Social Opportunity Project (SOP) | P | 2010 | Cash | — | — | — | Biweekly | Cash and electronic transfer |
| Africa | Kenya | Kazi Kwa Viajana Program (KKVP) | A | 2009 | Cash | Daily wage | 3.20 | — | Weekly | Cash |
| Africa | Liberia (1) | Cash for Work Temporary Employment Project (CfWTEP) | A | 2008 | Cash | Daily wage | 3.00 | — | — | Cash and electronic transfer |
| Africa | Liberia (2) | Liberian Emergency Employment Program/ Liberia Employment Action Program | A | 2006 | Cash and food | Daily wage | 3.00 | — | — | Cash |

*(continued next page)*

**Table A.4** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Payment modality* | *System of payment* | *Amount daily wage (US$)* | *Amount of piece rate* | *Frequency of payment* | *Delivery mechanism* |
|---|---|---|---|---|---|---|---|---|---|---|
| Africa | Madagascar | Emergency Food Security and Reconstruction Project | A | 2009 | Cash | Daily wage | 0.98 | — | Weekly | Cash |
| Africa | Malawi | Malawi Social Action Fund/Public Works Program | A | 2009 | Cash | Daily wage | 1.24 | — | Every 12 days | Cash |
| Africa | Mali (1) | Agricultural Sector Support Program (PASAM in French) | A | 2008 | Cash | Daily wage | — | — | Weekly | Cash |
| Africa | Mali (2) | Public Works Program | A | 2006 | Food | Daily wage | Food rations | — | Every 15 days | Food distribution |
| Africa | Rwanda | Vision 2020 Umurenge Program (VUP) | A | 2008 | Cash | Daily wage | 1.55 | — | Biweekly | Electronic transfer |
| Africa | South Africa | Expanded Public Works Program | A | 2004 | Cash and food | Daily and piece rate | 8.00 | R60 per 2 $m^3$ | Weekly (food); fortnightly (cash) | Cash and electronic transfer |
| Africa | South Sudan | Capacity Building Institutional and Human Resource Development Project | A | 2007 | Cash | Piece rate | — | — | Monthly | Electronic transfer |
| Africa | Tanzania | Tanzania Social Action Fund II (TASAF) | A | 2005 | Cash | Daily wage | 1.40 | — | Weekly | Cash |
| Africa | Togo | Public Works with High Labor Intensity | P | 2010 | Cash | Piece rate | — | — | Every 15 days | Cash |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Africa | Uganda | Northern Uganda Social Action Fund 2 | A | 2009 | Cash | Daily wage | 2.75 | — | Biweekly | Cash |
| Africa | Comoros | Community Development Support Fund (FADC in French) | A | 2010 | Cash | Daily wage | 6.47 | — | Weekly | Cash |
| Africa | Zimbabwe | Public Works Program | A | — | Cash | Daily wage | 1.33 | — | Monthly | Cash |
| E. Asia & Pacific | Cambodia | Emergency Food Assistance Project | A | 2008 | Cash and food | Piece rate | — | $2 $m^3$ excavation; $0.5 $m^2$ of grass planted | Varies | Cash |
| E. Asia & Pacific | Indonesia | National Community Empowerment Program (PNPM Mandiri) | A | 2007 | Cash | Daily wage | 4.50 | — | Daily | Cash |
| E. Asia & Pacific | Lao PDR (1) | Poverty Reduction Fund | A | 2003 | — | Daily and piece rate | — | — | — | — |
| E. Asia & Pacific | Lao PDR (2) | Protracted Relief and Recovery Operation and Emergency Operations | A | 2000 | Food | Daily wage | 16 kg rice | — | Monthly | Food distribution |
| E. Asia & Pacific | Lao PDR (3) | Rural Roads Program | A | 2000 | Cash | Daily wage | 2.30 | — | Biweekly | Cash |
| E. Asia & Pacific | Papua New Guinea | Public Works Program | P | 2010 | Cash | Daily wage | 1.25 | — | Biweekly | Electronic transfer |
| E. Asia & Pacific | Solomon Islands | Rapid Employment Program | P | 2010 | Cash | Daily and piece rate | 4.00 | — | Fortnightly | Cash and check |
| E. Asia & Pacific | Vietnam | Public Works Program for Poor Unemployed or Underemployed Laborers | P | 2011 | Cash and food | Daily wage | 2.00 | — | Daily | Cash and voucher |
| Eur. & Cent. Asia | Armenia | Paid Public Works | A | 2004 | Cash | Daily wage | 6.00 | — | Monthly | Cash |
| Eur. & Cent. Asia | Kosovo | Kosovo Public Works Program | P | 2010 | Cash | Daily wage | 7.50 | — | Monthly | Electronic transfer |

*(continued next page)*

**Table A.4** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Payment modality* | *System of payment* | *Amount daily wage (US$)* | *Amount of piece rate* | *Frequency of payment* | *Delivery mechanism* |
|---|---|---|---|---|---|---|---|---|---|---|
| Eur. & Cent. Asia | Latvia | Workplaces with Stipend emergency Public Works Program (WWS) | A | 2009 | Cash | Daily wage | 8.00 | — | Monthly | Cash and electronic transfer |
| Eur. & Cent. Asia | Macedonia, FYR | Organizing Public Works | C | 2009 | Cash | Daily wage | — | — | Monthly | Electronic transfer |
| Eur. & Cent. Asia | Uzbekistan | Public Works Employment Program | A | — | Cash | Daily wage | 6.00 | — | Biweekly | Cash and electronic transfer |
| L. Amer. & the Caribbean | Argentina | Trabajadores Constructores | A | 2007 | Cash | Daily wage | 6.81 | — | Monthly | Electronic transfer |
| L. Amer. & the Caribbean | El Salvador | Program for Temporary Income Support (PATI in Spanish) | A | 2009 | Cash | Daily wage | 5.00 | — | Monthly | Cash |
| L. Amer. & the Caribbean | Grenada | Debushing Program | A | — | Cash | Piece rate | — | — | Fortnightly | Cash |
| L. Amer. & the Caribbean | Haiti (1) | National Project of Community Participation Development (PRODEP in French) | A | 2005 | Cash | Daily wage | 5.00 | — | — | Cash |
| L. Amer. & the Caribbean | Haiti (2) | Regional Transportation and Development Project | A | 2008 | Cash | Daily wage | 5.00 | — | — | Cash |
| Mid. East & N. Africa | Djibouti | Social Assistance Pilot Program on Labor and Human Capital | P | 2010 | Cash and food | Daily wage | 3.00 | — | — | Cash |
| Mid. East & N. Africa | Yemen, Rep. (1) | Public Works Program —Yemen | A | 1996 | Cash | Daily wage | 7.00 | — | Daily | Cash |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Mid. East & N. Africa | Yemen, Rep. (2) | Labor Intensive Works (LIW) Program — Social Fund for Development | A | 2008 | Cash | Piece rate | — | $2 $m^2$ of terrace; $6 $m^2$ of pavement, $10 $m^3$ of wall building | Weekly | Cash |
| S. Asia | Bangladesh (1) | Employment Generation Program for Hardcore Poor | C | — | Cash | Daily wage | 1.75 | — | Weekly | Cash |
| S. Asia | Bangladesh (2) | 100 Days Employment Generation Program | C | 2008–09 | Cash | Daily wage | 1.50 | — | Daily | Cash |
| S. Asia | Nepal | Rural Community Infrastructure Works (RCIW) Program | A | 1995 | Food | Daily wage | Rice 4 kg/ person days | — | — | 2–3 installments |
| S. Asia | Sri Lanka | Emergency Northern Recovery Project (ENReP) | A | 2009 | Cash | Daily wage | 4.34 | — | Biweekly | Electronic transfer |

***Source:*** Social Protection South-South Learning Forum. 2010. Making Public Works Work; data available at http://go.worldbank.org/W9MSDVUSA0.
***Note:*** World Regions: Africa, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia. — = not available.

**Table A.5 Institutional Arrangements**

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Main managing institution* | *MIS* | *No. of people managing MIS* | *Database of projects (electronic/ paper-based)* |
|---|---|---|---|---|---|---|---|---|
| Africa | Burkina Faso | Food Security Support Program | A | 2009 | Central government | Centralized | — | Electronic |
| Africa | Cameroon | Agricultural Competitiveness Strengthening Project | A | 2010 | Central government and PMC | — | — | — |
| Africa | Cote d'Ivoire | Post-Conflict Assistance Project: Labor-Intensive Public Work Sub-Component | A | 2009 | Program management committees | Centralized | 11 | Electronic and paper |
| Africa | Congo, Dem. Rep. | Social Emergency Action Program (PASU in French) | A | 2005 | Community members | Centralized | 64 | Electronic and paper |
| Africa | Ethiopia (1) | Productive Safety Net Program (PSNP) | A | 2005 | Community members and PMC | Decentralized | — | Electronic and paper |
| Africa | Ethiopia (2) | Ethiopian Protection of Basic Services (PBS) | A | 2008 | District and local government and community members, elected officials and PMC | Centralized | 4 | Electronic and paper |
| Africa | Ghana (1) | Community Based Rural Development (CBEDP) | A | 2004 | Community members | — | — | Electronic and paper |
| Africa | Ghana (2) | Ghana Social Opportunity Project (SOP) | P | 2010 | Community members | — | — | Electronic and paper |
| Africa | Kenya | Kazi Kwa Viajana Program (KKVP) | A | 2009 | Community members | Centralized | 2 | Electronic and paper |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Africa | Liberia (1) | Cash for Work Temporary Employment Project (CfWTEP) | A | 2008 | Community members and NGOs | Centralized | — | Electronic and paper |
| Africa | Liberia (2) | Liberian Emergency Employment Program/Liberia Employment Action Programme | A | 2006 | Community members | — | — | Electronic and paper |
| Africa | Madagascar | Emergency Food Security and Reconstruction Project | A | 2009 | Social fund and community members | Decentralized | 34 | Electronic and paper |
| Africa | Malawi | Malawi Social Action Fund/Public Works Program | A | 2009 | Community members | Decentralized | 40 | Electronic and paper |
| Africa | Mali (1) | Agricultural Sector Support Program (PASAM in French) | A | 2008 | Elected officials/ councils | Decentralized | — | Paper |
| Africa | Mali (2) | Public Works Program | A | 2006 | Community members | Decentralized | 12 | — |
| Africa | Rwanda | Vision 2020 Umurenge Program (VUP) | A | 2008 | Local government | Centralized | 2 | Electronic and paper |
| Africa | South Africa | Expanded Public Works Program | A | 2004 | — | — | — | Electronic and paper |
| Africa | South Sudan | Capacity Building Institutional and Human Resource Development Project | A | 2007 | Central government | Centralized | 3 | Electronic and paper |
| Africa | Tanzania | Tanzania Social Action Fund II (TASAF) | A | 2005 | Central government and community members | Centralized | 5 | Electronic and paper |

*(continued next page)*

**Table A.5** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Main managing institution* | *MIS* | *No. of people managing MIS* | *Database of projects (electronic/ paper-based)* |
|---|---|---|---|---|---|---|---|---|
| Africa | Togo | Public Works with High Labor Intensity | P | 2010 | Social fund and NGO | — | — | — |
| Africa | Uganda | Northern Uganda Social Action Fund 2 | A | 2009 | Community members | Decentralized | 5 | Electronic and paper |
| Africa | Comoros | Community Development Support Fund (FADC in French) | A | 2010 | Social fund and community members | Decentralized | 4 | Electronic and paper |
| Africa | Zimbabwe | Public Works Program | A | — | District/regional government | Centralized | 10 | — |
| E. Asia & Pacific | Cambodia | Emergency Food Assistance Project | A | 2008 | Central government | Centralized | 8 | Electronic and paper |
| E. Asia & Pacific | Indonesia (1) | National Community Empowerment Program (PNPM Mandiri) | A | 2007 | Elected officials/ councils | Centralized | — | Electronic and paper |
| E. Asia & Pacific | Indonesia (2) | Urban Poverty Project | A | 1999 | — | — | — | — |
| E. Asia & Pacific | Lao PDR (1) | Poverty Reduction Fund | A | 2003 | Program management committees | Centralized | 10 | Electronic and paper |
| E. Asia & Pacific | Lao PDR (2) | Protracted Relief and Recovery Operation and Emergency Operations | A | 2000 | Program management committees | Centralized | 3 | Electronic and paper |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| E. Asia & Pacific | Lao PDR (3) | Rural Roads Program | A | 2000 | District/regional government and community members | Centralized | 3 | Electronic |
| E. Asia & Pacific | Papua New Guinea | Public Works Program | P | 2010 | Local government | Centralized | 3 | Electronic and paper |
| E. Asia & Pacific | Solomon Islands* | Rapid Employment Program | P | 2010 | Local government and program management committees | Centralized | 3 | Electronic and paper |
| E. Asia & Pacific | Vietnam | Public Works Program for Poor Unemployed or Underemployed Laborers | P | 2011 | Local government | Decentralized | — | Electronic and paper |
| Eur. & Cent. Asia | Armenia | Paid Public Works | A | 2004 | Program management committees | Centralized | — | Electronic and paper |
| Eur. & Cent. Asia | Kosovo | Kosovo Public Works Program | P | 2010 | Central and local government | Centralized | — | Electronic and paper |
| Eur. & Cent. Asia | Latvia | Workplaces with Stipend emergency Public Works Program (WWS) | A | 2009 | Central government | Centralized | — | Electronic and paper |
| Eur. & Cent. Asia | Macedonia, FYR | Organizing Public Works | C | 2009 | Elected officials/ councils and program management committees | Centralized | 33 | Electronic and paper |

*(continued next page)*

**Table A.5** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Main managing institution* | *MIS* | *No. of people managing MIS* | *Database of projects (electronic/ paper-based)* |
|---|---|---|---|---|---|---|---|---|
| Eur. & Cent. Asia | Moldova | Moldova Social Investment Fund (MSIF) | A | 1998 | Local government, community members and NGOs | Centralized | 3 | Electronic and paper |
| Eur. & Cent. Asia | Uzbekistan | Public Works Employment Program | A | — | District/regional government | Centralized | — | Electronic and paper |
| L. Amer. & the Caribbean | Argentina | Trabajadores Constructores | A | 2007 | Government (central, regional, local) | Centralized | — | Electronic |
| L. Amer. & the Caribbean | El Salvador | Program for Temporary Income Support (PATI in Spanish) | A | 2009 | Local government | Centralized | 3 | Electronic |
| L. Amer. & the Caribbean | Grenada | Debushing Program | A | — | Central government | Centralized | 16 | Electronic and paper |
| L. Amer. & the Caribbean | Haiti (1) | National Project of Community Participation Development (PRODEP in French) | A | 2005 | Community members | Centralized | 2 | Electronic and paper |
| L. Amer. & the Caribbean | Haiti (2) | Regional Transportation and Development Project | A | 2008 | Program management committees | Centralized | 30 | Electronic and paper |
| Mid. East & N. Africa | Djibouti | Social Assistance Pilot Program on Labor and Human Capital | P | 2010 | Central government | Centralized | — | — |
| Mid. East & N. Africa | Yemen, Rep. (1) | Public Works Program—Yemen | A | 1996 | Program management committees | Decentralized | 3 | Electronic |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Mid. East & N. Africa | Yemen, Rep. (2) | Labor Intensive Works (LIW) Program—Social Fund for Development | A | 2008 | Social fund | Decentralized | 17 | Electronic |
| S. Asia | Bangladesh (1) | Employment Generation Program for Hardcore Poor | C | — | Local government | Decentralized | 20 | Electronic and paper |
| S. Asia | Bangladesh (2) | 100 Days Employment Generation Program | C | 2008–09 | Program management committees | Centralized | — | Electronic and paper |
| S. Asia | Nepal | Rural Community Infrastructure Works (RCIW) Program | A | 1995 | — | — | — | — |
| S. Asia | Sri Lanka | Emergency Northern Recovery Project (ENReP) | A | 2009 | District/regional government | Centralized | 2 | Electronic and paper |

***Source:*** Social Protection South-South Learning Forum. 2010. Making Public Works Work; data available at http://go.worldbank.org/W9MSDVUSA0.
***Note:*** World Regions: Africa, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia. — = not available.

**Table A.6 Financing Arrangements**

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Annual cost of program (US$)* | *Domestic funds (%)* | *External funds (%)* | *External donors* |
|---|---|---|---|---|---|---|---|---|
| Africa | Burkina Faso | Food Security Support Program | A | 2009 | 16,892,000 | 100 | — | — |
| Africa | Cameroon | Agricultural Competitiveness Strengthening Project | A | 2010 | 1,500,000 | 26.80 | 73% | IDA |
| Africa | Cote d'Ivoire | Post-Conflict Assistance Project: Labor-Intensive Public Work Sub-Component | A | 2009 | 39,000,000 | — | 100% | — |
| Africa | Congo, Dem. Rep. | Social Emergency Action Program (PASU in French) | A | 2005 | 12,000,000 | — | 100% | WB |
| Africa | Ethiopia (1) | Productive Safety Net Program (PSNP) | A | 2005 | 300,000,000 | — | 100% | WB, USAID, CIDA, SIDA, DIFED, Netherlands, Irish, WFP |
| Africa | Ethiopia (2) | Ethiopian Protection of Basic Services (PBS) | A | 2008 | 53,400,000 | — | — | IDA, KfW and DFID |
| Africa | Ghana (1) | Community Based Rural Development (CBEDP) | A | 2004 | 12,000,000 | 2 | 98% | WB, Agence Française de Développement (AfD) |
| Africa | Ghana (2) | Ghana Social Opportunity Project (SOP) | P | 2010 | 12,000,000 | — | — | WB |
| Africa | Kenya | Kazi Kwa Viajana Program (KKVP) | A | 2009 | 197,000,000 | 70 | 30% | — |
| Africa | Liberia (1) | Cash for Work Temporary Employment Project (CfWTEP) | A | 2008 | 15,000,000 | 0.50 | 99.50% | WB |
| Africa | Liberia (2) | Liberian Emergency Employment Program/Liberia Employment Action Program | A | 2006 | 120,000 | 100 | — | — |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Africa | Madagascar | Emergency Food Security and Reconstruction Project | A | 2009 | 13,300,000 | — | 100% | IDA |
| Africa | Malawi | Malawi Social Action Fund/ Public Works Program | A | 2009 | 4,250,306 | 20 | 80% | WB |
| Africa | Mali (1) | Agricultural Sector Support Program (PASAM in French) | A | 2008 | — | — | — | Denmark |
| Africa | Mali (2) | Public Works Program | A | 2006 | 2,535,260 | — | — | Ministry of Agriculture, Fishery and Forestry—Japan |
| Africa | Rwanda | Vision 2020 Umurenge Program (VUP) | A | 2008 | 16,900,000 | 40 | 60% | DFID, WB, EU |
| Africa | South Africa | Expanded Public Works Program | A | 2004 | 3,800,000 | 100 | — | — |
| Africa | South Sudan | Capacity Building Institutional and Human Resource Development Project | A | 2007 | 1,674,337 | — | 100% | MDTF for Southern Sudan |
| Africa | Tanzania | Tanzania Social Action Fund II (TASAF) | A | 2005 | 9,300,000 | 10 | 90% | WB, IDA |
| Africa | Togo | Public Works with High Labor Intensity | P | 2010 | 4,400,000 | — | 100% | WB |
| Africa | Uganda | Northern Uganda Social Action Fund 2 | A | 2009 | 5,000,000 | — | 100% | WB |
| Africa | Comoros | Community Development Support Fund (FADC in French) | A | 2010 | 809,000 | — | 100 | IDA |
| Africa | Zimbabwe | Public Works Program | A | — | — | — | 100 | — |
| E. Asia & Pacific | Cambodia | Emergency Food Assistance Project | A | 2008 | 11,000,000 | 1 | 99 | Asian Development Bank |



*(continued next page)*

**Table A.6** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Annual cost of program (US$)* | *Domestic funds (%)* | *External funds (%)* | *External donors* |
|---|---|---|---|---|---|---|---|---|
| E. Asia & Pacific | Indonesia (1) | National Community Empowerment Program (PNPM Mandiri) | A | 2007 | 1,500,000,000 | 50 | 50 | WB, ADB, IDB, small grants by communities |
| E. Asia & Pacific | Indonesia (2) | Urban Poverty Project | A | 1999 | — | — | — | — |
| E. Asia & Pacific | Lao PDR (1) | Poverty Reduction Fund | A | 2003 | 8,000,000 | 1 | 99 | WB, SDC |
| E. Asia & Pacific | Lao PDR (2) | Protracted Relief and Recovery Operation and Emergency Operations | A | 2000 | 4,000,000 | 1 | 99 | WFP, funds from Australia, China, CERF, Community Chest of Korea, EC, Germany, Japan Association for the UN WFP, RedR (Australia), USA, Ireland, Netherlands, Saudi Arabia |
| E. Asia & Pacific | Lao PDR (3) | Rural Roads Program | A | 2000 | 5,000,000 | 50 | 50 | WB, SIDA, ADB, KfW, WFP, PRF, AusAID |
| E. Asia & Pacific | Solomon Islands | Rapid Employment Program | P | 2010 | 720,000 | — | 100 | WB grants, AusAID |
| Eur. & Cent. Asia | Armenia | Paid Public Works | A | 2004 | 1,795,000 | 100 | — | — |
| Eur. & Cent. Asia | Kosovo | Kosovo Public Works Program | P | 2010 | 2,900,000 | — | 100 | WB |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Eur. & Cent. Asia | Latvia | Workplaces with Stipend emergency Public Works Program (WWS) | A | 2009 | 70,200,000 | 53 | 47 | European Social Fund |
| Eur. & Cent. Asia | Macedonia, FYR | Organizing Public Works | C | 2009 | 4,770,416 | 100 | — | — |
| Eur. & Cent. Asia | Moldova | Moldova Social Investment Fund (MSIF) | A | 1998 | 12,000,000 | 3 | 97 | IDA, USAID, KfW, DFID, SIDA, EU, JSDF, the Dutch Government, UNICEF |
| Eur. & Cent. Asia | Uzbekistan | Public Works Employment Program | A | — | — | 75 | 25 | Private funds (enterprises, businesspeople, farmers) |
| L. Amer. & the Caribbean | Argentina | Trabajadores Constructores | A | 2007 | 35,800,000 | — | — | WB |
| L. Amer. & the Caribbean | El Salvador | Program for Temporary Income Support (PATI in Spanish) | A | 2009 | 650,000 | — | — | WB (this cost is only for pilot) |
| L. Amer. & the Caribbean | Grenada | Debushing Program | A | — | 1,200,000 | — | — | — |
| L. Amer. & the Caribbean | Haiti (1) | National Project of Community Participation Development (PRODEP in French) | A | 2005 | 10,000,000 | 10 | 90 | WB |
| L. Amer. & the Caribbean | Haiti (2) | Regional Transportation and Development Project | A | 2008 | 8,000,000 | 5 | 95 | WB |
| Mid. East & N. Africa | Djibouti | Social Assistance Pilot Program on Labor and Human Capital | P | 2010 | 3,640,000 | — | 100 | Japan Social Development Fund |

*(continued next page)*

**Table A.6** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Annual cost of program (US$)* | *Domestic funds (%)* | *External funds (%)* | *External donors* |
|---|---|---|---|---|---|---|---|---|
| Mid. East & N. Africa | Yemen, Rep. (1) | Public Works Program -Yemen | A | 1996 | 61,200,000 | 10 | 90 | IDA, Arab Fund, OPEC Fund, Saudi Fund, Governments of USA, Netherlands, Oman, EU |
| Mid. East & N. Africa | Yemen, Rep. (2) | Labor Intensive Works (LIW) Program - Social Fund for Development | A | 2008 | 50,000,000 | 50 | 50 | WB, EU, DFID |
| S. Asia | Bangladesh (1) | Employment Generation Program for Hardcore Poor | C | — | 104,571,427 | 100 | — | — |
| S. Asia | Bangladesh (2) | 100 Days Employment Generation Program | C | 2008-2009 | 285,700,000 | 100 | — | — |
| S. Asia | Nepal | Rural Community Infrastructure Works (RCIW) Program | A | 1995 | 20,370,000 | 8 | 92 | WB |
| S. Asia | Sri Lanka | Emergency Northern Recovery Project (ENReP) | A | 2009 | 12,000,000 | — | 100 | WB |

***Source:*** Social Protection South-South Learning Forum. 2010. Making Public Works Work; data available at http://go.worldbank.org/W9MSDVUSA0.
***Note:*** World Regions: Africa, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia. — = not available.

**Table A.7 Monitoring and Evaluation**

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Frequency of data collection* | *Data collection instruments* | *Evaluation conducted* | *Type of evaluation* | *Year of evaluation* |
|---|---|---|---|---|---|---|---|---|---|
| Africa | Burkina Faso | Food Security Support Program | A | 2009 | Monthly | Reports | Planned | Process, targeting efficiency, impact | 2010 |
| Africa | Cameroon | Agricultural Competitiveness Strengthening Project | A | 2010 | Weekly, every 6 months, annual | Reports | Planned | Process | — |
| Africa | Cote d'Ivoire | Post-Conflict Assistance Project: Labor-Intensive Public Work Sub-Component | A | 2009 | Monthly | — | Planned | Process, impact | 2010 |
| Africa | Congo, Dem. Rep. | Social Emergency Action Program (PASU in French) | A | 2005 | Annual | — | Yes | Process, impact | 2008 |
| Africa | Ethiopia (1) | Productive Safety Net Program (PSNP) | A | 2005 | — | Surveys, reports | Yes | Impact | 2009 |
| Africa | Ethiopia (2) | Ethiopian Protection of Basic Services (PBS) | A | 2008 | Quarterly | Reports | Yes | Process | 2010 |
| Africa | Ghana (1) | Community Based Rural Development (CBEDP) | A | 2004 | — | — | Yes | Beneficiary assessment | 2006 |
| Africa | Ghana (2) | Ghana Social Opportunity Project (SOP) | P | 2010 | — | — | Yes | Beneficiary assessment | 2006 |
| Africa | Kenya | Kazi Kwa Viajana Program (KKVP) | A | 2009 | Monthly | Head count | No | — | — |
| Africa | Liberia (1) | Cash for Work Temporary Employment Project (CfWTEP) | A | 2008 | Monthly | Focus groups, interviews | Yes | Process, targeting efficiency, impact | 2009 |



*(continued next page)*

**Table A.7** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Frequency of data collection* | *Data collection instruments* | *Evaluation conducted* | *Type of evaluation* | *Year of evaluation* |
|---|---|---|---|---|---|---|---|---|---|
| Africa | Liberia (2) | Liberian Emergency Employment Program/ Liberia Employment Action Program | A | 2006 | Periodical | Surveys | Yes | — | — |
| Africa | Madagascar | Emergency Food Security and Reconstruction Project | A | 2009 | Every 6 months | Surveys | Planned | Impact | — |
| Africa | Malawi | Malawi Social Action Fund/Public Works Program | A | 2009 | Quarterly | Reports | Planned | Process, targeting efficiency, impact | 2011–13 |
| Africa | Mali (1) | Agricultural Sector Support Program (PASAM in French) | A | 2008 | Monthly | Surveys | Yes | Audits | — |
| Africa | Mali (2) | Public Works Program | A | 2006 | — | — | Yes | Process | — |
| Africa | Rwanda | Vision 2020 Umurenge Program (VUP) | A | 2008 | Monthly, quarterly, every 6 months | Site visits, reports | Planned | Process, targeting efficiency, impact | 2010, 2012 |
| Africa | South Africa | Expanded Public Works Program | A | 2004 | — | — | Yes | Process, targeting efficiency, impact | — |
| Africa | South Sudan | Capacity Building Institutional and Human Resource Development Project | A | 2007 | Monthly | Monitoring sheets and logs | Yes | Process, impact | 2009, 2010 |
| Africa | Tanzania | Tanzania Social Action Fund II (TASAF) | A | 2005 | Quarterly | Reports | Planned | Impact | 2010 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Africa | Uganda | Northern Uganda Social Action Fund 2 | A | 2009 | Biweekly, quarterly, every 6 months | HH surveys, score cards | Planned | Process, impact | 2010–14 |
| Africa | Comoros | Community Development Support Fund (FADC in French) | A | 2010 | Monthly | — | Planned | Targeting efficiency, impact | 2010 |
| Africa | Zimbabwe | Public Works Program | A | — | Monthly, annual | Reports | — | — | — |
| E. Asia & Pacific | Cambodia | Emergency Food Assistance Project | A | 2008 | — | — | Planned | Process, targeting efficiency, impact | 2010 |
| E. Asia & Pacific | Indonesia (1) | National Community Empowerment Program (PNPM Mandiri) | A | 2007 | Quarterly | Reports | Yes | Impact | 2007 |
| E. Asia & Pacific | Indonesia (2) | Urban Poverty Project | A | 1999 | — | — | — | — | — |
| E. Asia & Pacific | Lao PDR (1) | Poverty Reduction Fund | A | 2003 | Yearly | Surveys | Yes | Process, targeting efficiency, impact | 2008 |
| E. Asia & Pacific | Lao PDR (2) | Protracted Relief and Recovery Operation and Emergency Operations | A | 2000 | Yearly | Program records | Yes | Process, targeting efficiency, impact | 2009 |
| E. Asia & Pacific | Lao PDR (3) | Rural Roads Program | A | 2000 | Yearly | Site visits, reports | Yes | Impact | 2009 |
| E. Asia & Pacific | Papua New Guinea | Public Works Program | P | 2010 | — | — | Planned | — | — |
| E. Asia & Pacific | Solomon Islands | Rapid Employment Program | P | 2010 | Quarterly, biannual | Site visits, surveys, reports | Planned | — | — |
| E. Asia & Pacific | Vietnam | Public Works Program for Poor Unemployed or Underemployed Laborers | P | 2011 | — | — | Planned | — | — |



*(continued next page)*

**Table A.7** *(continued)*

| *Region* | *Country* | *Name of the program* | *Status (active, planned, closed)* | *Year (start, planned, closed)* | *Frequency of data collection* | *Data collection instruments* | *Evaluation conducted* | *Type of evaluation* | *Year of evaluation* |
|---|---|---|---|---|---|---|---|---|---|
| Eur. & Cent. Asia | Armenia | Paid Public Works | A | 2004 | Monthly | Reports | Yes | Process | — |
| Eur. & Cent. Asia | Kosovo | Kosovo Public Works Program | P | 2010 | — | — | Planned | Process, impact | — |
| Eur. & Cent. Asia | Latvia | Workplaces with Stipend emergency Public Works Program (WWS) | A | 2009 | — | — | Planned | Impact | 2010 |
| Eur. & Cent. Asia | Macedonia, FYR | Organizing Public Works | C | 2009 | Monthly | Reports | Yes | Process, targeting efficiency, impact | 2009 |
| Eur. & Cent. Asia | Moldova | Moldova Social Investment Fund (MSIF) | A | 1998 | Permanently | Surveys, reports | Yes | Process, targeting efficiency, impact | — |
| Eur. & Cent. Asia | Uzbekistan | Public Works Employment Program | A | — | Weekly | Surveys, reports | Yes | Process, targeting efficiency | — |
| L. Amer. & the Caribbean | Argentina | Trabajadores Constructores | A | 2007 | Periodical | Surveys, reports | Yes | Process | 2009 |
| L. Amer. & the Caribbean | El Salvador | Program for Temporary Income Support (PATI in Spanish) | A | 2009 | Monthly and every 6 months | Interviews, reports | Yes | Process, impact and beneficiary assessment | 2010–12 |
| L. Amer. & the Caribbean | Grenada | Debushing Program | A | — | Weekly | Site visits, reports | No | — | — |
| L. Amer. & the Caribbean | Haiti (1) | National Project of Community Participation Development (PRODEP in French) | A | 2005 | Every 3 months | Audits, reports | Yes | Process, impact | — |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| L. Amer. & the Caribbean | Haiti (2) | Regional Transportation and Development Project | A | 2008 | Monthly | Reports | Planned | Impact | 2011 |
| Mid. East & N. Africa | Djibouti | Social Assistance Pilot Program on Labor and Human Capital | P | 2010 | — | — | Planned | Process, impact | — |
| Mid. East & N. Africa | Yemen, Rep. (1) | Public Works Program—Yemen | A | 1996 | Biweekly | Site visits, surveys, reports | — | — | — |
| Mid. East & N. Africa | Yemen, Rep. (2) | Labor Intensive Works (LIW) Program—Social Fund for Development | A | 2008 | Monthly | Focus groups, surveys | Yes | Targeting efficiency, impact | 2009 |
| S. Asia | Bangladesh (1) | Employment Generation Program for Hardcore Poor | C | — | Weekly | Surveys, interviews, FGG | Planned | Process, impact | — |
| S. Asia | Bangladesh (2) | 100 Days Employment Generation Program | C | 2008–09 | — | — | Yes | Impact | 2008–09 |
| S. Asia | Nepal | Rural Community Infrastructure Works (RCIW) Program | A | 1995 | — | — | Planned | Impact | — |
| S. Asia | Sri Lanka | Emergency Northern Recovery Project (ENReP) | A | 2009 | — | — | Planned | Impact | — |

***Source:*** Social Protection South-South Learning Forum. 2010. Making Public Works Work; data available at http://go.worldbank.org/W9MSDVUSA0.
***Note:*** World Regions: Africa, East Asia and Pacific, Europe and Central Asia, Latin America and the Caribbean, Middle East and North Africa, South Asia. — = not available.

## Note

1. Full information and background materials, including country surveys, are available at http://go.worldbank.org/W9MSDVUSA0.

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del Ninno, Carlo, Kalanidhi Subbarao, and Annamaria Milazzo. 2009. "How to Make Public Works Work: A Review of the Experiences." Social Protection Discussion Paper 0905, World Bank, Washington, DC.

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APPENDIX B

# Types of Projects Implemented under Public Works

Chapter 4 explained the types of labor-intensive projects implemented under public works. The table below develops an extensive list of projects that are executed by existing programs which can be grouped as follows:

**Type of Projects Implemented under Public Works**

| *Area of works* | *Activities* |
|---|---|
| Economic infrastructure | |
| Road sector | – Rehabilitation/maintenance of rural and urban roads<br>– Construction and maintenance of feeder roads and trails (e.g., pavement, slurry treatments)<br>– Road clearance and grass maintenance<br>– Road markings and erection of road signs<br>– Rock breaking for roads<br>– Building/maintenance of pedestrian bridges<br>– Building/maintenance of culverts, drifts, fences, and retaining walls<br>– Stock routes<br>– Building bus stops, sidewalk ramps, and steps<br>– Cleaning existing road infrastructure |

*(continued next page)*

**Type of Projects Implemented under Public Works** *(continued)*

| *Area of works* | *Activities* |
|---|---|
| Marketplace | – Rehabilitation/construction of public marketplaces<br>– Pavement of market yards<br>– Building storage facilities, access roads and parking lots<br>– Planting trees for shade<br>– Installing latrines and waste disposal pits<br>– Making higher base for helipads, market yards and animal/livestock marketplaces |
| Gas and electricity | – Installation of electricity cables<br>– Excavation of trenches for reticulation of all voltages<br>– Erection of poles for overhead lines<br>– Construction/maintenance of gas network systems |
| Irrigation systems/other productive infrastructure | – Rehabilitation/improvement of small-scale surface irrigation schemes<br>– Digging and protection of irrigation canals and drains<br>– Construction of small water retaining structures (e.g., water pans, earth dams, reservoirs) for irrigation, fish harvesting and livestock watering |
| Sanitary infrastructure | |
| Drinking water | – Construction and maintenance of:<br>◦ Community water supply networks<br>◦ Shallow wells (including hand-operated pumps and accessories)<br>◦ Small dams<br>◦ Ponds and other water harvesting structures, dug-outs<br>◦ Drainage and canals<br>– Extension of water distribution schemes<br>– Stream diversion<br>– Spring development and protection |
| Storm water | – Construction and maintenance of:<br>◦ Gabions and reno mattresses<br>◦ Grassed or lined water channels<br>◦ Drainage systems<br>◦ Infiltration pits<br>– Installation of pipes and arches |
| Wastewater and solid waste | – Construction/rehabilitation/maintenance of:<br>◦ Sewerage networks<br>◦ Sewer manholes and manhole covers<br>◦ Maturation or flocculation ponds<br>◦ Waste disposal pits<br>◦ Humid or dry latrines |

**Type of Projects Implemented under Public Works** *(continued)*

| *Area of works* | *Activities* |
|---|---|
| | – Garbage collection in poor urban areas<br>– Preparation of intermediate and main dumping sites<br>– Raising awareness about sanitation through educational programs. |
| Social infrastructure | |
| | – Construction/rehabilitation/maintenance of:<br>◦ School classrooms and training facilities<br>◦ Community clinics, health centers<br>◦ Social services facilities<br>◦ Childcare centers<br>◦ Nursing homes<br>◦ Community centers and libraries<br>◦ Recreational facilities (theaters, parks, playfields)<br>◦ Public showers, restrooms or latrines<br>◦ Housing for low income and vulnerable groups<br>– Manufacturing of masonry elements and roof trusses on site<br>– Painting of public buildings and street walls<br>– Street sweeping<br>– Running child care centers |
| Environmental/ agricultural projects | |
| Soil and water conservation projects | – Construction of terraces and small weirs to increase infiltration of run-off<br>– Afforestation<br>– Setting up tree nurseries, community woodlots and fire lines<br>– Gully protection using dry masonry or gabion structures<br>– Flood control structures such as bank protection dikes, gully dams, and bund walls<br>– Drainage of waterlogged areas<br>– Renovation of traditional water bodies, including de-silting of tanks<br>– Reclaiming water bodies (e.g., removal of hyacinth) |
| Land productivity/ availability and soil fertility restoration | – Area closures/wood lots<br>– Multi-layered/storied agro-forestry<br>– Physical conservation measures (e.g., hill side terracing)<br>– Micro-niche development<br>– Harmful tree removal<br>– Biological measures<br>– Debris removal/bush brushing<br>– Land reclamation of extremely degraded land<br>– Gully control<br>– Compost heap/organic manure for cultivated land |

*(continued next page)*

**Type of Projects Implemented under Public Works** *(continued)*

| *Area of works* | *Activities* |
|---|---|
| Fodder availability | – Vegetative fencing and fodder belts<br>– Conservation measures<br>– Fodder seed collection<br>– Paddock systems<br>– Water logging control<br>– Multipurpose nurseries |

***Source:*** Kalanidhi Subbarao, Carlo del Ninno, Colin Andrews, and Claudia Rodríguez-Alas. 2010. *The Design and Implementation of Public Works Programs: A Toolkit for Practitioners*. Washington, DC: World Bank.

APPENDIX C

# Environmental Assessments: Illustrations from Select Countries

This appendix illustrates how environmental assessments are carried out in Rwanda's Vision 2020 Umurengue Program and Ethiopia's PSNP.

## Rwanda: Public Works Environmental Assessment

Vision 2020 Umurenge Programme's (VUP) public works projects are monitored carefully to ensure that there are no adverse environmental impacts. Rwanda has a very clear and robust regulatory framework regarding environmental impact, and VUP strictly follows these regulations as stated in the Program Implementation Manual:

> Each District will cause to be forwarded a project brief to the Rwanda Environmental Management Authority (REMA). The project Brief shall be in accordance with the General Environmental Impact Assessment Guidelines of 2006 and shall include:
> 1. Name, title and address of developer.
> 2. Name, purpose, objectives and nature of project, including attributes such as size of project, products and inputs, sources of inputs, etc.
> 3. Description of the proposed project site and its surroundings and alternative sites, if any, where the project is to be located.

4. Description of how the proposed project and its location conform to existing laws, regulations and policies governing such project and the use of the site/area proposed for its location.
5. Any likely environmental impacts that may arise due to implementing various phases/stages of the project and proposed mitigation measures thereto.
6. Description of any other alternatives, which are being considered (e.g., siting, technology, construction and operation procedures, sources of raw materials, handling of wastes etc., decommissioning/closure and site restoration).
7. Any other information that may be useful in determining the level of Environmental Impact assessment (EIA) required.

REMA will assess the brief, and, in accordance with the guidelines, shall undertake a screening. This will determine whether or not a full EIA is necessary. In the event of the impact on the environment of any proposal being unacceptable the District shall either effect its cancellation or take remedial action as necessary. National standards will be followed based on the nature of the projects. Sectoral Ministries reserve the right to monitor and inspect any ongoing works to ensure adherence to these standards (VUP program implementation manual, 2009).

## Ethiopia: PSNP's Environmental and Social Management Framework

PSNP established an Environmental and Social Management Framework (ESMF) that requires that all public works projects are developed by a participatory community-based watershed planning and development process, in which environmental issues are integrated.

Since the projects are small, numerous, dispersed, community-based, and not known before the program gets underway, it is in most cases both unrealistic and unnecessary to execute full project Environmental Impact Assessment (EIA). Instead, the ESMF provides for the majority of public works projects to have standard environmental mitigating measures incorporated into the technical design at DA or *woreda* level, following the Ministry of Agriculture and Rural Development (MoARD) Community Based Participatory Watershed Management Guidelines. Only a minority of projects, deemed to be of environmental concern, will be earmarked for special attention, which may include EIA.

The ESMF specifies a simple procedure for ensuring that projects follow the guidelines required, and are brought to the attention of the Regional Environmental Authority (REPA) if necessary. The procedure, which is set out in the ESMF Operational Summary, may be summarized as follows:

- The Development Agent (DA) checks each sub-project as it is selected to ensure that it is not within internationally disputed territory, does not incorporate a dam exceeding 15 meter in height and will not lead to physical relocation of residents or involuntary loss of assets or access to assets.
- The DA, with the support of the *woreda* NR & Environmental Team, screens the project on the basis of established criteria, to identify whether it is likely to have significant negative environmental impacts. If so, then the project is redesigned to the extent possible, to avoid the negative impacts. If such re-design is not possible, the project is earmarked for attention by the Regional Environmental Authority (REPA), or equivalent office.
- For such cases, the REPA examines the project details and decides whether or not an EIA is required, and if so, the scope of the EIA.
- The *woreda* NR & Environmental Team arranges the conduct of the EIA, which is then forwarded to the REPA for a final decision on the project. Every effort will be made to suggest ways in which the project will be able to proceed, modified if necessary. Disapproval of a project would occur only as a last resort (PSNP Program Implementation Manual, 2006)

*Source:* Kalanidhi Subbarao, Carlo del Ninno, Colin Andrews, and Claudia Rodríguez-Alas. 2010. *The Design and Implementation of Public Works Programs: A Toolkit for Practitioners*. Washington, DC: World Bank.

APPENDIX D

# Public Works Plus: Illustrations from Different Countries

Some countries have adapted their programs to include some element of graduation from public works participation into possibilities for longer term regular income generation programs. This appendix provides some examples of such initiatives. It is worth noting that information (based on structured evaluations) on whether or not these initiatives have actually resulted in graduation of some households is as yet unavailable.

## Examples of Graduation Strategies in Public Works Programs

### *Ethiopia—The Productive Safety Nets Program (PSNP) 2004 to Present—Graduation Through Linking to Intermediate Services*

According to PSNP's program implementation manual a household graduates from the program when it can meet its food needs for all 12 months and is able to withstand modest shocks without PSNP transfers. To achieve this goal PSNP is complemented with the Household Asset Building Program (HSBP). While the PSNP aims to reduce household vulnerability by ensuring food consumption and protecting household assets, the HABP strategy is (i) to increase access to microfinance, in a manner that is tailored to the interests and capacities of households (poorer households get smaller loans; successive loans are progressively

larger); (ii) strengthen the agricultural extension system to provide better technical and business advice to households to enable them to devise 'business plans' that will guide their investments and yield a positive result. Added to this are activities to improve input sources, marketing, supporting off-farm activities, etc.

Therefore, the objective is to stabilize chronically food-insecure households through PSNP transfers, and help them improve their economic base by providing additional services, financial literacy and access to credit through the HABP. These two interventions combined are expected to help households graduate from PSNP and food security.

### *Argentina—Head of Households Program (Jefes de Hogar) 2002–09—Graduation from Public Works to Self-Employment or CCT*

During the economic crisis in 2002, the Argentinean government initiated the Heads of Household Program (Jefes de Hogar), which transferred cash to unemployed beneficiaries heads of households with pregnant women, children or handicapped, conditioned on participation mainly in workfare but also in other training/education activities.

With the normalization of the overall economic and social situation, the Government decided to reorient the Jefes Program from its original emergency nature towards a medium-long-term role in Argentina's social protection system. The strategy was to distinguish amongst the Program beneficiaries those who had higher re-employment opportunities from those that required a different type of longer-term safety net, linked to building human capital for children. The strategy aimed to support and test several approaches to raise beneficiaries' employment prospects, and to facilitate the transfer of other participants to another social safety net.

For the Jefes beneficiaries with re-employment opportunities, links with employment were explored through the installation and strengthening of municipal employment services and activities such as school completion and the combination of training with transient employment projects.

### *South Africa—Expanded Public Works Program (EPWP) 2004 to Present—Graduation Through Training and Labor Activation*

In 2002, the Minister of Labor issued the Code of Good Practice for Special Public Works Programmes. This Code guides the EPWP and provides for a training entitlement of at least 2 days per month of services for

workers in the program. Therefore all workers are provided with skill training and education that aims to increase the ability of participants to find employment once they exit the program. The type of training includes literacy and numeracy, vocational skills, and business skills.

### *Rwanda—Vision 2020 Umurenge Programme (VUP) 2008 to Present—Graduation Through Financial Inclusion and Training*

Beneficiaries under VUP are encouraged to save a small part of their wage. Bank accounts are opened in the name of each beneficiary and wages are deposited weekly into their account, with the objective to allow them to save if they wish.

### *Kenya—Kazi KwaVijana Programme (KKV) 2009 to Present—Graduation Though Training and Labor Activation*

The main objectives of KKV are to increase access to youth-targeted temporary employment program and to improve youth employability. To achieve these goals the KKV includes skill development through modular and on- the-job training as well as work attachments in the private sector. Youth who have worked on KKV projects and who meet the entry requirements are encouraged to apply for the training and internship component.

*Source:* Kalanidhi Subbarao, Carlo del Ninno, Colin Andrews, and Claudia Rodríguez-Alas. 2010. *The Design and Implementation of Public Works Programs: A Toolkit for Practitioners*. Washington, DC: World Bank.

APPENDIX E

# Mixed Delivery Systems

Public works programs have been implemented adopting diverse delivery models that differ with respect to who finances, who designs and who actually implements. The traditional model is when government finances, designs and implements as explained in chapter 5. However, a number of alternatives to this traditional model have emerged. These are discussed below.

## Government Funded Program

### *Alternative Model 1: Implementation by Social Funds and Communities*

Figure E.1 illustrates a PW programs managed as a component of a Social Fund in which communities take the lead in program implementation.

### *Alternative Model 2: Implementation by Local Elected Officials*

As described in figure E.2, PW programs can also be implemented by local committees formed by community elected leaders (e.g., village councils).

**Figure E.1 PW Delivered by a Social Fund**

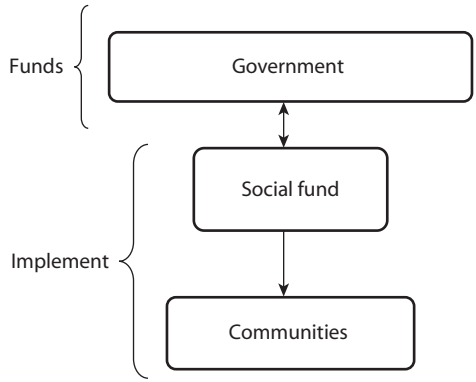
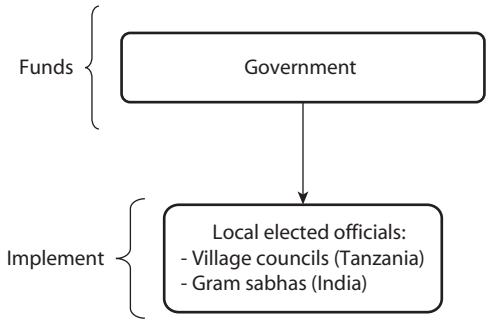



**Figure E.2 PW Delivered by Elected Officials**




### *Mixed Model 1: Implementation by Governments, NGOs, Private Sector and Community Organizations*

In some countries, governments still implement most of the projects but outsource the ones with more complexity. The figure below, provides an example of implementation arrangements between governments, NGOs and private sector.

## Government and Donors Funded Program

There are other schemes where donors co-finance Public Works as well as the implementing agencies. In Argentina's Trabajar III for example,

**Figure E.3 PW Delivered by Government and Implementing Partners**

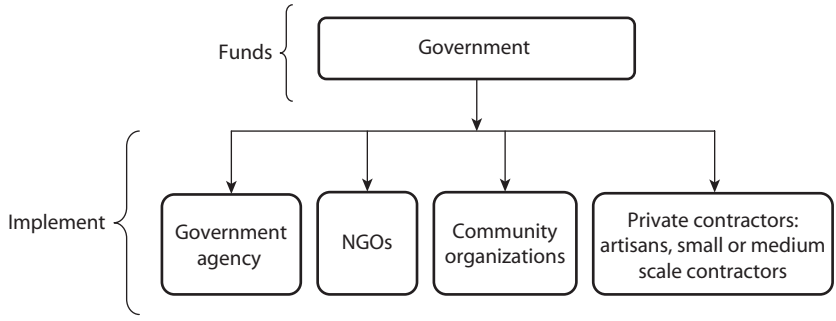
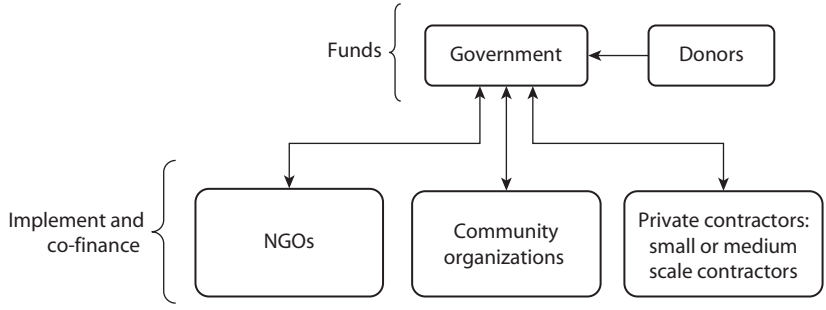



**Figure E.4 PW Funded and Delivered by Government and Implementing Partners**




NGO's, community organizations and small contractors submitted project proposals to the government and if approved they committed to finance a percentage of the total cost. The implemented organizations could apply for funding from other donors or government programs to be able to co-finance the works.

APPENDIX F

# Sample M&E Indicators for Typical Public Works Program

This appendix provides a list of selected input, output and outcome indicators commonly used for public works programs.

***Input indicators***

- Institutional arrangements (financing, implementing agencies)
- Budget allocation for salaries, intermediate inputs, and administration
- Amount of food available in the budget (food-for-work projects)
- Number of program staff by level

***Output indicators***

- *Projects*
  - Number of workfare projects and financial allocation by type (for example, with and without financing of materials) and by province or region
  - Project specific
    - Description—Including community involvement and targeting method
    - Actual kilometers of water or sewer lines or roads maintained or built

    - Cost of managerial staff (number of people and wage rate)
    - Cost of nonlabor inputs
    - Wages paid to (skilled and unskilled) workers (per day, per month, by province, and overall)
    - Amount of food distributed as wages (for food-for-work projects)

- *Asset maintenance information: who, how frequently?*
- *Beneficiaries*
    - Number of workers participating in the program
    - Number of days, wage received, months when worked
    - Total number of beneficiaries employed in each activity
    - Key characteristics of beneficiaries: gender, age, previous economic activity, education level, number of children, previous participation in an employment or training program, household income, confirmation of education and health certificates
    - Actual number of unemployed people who received the minimum wage

***Intermediate outcome indicators***

- *Projects*
    - Location of projects in poor areas (correlation of number of projects and total expenditures with the incidence of poverty, number of unemployed poor, and so on within the country and within provinces)
    - Quality of projects completed
    - Utilization by poor communities in the selection of infrastructure built, expanded, or rehabilitated under the program

- *Beneficiaries*
    - Number of low-income workers employed in the project (total target, gender-specific target)
    - Beneficiaries transaction costs
    - Beneficiaries experiencing payment delays as a percentage of total beneficiaries

***Outcome indicators***

- Increase in net annual earnings of the average individual beneficiary
- Number of program beneficiaries who transitioned from workfare to formal sector employment

- If the objective is to fight seasonal hunger: percentage of beneficiaries whose diet improved
- Increase in second-round effects resulting from projects, for example, the number of people accessing roads or other infrastructure built or maintained

***Process and efficiency indicators***

- *Projects*
  - Average time taken to select viable projects (in calendar days)
  - Number of projects appraised and evaluated per month (overall and by province)
  - Number of projects evaluated as a percentage of total projects per month (overall and by province)
  - Number of projects supervised per supervisor per month
  - Number of supervision visits per project per month (overall and by province)
  - Average number of supervision visits per project during project execution (overall and by province)
  - Number of workfare activities executed by province (with and without financing of materials)
  - Number of supervision visits to training courses and basic education courses
  - Percentage of projects located in poor areas (quintiles 1 and 2) (target = 100 percent)
  - Wages paid as a percentage of the contract amount
  - Average cost (and range) per project category
  - Average share of labor cost (and range) per project category
  - Average share of the cost for wages in food (for food-for-work projects)

- *Additional related objectives (such as community involvement)*
  - Percentage of projects with participation by nongovernmental organizations, civil society organizations, and so on (overall and by province)
  - Percentage of projects sponsored by nongovernmental organizations, municipalities, and the like (overall and by province)

- *Jobs*
  - Jobs provided per estimated target population (overall and by province)

  - Poor (bottom quintile) workers as a percentage of public works laborers

- *Administration*
  - Amount spent as a percentage of the amount allocated by province
  - Efficiency of employment program (value of salaries received by workers as a percentage of total government cost of program)
  - Labor intensity of projects
  - Unit cost, for example, by kilometer of road built
  - Average cost per beneficiary by project type

*Source:* Adapted from Margaret Grosh, Carlo del Ninno, Emil Tesliuc, and Azedine Ouerghi. 2008. *For Protection and Promotion: The Design and Implementation of Effective Safety Nets.* World Bank, Washington, DC.

APPENDIX G

# Outcome and Output Indicators for the PSNP Public Works Component in Ethiopia

The table below illustrates the outcome and output indicators of Ethiopia's PSNP which are key to monitoring and evaluation of program impact.

| *Objective* | *Indicators* |
|---|---|
| **IMPACT** | |
| One million chronically food insecure households and 2 million vulnerable households attain food security within 3–5 years | • Percentage of households with no food gap, that is, they have sufficient food to meet their needs for all 12 months of the year, including support provided by the program<br>• Percentage of households in need of food assistance over a 3 year moving average |
| **OUTCOMES** | |
| Chronically food-insecure households have ensured food consumption during the program period | • Percentage of program beneficiaries who report 12 months of food access from all sources including the program<br>• Average number of months of household food shortages covered by the program |
| Household assets protected (households' short-term vulnerability to shocks reduce) | • Percentage of the average change in asset levels of chronically food-insecure households<br>• Percentage of household reporting distress sales of assets<br>• Percentage of household reporting consumption of seed stocks |

*(continued next page)*

**Table** *(continued)*

| *Objective* | *Indicators* |
|---|---|
| Community assets used productively and managed in a sustainable manner | • Percentage of household reporting satisfaction or direct benefits from the community assets developed<br>• Percentage of household regularly using three or more community assets developed by the program.<br>• Percentage of public works for which an ongoing management mechanism has been established |
| Markets stimulated through the shift from food to cash | • Percentage change in the number of traders/retailers in local markets<br>• Percentage change in the volume of grain trade<br>• Diversity of goods available in local markets |
| **OUTPUTS** | |
| *Public Works* | |
| Appropriate payments (food and/or cash) delivered to targeted beneficiaries in a timely and predictable manner | • Percentage of participants receiving food and/or cash resources per month versus the planned number supposed to receive food and/or cash<br>• Percentage of food and/or cash delivered per month versus the amount that was planned to have been delivered<br>• Percentage of districts completing 70% of distributions by end July |
| Targeting undertaken according to established procedures | • Percentage of community members who understand targeting criteria |
| *Community Assets* | |
| Appropriate and good quality public works constructed | • Number of public works constructed, including kilometers of reads constructed or maintained per targeted district<br>• Number of structures constructed per targeted district (health posts, classrooms, grain stores, market structures, latrines<br>• Percentages of public works that conform to established standards |
| Soil conservation measures promoted and/or installed; degraded areas rehabilitated | • Hectares of degraded cropland and rangeland rehabilitated<br>• Hectares covered by soil and water conservation measures<br>• Number of tree seedlings planted<br>• Number of communities participating in training and/or environmental rehabilitation |
| Small-scale irrigation and water harvesting developed, improved, or established | • Hectares of agricultural and pasture land reclaimed per targeted district<br>• Number of irrigation and water harvesting schemes developed per district<br>• Amount of land cultivated by small-scale irrigation |

*(continued next page)*

**Table** *(continued)*

| *Objective* | *Indicators* |
|---|---|
| HIV/AIDS awareness campaign | • Number of households receiving HIV/AIDS awareness training |
| Management systems for community assets established | • Percentage of communities with guidelines or bylaws developed for the management and protection of community assets<br>• Number of visits to sites by a technical task force team per district per year<br>• Percentage of local, district, and regional monitoring reports on actual versus planned activities delivered on time<br>• Percentage of district where the M&E plan is fully understood and implemented |
| *Direct Support* | |
| Appropriate food and/or cash assistance provided accurately to targeted beneficiaries in a timely manner | • Percentage of participants receiving food and/or cash resources per month versus the planned number supposed to receive food and/or cash<br>• Percentage of food and/or cash delivered per month versus the amount that was planned to have been delivered<br>• Percentage of districts completing 70% of distributions by end July |

***Source:*** Food Security Coordination Bureau (2004), as cited in Margaret Grosh, Carlo del Ninno, Emil Tesliuc, and Azedine Ouerghi. 2008. *For Protection and Promotion: The Design and Implementation of Effective Safety Nets*. World Bank, Washington, DC.).

APPENDIX H

# Institutional Responsibilities for Monitoring and Evaluation: Illustration from Ghana

As explained in chapter 7, the implementation of an M&E system requires well-defined institutional responsibilities. This appendix illustrates how the assignment of institutional roles is done in Ghana's Social Opportunity Project.

**Ghana: M&E Roles and Responsibilities**

| *Levels* | *Responsibilities* | *Performance indicators* |
|---|---|---|
| Communities (local) | Form a seven member Community Implementation Management Committee (IMC) | Community Implementation Committee in place and functional |
| | Provide information to stakeholders | Stakeholders are regularly informed |
| | Organise and participate in community fora | No. of community for an organized in the community |
| | Conduct on the spot checks every 2 days | No. of on the spot checks conducted |
| | Participate in capacity building programmes such as social accountability and community score cards | No. of training programmes participated in |
| | Inform the area council/district assembly on the progress of the project | Area councils and assemblies informed regularly |
| | Participate in impact and beneficiary assessment and other M&E related studies on the project | Communities involved in impact assessment |
| Area council | Form a five member AC IMC in cases where the project cuts across more than one community, membership shall include Assembly Members of the communities involved | IMC in place and functioning |
| | Organise on-the-spot checks weekly | No. of on-the-spot checks organized |
| | Designate two AC members for M&E | |
| | Participate in capacity building programmes such as social accountability and M&E training | No. of capacity building programmes organized for ACs |
| | Inform the district assembly on the progress of the project | DAs informed regularly |
| | Participate in impact and beneficiary assessment and other M&E related studies on the project | ACs involved in impact studies |
| District assembly | Form an IMC | IMC formed and functioning at DAs |
| | Organise IMC meetings quarterly | IMC meets regularly |
| | Organise on-the-spot checks biweekly | No. of on-the-spot checks organized. |
| | Designate the secretary of the DPCU (DPO) as the focal person for M&E | M&E focal person available and active |
| | Participate in capacity building programmes such as Social Accountability and M&E training | No. of capacity building programmes and M&E training for DAs |

| | | |
|---|---|---|
| | Keep a data bank on the project and provide information of the project to all stakeholders | Databank available and functioning |
| | Submit quarterly report on the progress of the project to all stakeholders | No. of quarterly reports submitted |
| | Participate in impact and beneficiary assessment and other M&E related studies on the project | DAs involved in impact study |
| Regional | Organise on-the-spot checks monthly | No. of on-the-spot checks organized |
| | Secretary to the RPCU (RPO) shall be the focal person for M&E | Focal person available and active |
| | Facilitate M&E related capacity building programmes for communities, ACs and DAs such as social accountability, score cards and M&E training | No. of training held and organized |
| | Keep a data bank on the project and provide information to all stakeholders at the regional level | Databank available and working |
| | Submit semi-annual reports on progress of the project to all stakeholders at the regional level | No. semi-annual reports submitted |
| | Facilitate impact and beneficiary assessments and other M&E related studies on the project | RPCU involved in impact study. |
| National | Organise NPSC meetings quarterly | No. of NPSC meetings held |
| | Organise on-the-spot checks quarterly | No. of on-the-spot checks held |
| | PBMED of MLGRD/PBMED of NCO as the focal persons for M&E | Focal person available |
| | Participate in capacity building programmes such as Social Accountability and M&E training | No. of training held/organized |
| | Keep a data bank on the project and provide information of the project to all stakeholders | National databank available and effective |
| | Submit quarterly report on the progress of the project to all stakeholders | No. of quarterly reports submitted |
| | Recruit an M&E consultant to design an M&E system which should be mainstream | M&E consultant recruited and M&E system in place |
| | Generate and provide quarterly feedback to the local level | No. of feedback on the project to RCC, DA, ACs and communities |

***Sources:*** Government of Ghana. 2010. *Ghana Social Opportunities Project (GSOP). Project Implementation Manual*. Vol I: General. Accra: Government of Ghana; Kalanidhi Subbarao, Carlo del Ninno, Colin Andrews, and Claudia Rodríguez-Alas. 2010. *The Design and Implementation of Public Works Programs: A Toolkit for Practitioners*. World Bank, Washington, DC.

APPENDIX I

# Summary of Key Findings from Main Impact Evaluations of Ethiopia's Productive Safety Net Program

This appendix provides a summary table of the main evaluations conducted for Ethiopia's PSNP. A more detailed explanation on key findings is included in chapter 12.

| *Evaluation* | *Focus and key findings* | *Methodology* |
|---|---|---|
| Guush Berhane, John Hoddinott, Neha Kumar, Alemayehu Seyoum Taffesse, *The Impact of Ethiopia's Productive Safety Nets and Household Asset Building Programme: 2006–2010* (Washington, DC: International Food Policy Research Institute, 2011). | *Impacts on food security, asset accumulation, and agricultural production*<br>A. For households that have received 5 years of PSNP payments, results are:<br>• The PSNP has improved food security by 1.05 months. This impact is statistically significant.<br>• There is an improvement in food security in all regions, and these are statistically significant.<br>• There is a statistically significant increase of 0.15 children's meals consumed during the lean season between 2006 and 2010. This increase is largest in Oromiya where it rises by 0.23 meals.<br>• There is no impact on changing adult meal frequency during the lean season.<br>• Five years participation raises livestock holdings by 0.38 TLU relative to receipt of payments in only 1 year.<br>• There is no evidence that the PSNP crowds out private transfers nor does it reduce the likelihood that participants start nonfarm businesses.<br>B. For households that have received 5 years of joint payments from PSNP and OFSP/HABP, results are:<br>• Relative to having no program benefits, having the PSNP and OFSP/HABP increases foods security by 1.53 months.<br>• For households receiving the PSNP, the OFSP/HABP provides an increase in food security of 0.61 months.<br>• For households receiving the OFSP/HABP, the PSNP increases food security by 1.38 months.<br>• The joint receipt of the PSNP and OFSP/HABP leads to the accumulation of 1.00 TLU more than households that received neither. Households receiving both PSNP and OFSP/HABP accumulated 133 birr more in tools than households that received neither. | *Quantitative methods:*<br>• Longitudinal household survey: three rounds of surveys (2006, 2008, 2010) covering about 3,700 households; data were complemented by a quantitative capacity survey, a quantitative community survey, and a community price survey<br>• Difference-in-differences estimation: The difference between "before" and "after" the program was measured matching households that have received only 1 year of payment with the ones that received more than 2–5 years of payments. The different between "with" and "without" the program was taken using the households that have received only 1 year of payments (they received almost nothing) as the "without the program" group and the households that have received up to 5 years of payments as the "with the program" group. This approach yielded the double-difference estimate of program impact. |

- Conditional on receiving the PSNP for 5 years, households that also had OFSP or HABP assistance produced 147 kg more grain. Households receiving the PSNP and also having access to the OFSP or HABP obtained yields that were 297 kg/ha higher than those households that only received the PSNP.
- Conditional on receipt of the PSNP, access to the OFSP/HABP raises the likelihood of using fertilizer by 19.5 percentage points and the probability of investing in stone terracing by 13 percentage points.
- Having both PSNP payments and OFSP/HABP services raises the likelihood of investing in fencing by 22.6 percentage points relative to households who have neither.
- Conditional on access to the OFSP/HABP, the PSNP raises this likelihood by 16.4 percentage points while conditional on access to the PSNP, access to the OFSP/HABP raises it by 7.9 percentage points.

C. Impact on direct support beneficiaries are:

- Direct support improves food security as measured by the number of months that the household reports that it can meet its food needs. In the few cases where average direct support transfers have been large, this effect is substantial. Increasing average direct support payments from 500 to 2500 birr leads to a 2-month improvement in food security.
- There is no evidence that direct support has disincentive effects. Higher levels of direct support have led to more rapid asset accumulation. There is no evidence that direct support reduces (crowds out) private transfers, and there is some evidence that private transfers are crowded in.

*Qualitative methods:*

- Key informant interviews and focus groups conducted in 2010.

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|---|---|---|
| Sarah Coll-Black, Daniel O. Gilligan, John Hoddinott, Neha Kumar, Alemayehu Seyoum Taffesse, and William Wiseman, "Targeting Food Security Interventions When 'Everyone Is Poor': The Case of Ethiopia's Productive Safety Net Programme," ESSP II Working Paper 24 (Washington, DC: International Food Policy Research Institute/ Ethiopian Development Research Institute, 2011). | *Targeting assessment*<br>• PSNP targets resources to the poorest rural household using a combination of geographic and community-based targeting.<br>• PSNP is well targeted to food-insecure and poor households. PIM guidelines for targeted are followed.<br>• PSNP is well targeted and progressive according to the Coady-Grosh-Hoddinott indictor (CGH). The CGH is 1.69 for the poorest quintile, indicating that PSNP is better targeted than the average international safety net program.<br>• There is also little evidence of elite capture. | *Quantitative methods:*<br>• Longitudinal quantitative survey data (2006 and 2008). |
| Rachel Sabates-Wheeler, and Stephen Devereux, "Cash Transfers and High Food Prices: Explaining Outcomes on Ethiopia's Productive Safety Net Programme," *Food Policy* 35 (4): 274–85. | *Impacts on food security and other outcomes*<br>In the context of unprecedented inflation in Ethiopia, the study finds that food transfers or "cash plus food" packages are superior to cash-only transfers since they enable higher levels of income growth, asset accumulation, and self-reported food security. | *Quantitative methods:*<br>• Two-wave panel survey of program beneficiaries and a nonbeneficiary control group (2006 and 2008).<br>• A growth regression model to compare the impacts of different payment modalities. |

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| Camila Andersson, Alemu Mekonnen, and Jesper Stage, "Impacts of the Productive Safety Net Program in Ethiopia on Livestock and Tree Holdings of Rural Households," *Journal of Development Economics* 94 (2011): 119–26. | *Impact of PSNP on livestock and tree holding*<br>The study found no indication that participation in PSNP leads households to disinvestment in livestock or trees. The number of trees increased for households that participated in the program. The study elaborates on the possible reasons for these results, such as participants acquiring skills in forestry during the program. The fact that tree planting is less labor intensive than other activities or increases in wood prices made tree planting more profitable is also explored. Having a secure income from the program while trees mature would encourage farmers to undertake tree planting | *Quantitative methods:*<br>• Panel data collected in three surveys in 2002, 2006, and 2007 in the Amhara region.<br>• Regression analysis.<br>• Propensity score matching. |
| Daniel Gilligan, John Hoddinott, Neha Kumar, and Alemayehu Seyoum Taffesse, "An Impact Evaluation of Ethiopia's Productive Safety Nets Program" (Washington, DC: International Food Policy Research Institute, 2009). | *Impact*<br>• The program improves food security by 0.40 months and increases growth in livestock holdings by 0.28 Tropical Livestock Units (TLUs).<br>• Program impacts on asset accumulation are greater when higher levels of transfers are received and when participants have access to both the PSNP and the OFSP. On average, households receiving high levels of transfers (defined as more than 900 birr over the first 5 months of 2006, 2007, and 2008) had a 14.3 percent higher growth rate in the value of their livestock holdings.<br>• High levels of transfers and access to the OFSP improved food security between 2006 and 2008 by 0.45 months.<br>• Households receiving more than 900 birr but receiving transfers irregularly save a larger fraction of their transfers in the form of livestock than households receiving the same amount but on a more regular basis. However, households with irregular transfers are more likely to report distress sales.<br>• There is no meaningful evidence that participation in public works employment has a disincentive effect on household labor employed in nonfarm own-business activities, wage employment, or work on the family farm. | *Quantitative methods:*<br>• Panel data collected in 2006 and 2008.<br>• Matching methods. |

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| | | |
|---|---|---|
| Stephen Devereux, Rachel Sabates-Wheeler, Rachel Slater, Mulugeta Tefera, Taylor Brown, and Amdissa Teshome, "Ethiopia's PSNP: 2008 Assessment Report" (Sussex, UK: Sussex University, Institute of Development Studies, 2008). | *Process*<br>• Implementers' and beneficiaries' understanding of PSNP has improved since 2006, thanks to the widespread distribution and translation of manuals.<br>• Targeting has improved. Significant progress was made in terms of implementing full family targeting and unified beneficiary lists and temporarily switching pregnant and lactating women from public works to direct support. A cap on the numbers of days worked in public works was also introduced for families with low labor capacity.<br>• Predictability of transfers: even though some improvement has occurred most beneficiaries remain uncertain about whether and when they will receive their cash or food payments.<br>*Impact*<br>• PSNP transfers are promoting livelihoods, protecting assets against distress sales for food and non-food needs, improving household food security, and raising household incomes. The panel survey analysis found a strong program effect on income growth and on household food security of beneficiaries compared to nonbeneficiaries. PSNP also has other positive effects: parents are more likely to invest in their children's education, and so forth.<br>• Graduation: even though a large number of households in the panel data were "past beneficiaries," very few had graduated in terms of achieving measurable improvements in household well-being. | *Quantitative methods:*<br>• Panel data collected in 2006 and 2008. The fieldwork was conducted to 8 *woredas* in 4 regions. The questionnaire survey was administered to a sample of 960 beneficiary and nonbeneficiary households.<br>*Qualitative methods:*<br>• Key informant interviews, group interviews, focus groups, household case studies, and revision of government documents.<br>Note: the statistical findings reported apply only to the 8 *woredas* surveyed for the assessment. |

| | | |
|---|---|---|
| Daniel Gilligan, John Hoddinott, and Alemayehu SeyoumTaffesse, "The Impact of Ethiopia's Productive Safety Net Programme and Its Linkages," IFPRI Discussion Paper 00839 (Washington, DC: International Food Policy Research Institute, 2008). | *Impact of PSNP on food security*<br>• For households that received at least half of the amount of transfers it should have received, the study finds that PSNP improves two measures of household food security: it reduces the likelihood of a household having a very low caloric intake and it increases mean calorie availability.<br>• For households that received any payment for undertaking work on PSNP-supported public works and also received any component of the OFSP, the study finds that these households are more likely to be food secure, and more likely to borrow for productive purposes, use improved agricultural technologies, and operate nonfarm own business activities. | *Quantitative methods:*<br>• Propensity score matching (PSM) using data from 2006 survey. In PSM a probit model predicts the probability of each household receiving the PSNP as a function of observed household and community characteristics using a sample of PSNP beneficiaries and nonbeneficiaries. |
| Stephen Devereux, Rachel Sabates-Wheeler, Mulugeta Tefera, and Hailemichael Taye, "Ethiopia's Productive Safety Net Programme—Trends in PSNP Transfers within Targeted Households: Final Report" (Sussex, UK: Sussex University, Institute of Development Studies, 2006). | *Targeting assessment and impact*<br>• PSNP is well targeted. Households that receive direct support from the PSNP have lower average income and asset values, and owned and cultivated less land, than households participating in PSNP public works.<br>• PSNP recipients of cash wages report higher current asset values to "food only" and mixed "food plus cash" beneficiaries.<br>• PNSP beneficiaries have retained or increase their assets more than nonbeneficiaries.<br>• 71% of nonbeneficiaries reported experiencing a food shortage but were excluded from the PSNP. This indicates that the coverage of the PSNP is limited in relation to the level of need. | *Quantitative methods:*<br>• Household survey covering about 1,000 households.<br>• Community and market surveys.<br>*Qualitative methods:*<br>• Interviews. |

"This excellent volume is a welcome addition to the literature on public works, at a time when interest in them as safety nets is at an all-time high. Whether in the Middle East post–Arab Spring, or globally where inequality and vulnerability are on the rise, public works are at the forefront of strategic and operational discussions by governments and international agencies. The technical and operational literature on public works has exploded in the past decade, and this book provides a user-friendly guide and overview of the key findings and lessons. Using cross-country evidence from over 40 countries and detailed case studies from 7 countries, the authors address both technical and operational issues in the design and implementation of public works. *Public Works as a Safety Net* will be of great interest to analysts and practitioners alike."

—Ravi Kanbur, T. H. Lee Professor of World Affairs, International Professor of Applied Economics and Management, and Professor of Economics at Cornell University

"Public works programs are an important component of social protection measures, with a dual objective of generating employment and creating or maintaining productive assets. This outstanding volume provides a comprehensive overview of the design, evidence, and implementation of public works. Drawing on evidence from all over the world, it covers low-income, middle-income, and postconflict countries. The authors have collectively been working on issues related to safety nets for decades, and they have made sincere efforts in this book to objectively highlight both the strengths and the weaknesses of public works programs. There are many lessons to be learned from the country experiences presented here. I have no doubt that this book will be a useful resource on public works programs for students, researchers, and practitioners alike."

—Mahendra Dev, Director and Vice Chancellor, Professor, Indira Gandhi Institute of Development Studies

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