

RURAL POVERTY

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Summary

An understanding of the extent, nature and determinants of rural poverty is a precondition for effective public action to reduce deprivation in rural areas. In low-income countries, the vast majority of the poor reside in rural areas, where the incidence and intensity of poverty is usually higher than in the towns. The rural population also tends to be less healthy and less educated, experience poorer service delivery and, for the reasons discussed in the prologue to this chapter, declining employment opportunities.

Rural areas have several specific features of which policymakers should be aware: relatively low population densities, heavy reliance on natural resource-based production and more limited access to public infrastructure and services. While agriculture is the primary source of livelihood in most rural areas, the rural economy is broader than agriculture, and poverty reduction strategies should assess how to increase non-farm employment as well as agricultural income. Many factors affect rural poverty: political stability, the quality of governance, and macroeconomic and sectoral policies.

Rural poverty is heterogeneous, resulting variously as it does from lack of opportunity, of empowerment, and of security. A range of policies may therefore be required to meet these diverse needs. The central sections of the chapter lay out a framework for (i) identifying increased opportunities for the rural poor, (ii) empowering them through improvements in the asset base available to them, and (iii) reducing the insecurity of poor households. These sections all assume that the general policy framework is supportive of economic growth and of the agricultural sector. The focus is on how these policies might be modified to increase the impact on the poor. The sections raise a set of relevant questions for data collection, suggest sources of information, provide a list of policy options and, where appropriate, cross reference other chapters of the sourcebook that contain more detailed guidance. The roles of migration, remittances and public transfers in reducing deprivation in rural areas are also explored.

The chapter also poses relevant questions for data collection, suggests sources of information and addresses measures for monitoring and evaluation. (More detailed information is supplied in the Technical Notes.) The other dimensions of rural poverty are covered in depth in other chapters.

The process of preparing PRSPs is already underway. The extent to which poverty in rural areas is explicitly addressed varies widely in the interim papers prepared to date (December 2000). The most extensive attention is given in the Kenya I-PRSP, which draws on an extensive data base and addresses most of the broad subjects flagged in this chapter and, at this date, may be considered a 'best-practice' example.

1. Introduction

1.1 Understanding Rural Poverty

An understanding of rural poverty is a precondition for effective pro-poor development strategies. In low income countries, the vast majority of the poor reside in rural areas where the incidence of poverty is usually higher than in the towns (**Table 1**). The rural population also tends to be less healthy and less educated, as well as experiencing poorer service delivery and limited employment opportunities. Since a significant share of economic activity in low-income rural areas is devoted to the production of basic commodities, especially staple foods, for which the income elasticity of demand is low, a reduction of poverty requires either a shift of activities to production of other goods and services with greater income elasticities of demand, or a significant increase in productivity, or both.

1.1.1. Who are the Rural Poor?

Rural poverty is heterogeneous: the rural poor are widely dispersed, possess a variety of income sources and may be ethnically diverse. Constructing an overview of rural poverty allows target groups to be identified as a preliminary step to formulating coherent poverty reduction policies. (Chapter 3 of this sourcebook, **Poverty Data and Measurement**, provides a detailed explanation of how to construct a national poverty profile).

Any profile of rural poverty will answer the following questions:

- What is the incidence and intensity of poverty in rural areas compared to urban areas?
- What proportion of the country's poor reside in rural areas?
- What are the main sources of income of the rural poor?
- What is the pattern of consumption of the rural poor?
- What are the characteristics of the rural poor which distinguish them from the rural non-poor and the urban poor?
- Are the heads of poor rural households more likely than the heads of rural non-poor households to be female? Illiterate? Young? Physically handicapped?
- Are poor rural households more likely than rural non-poor households to be large? Members of an ethnic minority? Located in specific regions?
- How many of the rural poor have access to land?

The main source of these data is likely to be a national household expenditure or income survey. In the absence of such information, data will have to be collected quickly using alternative instruments such as the Core Welfare Indicators Questionnaire (CWIQ), and/or Participatory Poverty Assessments (PPAs).

Table 1. Rural Poverty in Selected Developing Economies

Country	Most Recent Survey Year	Total Population (millions)	Rural Population (% of total population)	Percent of Population Below Poverty Line			Rural Poor* (% of total poor)
				National	Rural	Urban	
Algeria	1995	28.4	42.3	22.7	30.3	14.7	56.4
Bangladesh	1995-96	118.0	79.7	35.6	39.8	14.3	89.1
Brazil	1990	147.8	25.7	17.4	32.6	13.1	48.2
China	1998	1239.0	68.8	4.6	4.6	<2	68.8
Cameroon	1984	9.7	64.9	40.0	32.4	44.4	52.6
Columbia	1992	36.4	29.7	17.7	31.2	8.0	52.3
Dominican Republic	1992	7.4	40.5	20.6	29.8	10.9	58.6
Ecuador	1994	11.2	41.1	35.0	47.0	25.0	55.2
Egypt	1995-96	58.6	55.3	22.9	23.3	22.5	56.3
El Salvador	1992	5.3	56.6	48.3	55.7	43.1	65.3
Estonia	1995	1.4	28.6	8.9	14.7	6.8	47.2
Georgia	1997	5.4	40.7	11.1	9.9	12.1	36.3
Ghana	1992	15.8	65.2	31.4	34.3	26.7	71.2
Honduras	1993	5.3	54.7	53.0	51.0	57.0	52.7
India	1994	898.0	74.7	35.0	36.7	30.5	78.4
Indonesia	1998	203.4	61.3	20.3	22.0	17.0	66.4
Kazakhstan	1996	15.9	43.4	34.6	39.0	30.0	48.9
Kenya	1992	25.0	74.4	42.0	46.4	29.3	82.2
Kyrgyz	1997	4.6	65.2	51.0	64.5	28.5	82.5
Lao PDR	1993	4.4	79.5	46.1	53.0	46.1	91.5
Lesotho	1993	1.8	77.8	49.2	53.9	27.8	85.2
Madagascar	1993-94	12.7	74.8	70.0	77.0	47.0	82.3
Moldova	1997	4.3	53.5	23.3	26.7	20.1	61.3
Mongolia	1995	2.5	38.4	36.3	33.1	38.5	35.0
Morocco	1998-99	28.0	45.0	19.0	27.2	12.0	64.4
Nepal	1995-96	21.6	88.0	42.0	44.0	23.0	92.2
Nicaragua	1993	4.2	45.2	50.3	76.1	76.1	68.4

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Niger	1989-93	8.0	83.8	63.0	66.0	52.0	87.7
Nigeria	1996 ¹	114.5	59.6	65.6	67.8	57.5	61.6
Pakistan	1991	110.8	67.6	34.0	36.9	28.0	73.4
Panama	1997	2.7	44.4	37.3	64.9	15.3	77.3
Paraguay	1991	4.3	51.2	21.8	28.5	19.7	66.9
Peru	1997	24.4	28.3	49.0	64.7	40.0	37.3
Philippines	1997	73.5	44.2	40.6	51.2	22.5	55.8
Romania	1994	22.7	45.4	21.5	27.9	20.4	58.9
Sierra Leone	1989	3.9	71.8	68.0	76.0	53.0	80.2
Sri Lanka	1990-1991	17.0	78.8	35.3	38.1	28.4	85.1
Tunisia	1990	8.2	41.5	14.1	21.6	8.9	63.5
Yemen	1992	13.9	77.0	19.1	19.2	18.6	77.4
Uganda ¹	1997	20.3	86.7	44.0	48.2	16.3	95.0
Zambia ¹	1996	9.2	60.9	60.0	74.9	34.0	76.0
Zimbabwe ¹	1996	11.2	67.9	47.2	62.8	14.9	90.3

¹ Poverty line data is based on nutrition-based poverty lines.

* Calculated from available data.

Sources: World Development Indicators (WDI) 2000, and World Development Report, 2000/2001

Sources of Income The most important source of diversity among the rural poor, and between the poor and non-poor, is found in their sources of income and patterns of expenditure. The rural poor commonly possess multiple sources of income from agriculture, rural non-farm employment and transfers (private and public). By focussing on the main income source of poor rural households, it is possible to construct a simple typology of rural poverty groups, as shown in the table below:

Table 2 : Rural poverty groups			
Main source of income			
Agriculture (crops, livestock, fisheries, forestry)		Rural Non-Agriculture	Transfers
Small farmers (owner-cultivators, tenants)	Permanent wage laborers; temporary wage laborers (non-migratory, migratory)	Self-employed miners; petty traders	The elderly; Female-headed; Disabled

This typology is illustrative. It may be necessary to distinguish further between groups according to differences in farming systems and population settlements. Having identified different target groups among the poor, survey data can be used to develop a detailed profile of rural poverty to provide an empirical context within which to choose among alternative poverty reduction programs and policies.

It is important to gain an understanding of how resources are allocated within the household. Distinctions between men and women, and between young and old may be significant in the allocation of household resources such as food and labor. Some public transfers aim to alter the intra-household distribution of income directly (e. g. pensions and targeted nutrition programs), while other public policies may change it indirectly and unintentionally.

1.1.2. Features of Rural Areas

The prologue discussed the inter-linkages between urban and rural areas (and their economies) and their implications for efforts to reduce poverty in the two elements of national space. Six relevant features of rural space that underlay the particular problems of addressing rural poverty are summarized below:

- Rural areas are characterized by relatively low population densities, with maximum population thresholds of 5,000 to 10,000 per settlement. However, some small towns have more economically in common with the surrounding rural hinterland than with the capital city, or urban-industrial agglomerations.
- Low rural population density is associated with low levels of basic infrastructure and service provision, inhibiting economic development. The delivery of services and public goods to rural areas presents unique challenges for cost effectiveness and cost recovery.
- Poor access to public goods and basic services as well as prolonged government interventionism has led to weak rural factor and product markets. High transaction costs and shallow rural markets make it difficult for rural households to accumulate assets and to manage income volatility.

- The rural economy is broader than agriculture. Poverty reduction strategies should assess how to increase non-farm as well as agricultural income. In many areas, rural household income derives increasingly from non-farm employment.
- The heavy reliance on natural resource-based (especially climatically dependent) production in rural areas leads to seasonal and annual variations in household income, and has also placed environmental issues at the forefront of rural poverty strategies.
- Many rural communities have strong traditional ties, where social capital may be very important and strongly influence economic decisions (i.e., informal capital and labor sharing arrangements, informal tenure systems, migration networks, etc.).

1.2 Preparing the Rural Dimension of a PRSP

Policy decisions on the rural dimension of a PRSP should emerge only after widespread participation and consultation involving discussions between the different levels of government and between government agencies and different elements in civil society at each level. A key issue here will be the assigning of administrative and fiscal responsibilities. Local governments should interact with community organizations, farmers' groups and other grassroots organizations, while federal agencies should engage with political parties and a wide range of interest and pressure groups at the national level.

Furthermore, the administrative responsibilities for designing, implementing, monitoring and evaluating the rural dimension of a poverty reduction strategy need to be assigned. Where a *Ministry of Rural Development* exists with an institutional mandate to supply public goods and services to the rural population, prime responsibility is likely to reside there. Where no such mandated Ministry of Rural Development exists, it may be helpful to establish an interagency task force with representatives from different Ministries such as *Agriculture, Health, Education, and Transport*, to facilitate the emergence of a **pro-poor and multi-dimensional, growth-oriented, rural development strategy**. It is important that the *Ministry of Finance* also be represented in the group coordinating the rural dimension of a poverty reduction strategy.

Because of the multi-sectoral nature of rural development, a single chapter cannot do justice to all of its elements. This chapter should be supplemented by use of other relevant chapters in the sourcebook.

1.3 Approach and Organization of the Chapter

The World Development Report (WDR) for 2000/2001 emphasizes the multi-dimensional nature of poverty, income poverty, low levels of health and education, vulnerability, and voicelessness and powerlessness. A series of chapters in the Sourcebook examine overall aspects of an approach to reducing these different dimensions of poverty. This chapter focuses on the particular aspects of poverty resulting from the special features of rural areas outlined above, using the framework in the WDR, that is, opportunities, empowerment, and security. For example, in addressing improved opportunities, it explores ways of (i) increasing the both the level and value of production of small-scale farmers; (ii) maintaining or enhancing the natural resource base available for use by poor households and (iii) increasing the availability of non-farm employment, both in agriculture and in non-agricultural sectors. In addressing empowerment through improvements in

health and education, it touches only on those aspects of the problem that relate specifically to rural conditions, that is primarily problems related to difficulties of physical access to facilities both for the poor, and health and educational staff.

This chapter is divided into seven parts. Section 2 outlines the key aspects of a strategy to reduce poverty, underlining the importance both of growth and of national economic and sectoral policies in reducing rural poverty. The next three sections lay out a framework for identifying increased opportunities for the rural poor, improving the performance of public services, and reducing the security of poor households. These sections raise a set of relevant questions for data collection, suggest sources of information, provide a list of policy options and, where appropriate, cross reference other chapters of the sourcebook that contain more detailed guidance (more detailed information on specific policy initiatives are contained in a set of Technical Notes). Section 7 explores the role of migration, remittances and public transfers in reducing deprivation in rural areas. The final section addresses briefly how progress in decreasing poverty may be measured and monitored.

2. Key Aspects of a Strategy to Reduce Rural Poverty

The first section showed that, in most low income countries, the incidence of poverty is higher in rural than urban areas and that, typically, the overwhelming majority of the poor live in rural areas. Furthermore, that the majority of the rural population is dependant upon agricultural activity as a prime source of livelihood. Given the pervasiveness of poverty in the rural areas, reducing it can only be achieved by increasing the overall level of goods and services produced, particularly of agricultural products. Thus, any strategy to reduce poverty must recognize: (i) the centrality of growth; and (ii) the centrality of agriculture to growth in most rural areas. In addition any rural poverty strategy must take cognisance of the fact that; (i) that national policies can have a major impact on the effectiveness of efforts to reduce poverty; and (ii) that, within most countries, rural areas are not homogeneous and, therefore, that different strategies may be needed in the different regions of the country.

2.1. The centrality of growth

The stark differences in poverty levels between rich and poor countries show the central role of economic development in poverty reduction. These differences generally reflect differences in sustained economic growth over the long term. Research has shown that, in developing countries over the past 20 years, growth in consumption of the poorest one-fifth of the population tracked economic growth on a one-to-one basis. In the vast majority of the country cases growth led to rising consumption of the poorest fifth of the population, while economic decline led to falling consumption by this group, and even deeper poverty. Although the deviations from this average relationship show that, in some countries, growth is associated with more poverty reduction than in others, the relationship highlights the importance of economic growth for improving the incomes of poor people.

Specialization and trade play an indispensable role in economic development and poverty alleviation. Creating, sustaining and integrating markets for agricultural inputs/ outputs and manufactured consumer goods provide incentives for farm-households to move away from self-sufficiency towards greater specialization and trade which raises rural incomes and, therefore, these processes and appropriate national policies to support them must lie at the core of an effort to address rural poverty.

2.2. The centrality of agriculture.

For most developing countries, agricultural growth is essential to economic growth, even though, in the long run, the share of agriculture in the economy falls as an economy grows. Very few low-income countries have achieved rapid nonagricultural growth in the absence of rapid agricultural growth. Most of the developing countries that grew rapidly during the 1980s and 90 experienced rapid agricultural growth in the preceding years. Agricultural growth stimulates economic growth in nonagricultural sectors, and vice-versa. The overall impact is to increase employment and reduce poverty.

Much of this chapter focuses on ways in which the elements of agricultural and rural growth strategies can be modified to increase their potential beneficial impact on the most disadvantaged in the rural areas. The emphases in this chapter should not be seen as a substitute for a vigorous strategy for growth in the economy in general and the agricultural sector in particular. The establishment of viable agricultural enterprises that can supply products to the market with regularity, and not just occasionally, is essential if a viable trading system is to be supported. These units do not have to be large scale, as experience in, for example, SE Asia has shown. However, characteristically a core of larger scale operators have played a catalytic role in the process of development¹.

2.3. The effects of national policies on rural poverty

The rate of growth in rural areas and the potential for alleviating poverty will be affected by a range of national level economic policies, in addition to the overall emphasis on growth. A rural poverty reduction strategy will be enhanced by the adoption of the following macroeconomic policies:

- Low and stable inflation: some rural households may be better protected than urban households from high inflation because they produce most of their own food using only family labor. Other rural households, such as the landless, may be vulnerable to rising prices.
- Competitive real exchange rate: in many countries, a greater proportion of agricultural output than of non-agricultural output is tradable. Consequently, the maintenance of an overvalued exchange rate discriminates against the rural sector. Where the rural poor include both net producers and net consumers of tradable goods, a real devaluation will affect the welfare of these two groups in opposite ways. Net producers gain, while net consumers lose.
- Stable positive real interest rate: some members of low income groups in the rural sector save and invest. However, these savings may be transformed directly into investment without any interaction with the capital market. The fact that many low income farm-households invest-as-they-save does not mean they are indifferent to the wider process of financial intermediation. Government regulation of capital markets to keep real interest rates artificially low does not serve the poor because capital tends to

¹ For a review of a number of farming systems in lower income countries see: *J. A. Nicholas Wallis, "Intensified Systems of farming in the Tropics and Subtropics", World Bank, 1997.* This study shows that these systems developed under a range of conditions and influences. However, in all cases the key was a group of pioneer producers who followed up on an idea and evolved it

be rationed by other means and the small traders etc., on which the poor rely as buyers or sellers are hampered in their businesses.

- Competitive wage determination in urban labor markets: urban labor markets can have a profound effect on rural poverty via the process of labor migration. Members of the rural labor force migrate to the towns if their expected earnings are likely to be higher there. Generally, the more tradable is agricultural output and the more competitive is the urban labor market, the more likely is an increase in agricultural productivity to reduce rural poverty.
- Reduction or elimination of distortions in the allocation of public expenditure: Sectoral policies also affect rural poverty. The persistence of a bias in public expenditures towards capital intensive approaches to health, education and economic infrastructure is evident in many countries. This inevitably focuses provision in major centers and eliminating such actions that have the effect of discriminating against those living in rural areas is a necessary condition for reducing rural poverty

Poverty reduction strategies may be introduced during ongoing programs of macroeconomic and institution reforms. Policy makers will need to choose between rapid, deep and widespread reform which earns credibility for the government as reformer but risks hurting the poor, against more gradual change which has a less regressive impact on income distribution but is more vulnerable to delays caused by opposing interest group pressures.

2.4. Spatial dimensions of rural poverty

As discussed in the prologue, while there are significant differences between urban and rural areas, both are heterogeneous and, in most countries, the incidence of poverty differs between rural regions. Rural areas close to the major cities (peri-urban areas), and other long settled agricultural regions, may be well connected to national and international markets and have adequate supporting infrastructure and a range of vigorous enterprises producing inputs and processing outputs of the agricultural sector. In such regions the incidence of poverty may be relatively low. However, other, more remote areas, perhaps inhabited by minority ethnic groups may lack these attributes and be characterized by a high incidence of poverty. Thus, a strategy for tackling rural poverty should recognize these differences and, if necessary, place differing emphases on the types of issues flagged in this chapter in different regions. A number of questions should be addressed before steps are taken to evolve a strategy to address rural poverty:

- To what extent does the poverty profile provide a disaggregated picture of where the poor are by location. Is there disaggregated information on differences in main sources of household income, assets, and access to essential services?
- Does the analysis present data at the lowest level of disaggregation possible?
- Is there information on the different dimensions of risk and vulnerability facing individuals and households in different parts of the country?
- Is the poverty line adjusted to take into account regional and rural-urban differentials in cost of living?
- Is there identification of specific impediments to participation by the poor in regions of high poverty incidence and vulnerability, and are sector strategies consistent with removing some of these impediments?

Because of interregional differences, it is likely that national policies (as discussed above) will not have the same impact over the whole country. Care should be taken to ensure that policies do not have their most adverse impact on the most disadvantaged regions.

3. Increasing Opportunities for the Rural Poor

As noted above, the main determinant of rural poverty reduction is a vibrant rural economy with sustained and widely shared growth, and efficiency. This necessitates improving agricultural productivity, fostering non-farm activities, developing rural infrastructure and expanding markets. A PRS should address measures to promote rural incomes and employment by fostering economic growth in agriculture and non-farm sub-sectors, liberalizing access and removing market distortions (in both out/in-put, financial and labor markets, respectively), and increasing accessibility to infrastructure, knowledge and information systems. The above measures would lead to faster accumulation of, or improved access to, productive assets (human, physical, natural and financial) controlled by the poor and/or increase returns to those assets. This section discusses issues to be addressed in devising strategies to assist agricultural producers and workers.

3.1 Agricultural Producers.

Many of the rural poor who earn a living in agriculture are small-scale farmers. They typically suffer from low productivity and just produce enough to meet their subsistence needs with an occasional marketable surplus. The heavy concentration of their economic activities on the production of basic commodities hampers their attempts to increase incomes through agriculture since, as national income increases, the demand for these basic commodities only increases slowly. Typically, therefore, the prices of these commodities fall relative to those of other goods and services. As a result, if a farming household is to increase its real income, it must either increase its productivity rapidly enough to offset the decline in relative prices, switch some of the productive effort to agricultural products with better market prospects, or earn income from non-agricultural activities, or some combination of all three. To do this the farmer needs to be able to gain access to the relevant markets for inputs and products and be able to obtain assistance to learn the required new technologies. Inadequate markets and low agricultural productivity largely explain why mean returns to the assets of small farmers are so dismal. At the same time farmers may be constricted by the lack of resources (primarily land and other natural resources) at their command.

The approach to the rural poor. While any program will be likely to focus on increasing the level and value of production, determining what this might entail will require strong participation of the potential beneficiaries. This is particularly important with groups such as livestock herders who are often not well catered for in agricultural development programs, because they may not always reside in the same place, or may be of a different ethnic/linguistic group than the majority. Livestock serve multiple functions (food, traction, organic fertilizer, savings) and the relative values and potential outputs of these to the poor are not always apparent, and emphasis must be placed on the needs of the owners/herders. Implications of this approach are elaborated in **Technical Note 3**.

3.1.1. Improving markets to increase opportunities

Specialization and trade play indispensable roles in economic development and poverty reduction. Creating, sustaining and integrating markets for agricultural inputs, outputs and

manufactured consumer goods provides incentives for farm-households to move away from self-sufficiency towards greater specialization and trade which raises rural incomes.

However, to bring about such specialization and trade may require:

- Increasing the productivity of farming and other rural activities in order that rural residents can produce a regular supply for the market;
- Reducing the costs and risks of farmers and traders of engaging in the exchange of inputs/outputs and information.

Key questions on markets for small farmers

1. Prices and Profitability

- What types of agricultural output are produced by the poor (non-tradable goods, exportable goods, importable goods?)
- How well informed are small farmers as to output and input prices?
- What are the export taxes/import tariffs on crops produced by small farmers?
- What are the nominal and effective rates of protection on agricultural outputs produced by small and large farmers?
- Do the poor receive subsidies on selected crops?

2. Marketing channels

- What are the marketing channels through which poor farmers obtain inputs and sell outputs (e.g private traders, farmers' organizations, cooperatives, or state agencies?)
- Are men or women primarily responsible for selling output and buying inputs on small farms?

Data sources for markets²

- National/local government input/output marketing boards (1, 2, 3,)
- Private firms allowed by the state to supply/purchase agricultural inputs/outputs (1,2)
- National/local government information agencies (1)
- National/local government commodity price stabilization programs (3)
- Commodity market analyses (3)
- Focus group discussions with different groups of the rural poor (1, 2, 3,)
- Focus group discussions with local traders (1,2, 3,)
- Focus group discussions with national/local government administrators (2)
- Focus group discussions with general members and administrators of farmer organizations (2)
- Focus group discussions with different groups of the rural poor (1,2, 3, 4)

3. Price stabilization programs

- Does the government intervene to lower input prices and/or increase output prices?
- Are such interventions made on a systematic basis, eg. a floor-price for rice?
- Are public interventions made only in response to national or regional level shocks, such as floods or macro-economic instability?

² Numbers refer to the sections above to which the data source is most relevant.

- How credible is the commitment of the government to defend officially announced price bands?
- Have attempts at price stabilization been successful?
- If so, has price stabilization benefited poor consumers and poor producers?

Policies to improve agricultural marketing

- Complete the process of liberalizing and privatizing agricultural markets
- Provide greater stability and transparency of the 'rules of the game' in agricultural markets
- Publish & disseminate information on agricultural prices
- Improve infrastructure to facilitate movement of goods etc. in all seasons
- Strengthen financial system to assist market participants manage funds and ensure their security.

Further details on agricultural marketing are given in **Technical Note 4**.

3.1.2. Improving agricultural technology to raise productivity

In seeking higher levels of production, the objective should be to develop production systems that are sustainable in the long-term. Agricultural productivity depends upon the biophysical properties of the soil and the choice of technology. The biophysical properties of the soil are in turn affected by the choice of technology. The challenge is to find appropriate technologies that can be adopted by poor farmers to increase production profitably, while minimizing damage to the natural resource base. This section focuses on institutional issues related to ensuring that research on agricultural technologies and its dissemination do not ignore the conditions faced by poorer farmers.

Key questions on agricultural technology

1. Allocation of Public Expenditures

- What is the level of public expenditure on agricultural research and extension (R&E) related to crops and livestock produced or consumed by the poor?
- Does the level and composition of R&E expenditures vary across different regions within the country?

2. Institutional linkages between the Consultative Group of International Agricultural Research (CGIAR) and national agricultural research centers (NARCs)

- Are there institutional linkages between the various international agricultural research centers and local NARCs?
- How are these public partnerships funded?
- National budget? Bilateral, multilateral grants/loans?

3. Organization of NARCs

- How responsive are the NARCs to feedback from local extension systems about the needs and priorities of poor farmers?
- Have any difficulties arisen in facilitating partnerships between international biotechnology firms and local public/private actors, owing to the absence of assigned intellectual property rights, or to weak enforcement of such rights?
- Could the organizational and governance structures of local NARCs be improved, eg. by introducing more transparent decision making processes,?
- What disincentives are faced by scientists & administrators at the local NARCs?
- Insufficient pay? Nepotism and corruption?
- Are there institutional linkages between the private sector and the NARCs?
- If so, how is the private sector involved with NARCs in helping poor farmers to access appropriate technologies?

4. Organization of local extension systems

- How do farmers assess the extension services?
- How effective are local extension systems in delivering new technologies to poor farmers, and conveying feedback from farmers on the profitability and environmental sustainability of new technologies?
- How could the organizational structures of local extension systems be improved?
 - More accountability of extension agents? Better training of extension agents? More transparent decision making processes?
- What disincentives are faced by extension agents/administrators?
 - Insufficient pay? Corruption? Lack of adequate institutional support?

Data sources on agricultural technology

- Public expenditure reviews (1)
- CGIAR publications (2)
- Publications by NARCs (1, 2, 3)
- Publications by Agricultural Ministry (1)
- Focus groups meetings with representatives of the domestic private sector (3)
- Focus group meetings with NARC management, scientists/staff (3)
- Focus group meetings with extension agents (4)
- Focus group meetings with poor farmers (4)

Policies to improve access to agricultural technologies

Recent empirical evidence unambiguously indicates that in many countries small farmers and landless/land-poor households have benefited greatly from the “Green Revolution”. They have benefited directly through increased demand for on-farm employment, and indirectly through lower food prices and increased demand for non-farm employment

(induced by the technological change). For examples on livestock innovation see **Technical Note 3**.

However, adequate technologies are still needed to usher in a Green Revolution for food crops in much of Africa. Furthermore, even when improved technology is available, it tends to be unaccompanied by adequate seed distribution channels, credit markets, and output marketing channels.

The scientific and managerial capacity of national agricultural research centers (NARCs), particularly in Africa, should be strengthened in order to transfer technology efficiently from neighboring countries and the global research system.

Other policy initiatives by the public sector might include:

- Assessing the research and extension priorities of the NARCs from the viewpoint of rural poverty reduction
- Exploring the rationale and incentives for a mix of public and private sector funding of R&E, with incentives for additional private sector investments
- Identifying new ways of financing agricultural R&E
- Identifying new ways of delivering extension services, such as vouchers .
- Establishing internal markets for R&E, preferably based on customer/contractor relationships
- Fostering greater use of participatory processes involving farmers and other stakeholders in the financing, planning and conduct of research and technology transfer
- Cultivating strategic partnerships with national and international private firms to access biotechnology

3.1.3. Improving access to financial resources

Poor rural households tend to select a portfolio of assets and productive activities which is on average less profitable but also less risky than the portfolios chosen by richer households. This locks poor households into a poverty trap which reduces rural growth and exacerbates rural income inequality .

Improving access to financial services can enable some poor rural households to become economically viable by allowing them to undertake profitable investments, and to diversify their income sources. Access to financial markets allows the rural poor to adopt new agricultural technologies and to invest in rural non-farm activities. Such access is particularly crucial when a profitable project involves an indivisible investment with large fixed costs. The ability to borrow immediately after the harvest is important as an insurance substitute in low income rural areas where contingency markets are imperfect. Such borrowing allows the rural poor to smooth year-on-year consumption in the face of fluctuating annual earnings.

Key questions on financial services

1. Access to credit

- What information is available to inform policymakers about access to credit among the poor?

2. Access to insurance

- Are any formal insurance programs available to rural poor?
- What formal and informal sources of insurance are available to mitigate household-specific income-shocks?

3. Access to savings institutions

- Are there any formal or informal savings institutions which cater to the rural poor?
- Do data exist to inform policymakers about different informal savings instruments used by the poor?

Data sources for Financial Services

- Agricultural Censuses (1, 2)
- Household surveys (1,2)
- Farm management studies (1,2)
- Official records on disbursement of various types of government credit/loans (1,3)
- Official records on government insurance programs (2)
- Anthropological monographs (1, 2, 3)
- Focus group meetings with informal money lenders (1)
- Focus group meetings with different groups of the rural poor (1, 2, 3)

Policies to improve access to financial services

Empirical evidence suggests that the private sector, including NGOs, has tended to be more successful than the public sector in reaching the rural poor with credit. The main contribution of government to improving the poor's access to the capital market is likely to be the creation and maintenance of a favorable macroeconomic environment to facilitate rural financial intermediation as outlined in section 2.C above, and the adoption of a regulatory framework for the financial system which fosters competition among those supplying credit to the poor.

Group-based micro-credit programs can reduce rural poverty, especially among women.

- Groups which form voluntarily to receive credit can screen and monitor themselves. These lending programs allow credit-constrained individuals who are endowed with entrepreneurial skills to access necessary startup credit to launch their project. This is particularly significant for individuals who may also be excluded from the labor market. For example, women may face cultural obstacles to seeking wage employment.
- The segment of the poor who lack the business skills required to utilize credit productively, may have to depend on targeted Food-for-Work or other employment schemes to smooth their consumption.

However, group-based micro-credit programs may be difficult to sustain in high-risk areas where poor rural households are particularly vulnerable to weather-induced income shocks. Under these conditions, it may be difficult to offset the income fall by borrowing

from kin or friends within the same region. A group-based approach towards lending and borrowing in such risky areas is likely to be difficult to implement.

While even group-based microcredit programs have difficulty reaching the very poorest, and such programs may not be appropriate for high-risk areas, novel forms of rural financial instrument should be explored, eg. weather-indexed insurance bonds for the rural poor.

Further details on financial services for the rural poor are given in **Technical Note 5**.

3.2 Agricultural laborers

3.2.1. Agricultural wage employment and earnings

In countries with large numbers of landless and land-poor households, agricultural wage earnings are a major income source for poor rural households. Thus factors which influence agricultural labor markets play an important role in determining the welfare of the poor. The demand for labor is affected by the growth of agricultural output and the nature of agricultural technology, while labor supply depends on past population growth, the urban/rural wage differential, and factors affecting participation decisions.

Key questions

1. Factor-bias of agricultural production and population growth

- How have employment per acre and employment per unit of output in major crops and livestock activities changed in recent years?
- What has been the growth rate of agricultural output over the past 5 and 10 years?
- How is the rural population growth rate changing over time?
- How have rural wage rates changed during the past 5-10 years?

Data sources for factor bias of agricultural production and population growth

- National/local government statistics on agricultural output and employment
- National/local government statistics on rural prices and wage levels
- Population Census
- Farm management studies
- Focus group discussions with different groups of agricultural wage laborers
- Focus group discussions with medium and large scale farmers

2. Labor market regulations

- What are the different types of contract in the agricultural labor market, eg. long-/short-term, piece/time rate?
- Has the distribution of wage laborers across different types of contract changed in recent years?
- How flexible is the hiring and firing of long-term and short-term workers?
- Is there a minimum rural wage? If so, is it generally enforced?

Data sources for labor market regulations

- National/local government legislation regarding agricultural employment/wages
- Employment surveys
- Focus group discussions with different groups of agricultural wage laborers
- Focus group discussions with medium and small scale farmers

3. Access to rural labor markets

- Does the existence of seasonal labor markets give rise to seasonal labor migration?
- Do high transport costs prevent the rural poor from participating in the wider labor market?
- What is the extent and nature of female participation in agricultural labor markets?
- What are the market and non-market (social) barriers that women face which hinder their ability to participate in agricultural labor markets?
- Are certain minorities prohibited or restricted from engaging in specific agricultural employment? If so, what market and non-market barriers do they face?
- Is there wage discrimination between male and women engaged in agricultural activities?

Data sources for access to rural labor markets

- Anthropological Monographs
- Focus group discussions with different groups of agricultural laborers
- Focus group discussions with women
- Focus group discussions with disadvantaged minorities

3.2.2 Policies to increase income of agricultural laborers

1. Redressing factor bias of agricultural technology and population growth

Labor-intensive technologies targeted to small holders should lead to increased demand for hired labor by small holders in the short run, and to higher rural wage rates in the long-run.

A competitive exchange rate and a positive real interest rate will encourage the adoption of labor-intensive technologies

However, if rural population growth rates do not fall (as a result of declining fertility or/and out-migration), then productivity growth in agriculture may not be sufficient to reduce rural un(under)employment. In this event, policies which help to reduce population growth (raising female educational attainment, family planning services) should be considered.

2. Appropriate labor market regulations

Prohibitions against long-term labor contracts should be eliminated.

If there is an effective minimum wage, the consequences on agricultural output, employment, wages and income distribution should be examined, especially for its impact on women (see Chapter 14 on **Gender** (Section 3.2.3)).

3. Access to rural labor markets

Access to jobs can be enhanced by investments in rural infrastructure which is used by the poor to access rural markets, and by working with local organizations to empower women and minorities, and sensitize the public and policymakers at all levels to labor market discrimination faced by these groups.

3.3 Rural non-farm workers

3.3.1. Links to agriculture

Income derived from rural non-farm sources is often an important source of income for poor rural households. In regions characterized by a highly unequal distribution of land, land-poor and landless households are pushed into rural non-farm employment in order to survive.

It may be useful to distinguish between rural non-farm activities according to:

1. Whether they complement or substitute for agricultural activities

Some rural non-farm activities can be carried out during slack periods of the agricultural year. Thus, certain members of a rural household can participate both in agricultural activities and non-agricultural activities during the year, while others specialize in different rural non-farm activities.

2. Whether or not they have strong linkages to the agricultural sector

When growth in the agricultural sector induces the non-agricultural sector to increase its activities by investing in additional capacity for supplying inputs and services to the agricultural sector, the linkage is backward. In cases where the non-farm sector is induced to invest in capacity to supply agro-processing, transportation and marketing services, using farm products as inputs, the linkage is forward. Thus, cattle trading and food processing are examples of forward linkages from agriculture, while the manufacture and repair of farm implements is an example of a backward linkage to agriculture.

3.3.2 Key questions on rural non-farm employment (RNF)

1. Non agricultural rural activity

- What are the main types of RNF employment in different regions of the country?
- What are the principal constraints to non-farm activities? - basic infrastructure?
- What are the principal factors which limit access to markets for RNF output?
 - Quality requirements? Lack of information? Barriers to entry (high start-up costs with no access to credit, regulatory obstacles)?
- Are there environmental amenities in rural areas (e.g. wild life parks, beaches, mountain trails) which could be marketed to domestic and international tourists?

- See also Key questions on markets in section 3.1.1.

Data sources for access to markets

- Legislation regarding transactions between foreign and domestic firms
- Focus group discussions with different groups of urban (domestic/foreign) businesses
- Focus group discussions with domestic and international travel agencies
- See also data sources for markets in section 3.1.1.

2. Implications for local population.

- Do urban (and foreign) companies subcontract with rural enterprises? If so, in what industries? If not, why not?
- Where subcontracting with foreign companies exists, how effective in practice is any conditionality, such as limits on the employment of child labor?
- Are any efforts being made to encourage enterprises to employ local labor or source other requirements locally?
- See also questions on labor market regulations and access to labor markets in sections 3.2.2 and 3.2.3.

3. Access to financial services

- See Key questions on financial services in section 3.1.3.

Data sources for access to financial services:

- National/local government statistics on disbursement and beneficiaries of non-agricultural credit
- Private bank records on rural transactions
- See also data sources on financial services in section 3.1.3

4. Access to education and training

- What level of education or training is required for which type of rural non-farm activity?
- Are there any RNF training programs targeted to the rural poor? If so, which organizations are involved, and how successful have they been?

Data sources for access to education and training

- National/local government statistics on RNF training programs
- Focus group discussions with different groups of employers
- Focus group discussion with different groups of the rural poor

5. Linkages with the agricultural sector

- What types of linkages (backwards/forwards) exist between different RNF activities and the agricultural sector? How strong are these linkages?
- Is growth in certain rural non-farm activities independent of growth in the agricultural sector?

Data sources on agricultural and non-agricultural growth

- National/local government statistics on growth of agricultural output
- National/local government statistics on growth of rural non-agricultural output
- National or regional input-output tables
- Focus group discussions with different groups of the rural poor engaged both in farming and in non-agricultural activities
- Focus group discussions with medium and large farmers
- Focus group discussions with rural traders
- Focus group discussions with urban food-processing/agro-business firms

6. Regulations

- What rural non-farm activities require licenses?
- Why are such licenses necessary?
- Can the rural poor afford to purchase these licenses?
- What type of bureaucratic hurdles do the rural poor face in trying to obtain these licenses?
- Are regulatory processes subject to corrupt practices?

Data sources on regulations

- National/local government legislation
- Focus group interviews with national/local administrators
- Focus group interviews with different groups of the rural poor

3.3.3. Policies to increase rural non-farm income earning opportunities among the poor

1. Access to markets

Consider the creation of clusters to

- Encourage urban firms to invest in subcontracting channels with rural firms
- Induce multinational firms to invest in subcontracting channels with rural firms
- Promote international partnerships to develop and market local tourism

Establish domestic and international partnerships with environmental organizations to ensure the ecological sustainability of eco-tourism projects

Deregulate rural non-farm activities where appropriate

See policies for improved marketing in section 3.1.1

2. Growth linkages with the agricultural sector

If growth of the rural non-farm sector is strongly linked to the growth of the agricultural sector, then ways of increasing agricultural productivity and farm incomes should be explored. This may be most effectively approached through village level organizations

along the lines of the producer organizations discussed in section 4.3 above. Examples of this approach are discussed in **Technical Note 6**.

3. Access to education

Improve and extend the existing range of training programs to endow the rural poor with skills necessary to succeed in rural non-farm activities

Material in Chapter 7, **Pro-Poor Growth**, on the development of Small and Medium Scale Enterprises (SMEs) is also relevant here.

4. Empowering the Rural Poor by Improving their Assets

Rural incomes and employment, which are needed to lift the rural poor out of poverty, depend on sustained and widely shared economic growth. But, these by themselves are insufficient to tackle the overall poverty problem. The rural poor generally face interlocking barriers to economic, social and political opportunities. They lack a political voice because they are remote from the seats of power. These factors limit their access to infrastructure, and their ability to obtain or utilize social services (such as health and education) and, in some cases, reduce their rights to own or access land-based resources.

Empowering rural populations to take charge of their development agenda is essential for poverty reduction. They need to be able to enhance their own human and social capital (particularly development-oriented institutions), as well as obtain adequate access to natural resources and the necessary national physical capital necessary to improve their livelihoods. Development interventions should foster a social, legal, and policy framework that enables the rural poor to effectively influence public decisions that affect them and/or reduce factors that restrict their ability to earn a good living. A rural poverty reduction strategy should advocate that subnational and social institutions are accountable to the poor, including the removal of social barriers that result from distinctions of ethnicity, gender, and social status.

The previous section addressed issues related to the barriers related to the establishment and management of small agricultural enterprises, and to the markets for agricultural and non-farm employment. This section deals more directly with the ability of the poor to improve their health and education status, access infra-structural and natural resources, and to improve their bargaining power as producers.

4.1 Health and Education

Chapter 10, **Human Development** contains sections on Health, Nutrition and Population, and on Education, which detail recommended approaches to developing strategies for improving the health status, and the educational attainment of the rural poor. The discussion in those sections is based at the national level and does not specifically address issues in rural areas. This section is intended to flag elements of the diagnosis and prescriptions proposed in Chapter 10 that are likely to be of particular importance in rural areas.

While a failure to address the education and health needs of the rural poor reduces the life-chances of the adult population, it may have even more damaging effects on children who represent the next generation of workers and citizens, making it less likely that they will escape poverty through securing productive employment inside or outside the rural sector.

Good health and adequate nutrition are not only important goals in themselves, but they also raise workers' productivity and earnings. Loss of adults of prime working age to disease, such as HIV/AIDS, often leads to shifts in cropping patterns, and may reduce investments in soil enhancement, irrigation and other capital improvements which may, in turn, lead to long term effects on output.

Childhood nutritional outcomes play a critical role in determining the subsequent stock of adult health and educational attainment. Severely short or extremely low weight-for-height levels raise mortality rates among pre-school children. Child malnutrition increases morbidity, depresses the immune system, limits the acquisition of cognitive skills and reduces the payoffs to investments in primary schooling.

Investment in primary and secondary schooling promotes agricultural productivity growth and reduces rural poverty. Education is also an important determinant of rural non-farm business success, wage levels and productivity.

4.1.1. Key questions on health and education

Issues that are likely to be particularly relevant in rural areas are:

- *Accessibility of facilities.* Population density is low in many rural areas and health and education facilities and/or activities may not be available close enough to the poor for them to be able to benefit from them. Accessibility should be considered from the point of view of both users and providers (i.e. teachers or nurses). For students, particular problems may exist for pupil accessibility to post-primary facilities. Because of distance, rural pupils may not be able to travel to and from them on a daily basis. Poor students will have difficulties meeting costs and there may be social barriers to attendance by girls. There may be particular problems in maintaining adequate staffing levels of trained teachers in remote, low income areas, such as more specialized teachers for post primary schools (e.g. in mathematics and science), and for female teachers, where social issues may come into play.
- *Quality of service.* Beyond the problems of low physical standards of the facilities (building construction and maintenance, and equipment), staff in rural facilities (particularly in remote areas) may be less well trained than those in urban areas, and accessibility problems may limit the availability of supplies (e.g. basic drugs or teaching materials). Problems may also arise because staff do not adequately understand local languages.
- *Gender issues.* Particularly at times of stress (e.g. during the 'hungry season', or during periods of prolonged drought), men may leave poor communities to seek incomes elsewhere. Then the responsibility for the health of the family falls entirely on the women and it is important that the available services are responsive to their preferences and needs.

In addition further specific issues should be addressed:

Health

- What are the main health risks among the rural poor in different regions? How do these risks vary as between men and women? Are there specific health problems afflicting the poor in some areas that merit specific attention (e.g. river blindness)?
- Are there specific groups (e.g. nomads, illegal immigrant farm workers, indigenous groups) which may not be being serviced by existing services for language, legal, social, or other reasons?

Education

Particular issues that should be addressed include:

- Do poor households withdraw their children from school at peak periods of the agricultural year?

- Do poor households withdraw their children from school after an income-shock? If so, are boys and girls equally affected?
- Are there particular groups (e.g. nomads, illegal migrants, or indigenous minorities) that are reluctant to enroll their children, or for whom language differences form a particular barrier to education?

4.2 Infrastructure

Rural areas are characterized by a less extensive economic infrastructure than urban areas and such infrastructure is often not pro-poor. The focus here is on transport because of its central role in rural poverty reduction, but some brief comments on electrification and telecommunications are also included. For a further discussion, see Chapter 11 on **Private Sector and Infrastructure**, Section 1 on Energy, Section 2 on Transport, and Section 4 on Information and Communication Technology. **Technical Note 8**, Rural Infrastructure and the Poor, discusses innovative approaches to the development of infrastructure in ways which emphasize benefits for the poor.

4.2.1. Transport

Chapter 11, Section 11.2, **Transport**, contains a sub-section (4.1) on rural transport issues and also five case studies on the planning, financing and development of rural roads. This section emphasizes transport issues of particular relevance to the rural poor. Improvements in rural transport can benefit the poor in several ways. Lower transport costs raise real incomes by increasing households' terms of trade, and enhance factor productivity as a result of increased specialization and division of labor. Better rural transport promotes market integration which should reduce price differentials for a given product over space and time, thereby increasing food security.

Female empowerment may be enhanced by lower transport costs which reduces the time and physical effort spent by women in the collection of fuel and water, and in agricultural marketing. Reducing transport costs increases the net returns to female labor outside the household. If this raises extra-household female labor force participation, women's bargaining power within the household may be enhanced, thereby reducing intra-household income inequalities. Finally, reduced transport costs associated with attending meetings and social gatherings preserves and enhances social capital.

Key questions on transport

Issues particularly relevant for rural development are:

- What priority do the poor assign to improving rural transport?
- Who has responsibility for financing the recurrent costs of maintaining local transport infrastructure? Is such maintenance carried out? If not, why not? What incentives can be introduced to central, regional and local government to improve the maintenance of rural transport infrastructure?
- What standards are used in designing local access roads? Do they result in costs being so high that construction is sharply restricted? Would a lower standard be adequate to ensure adequate access?
- What types of transport do different members of poor households (men/women, young/old) use for what purposes? What are the costs (in money and time) of each of these modes of transport? Do the types of transport used by members of poor households vary according to the time of year?

- How many villages & communities have their transport links severely disrupted each rainy season? How could footpaths and dirt tracks be cheaply upgraded to take bicycle or small vehicle traffic using public works schemes with below market wage rates to employ local labor? (see Chapter 10, Section 2 on **Social Protection**)

4.2.2. Electrification

Supplying electricity to rural areas has the potential for reducing poverty in at least four ways:

1. It raises agricultural output by inducing investment in improved farm equipment.
2. It promotes the diversification of the non-farm rural economy by inducing investment in agricultural processing, manufacturing and service activities.
3. It improves the quality of life through the provision of domestic lighting and pumped drinking water.
4. It is often a prerequisite for improved communications in rural areas.

Indiscriminate power subsidies which bring few benefits to low income groups should be replaced by more focussed efforts by the government to diffuse new & proven low-cost energy technologies to poor rural households. Community initiatives to develop locality-specific energy sources should also be supported. On this topic Section 1 of Chapter 11 contains a sub-section (4.7) on Rural Electrification Programs, that discusses alternative means of improving electricity supplies to poor households in rural areas.

4.2.3. Telecommunications

Chapter 11, Section 4, **ICTs and Poverty**, contains a sub-section (4.3) on “pro-poor rural and universal access policies”, that discusses means of increasing the access of the poor to telecommunications and other information services, especially in rural areas, and emphasizes the potential role of new technologies. It notes that the telecommunications industry is transforming the extent and nature of communication worldwide. While the full implications of this process for the rural poor are as yet unclear, some relevant developments include:

- Cell phones are improving the poor’s access to regional and national economic information.
- Cell phone networks which cover rural areas are being used to provide early warning of natural hazards.
- Access to the Internet by rural communities offers a range of possibilities for reducing poverty, including
 - Receiving education and training via long-distance learning courses
 - Establishing local systems for monitoring and evaluating projects and programs, and sharing this experience with other communities.
 - Proposing policy initiatives to higher level authorities and providing quick feed-back on proposals received from above.
 - Identifying new opportunities for income earning.

At the same time, it should be noted that basic hard wire telephone connections in rural areas, where they can be extended and maintained cost-effectively, continue to provide highly valuable services.

4.3. Empowering small producers

Poverty is not just a lack of economic opportunities and access to resources. The poor have limited weight in bargaining processes and, in economic terms, are classic “price-takers”. By grouping together, poor people are better able to utilize the resources that are available to them and more effectively interact with other organizations, including government. Chapter 13, **Community Driven Development**, discusses ways in which local civic, social and other groups can be supported and fostered as a basis for local level development. Chapter 12, **Governance**, also addresses ways in which government can more effectively work with local groupings and measures to foster this, e.g. changes in the legal framework that provide legal standing for such groupings. One particular type of grouping that can play an important role in combating poverty is the producers’ organization (PO). When producers group together they can offer larger transactions to buyers and sellers and provide a more attractive business partner than any single individual. Helping producers get organized can also facilitate extension activities and help spur interest and understanding in new technologies and products. Fostering producer organizations is also an investment in social capital, that complements investments in other forms of capital, human, physical and financial.

Key questions on producers organizations.

Many organizations, associations, clubs etc. exist in societies. Their purpose may be purely social or they may have been developed for a specific purpose, mutual aid or defense, mutual financial support, etc. Producer organizations (POs) are membership organizations to provide services to their members. They perform economic or technical functions (e.g. irrigation groups or sales cooperatives), advocacy or policy functions (e.g. unions or syndicates), or even local development functions (e.g. road or track maintenance groups).

- What types of organizations exist within the rural areas under review?
- How many have a ‘formal’ ‘business’ common interest as their core purpose, i.e. that might be considered to be a Producer Organization (PO)?
- Are they open to the poorer members of the society, or only the local leadership? Most organizations of the PO type have a degree of exclusivity and are not open to everyone.
- Are the leaders of the POs members of the elite, or has different leadership developed?

Measures to support and strengthen producer organizations.

Experience has shown that assistance is best directed to pre-existent groupings. There are numerous examples of organizations that have been created in response to external signals of support that have not survived beyond the initial period of support. Support should be aimed at helping POs become more effective at providing services for which their members created them. Support may be either strategic or technical:

- Strategic capacities, to enable a PO to define its strategy to achieve its objectives, including (i) the capacity to carry out a diagnosis of itself and its environment; and (ii) accessing information and expertise in strategic areas.
- Technical capacities are necessary for POs to implement commercially oriented activities. These include: (i) functional literacy and numeracy; (ii) accounting skills; (iii) capacity to analyze constraints, synthesize members’ needs and set and articulate

priorities; (iv) capacity to design, implement and evaluate the outcome of an action; and (v) technical capacity for specific activities.

Support to POs should:

- Grant equal access to all the POs that meet the criteria for funding;
- Ensure that POs are legally registered, with transparent governing rules, procedures, accounting and reporting systems.
- Be addressed to existing POs accepting their limitations, working with them at their pace;
- Target the activities that the POs have chosen, based on their assessment of their capacities;
- Be carried out through a “learning by-doing” mode;
- Guarantee POs independence from government or donor agencies;

4.4 Natural Resources and Environment

The overall range of interactions between environmental conditions and poverty, including their impact on health, risks of natural disasters, and the use of environmental resources by the poor, are discussed in Chapter 15, **Environment**. Issues related to rural poverty relate particularly to the access of the poor to natural resources, primarily to land and water resources, specifically for agricultural purposes. However, the natural resource base is normally important to the rural poor for more than just its agricultural uses.

The poor typically make use of natural resources for a wide range of purposes. For example, a recent study in Zimbabwe identified as many as 100 items (e.g. wild vegetables and fruits, firewood, grasses, clays, environmental fertilizers, etc.) used by rural households in communal areas. Each may be quite minor but, in the aggregate, the households derived close to 40% of their income from natural resources other than using land for crop production. For the poorest households the proportion was even higher.

The most significant point is that many of these minor articles of consumption are overlooked by general surveys. Therefore, the degree of dependence of the poorest households on the natural resource base is often larger than is shown in household income surveys and, therefore, sound management of these assets is of particular importance for the poor.

This section first reviews issues related to measures to increase the access of disadvantaged groups to rights over land and water, primarily for agricultural purposes, and then turns to the broader use of natural resources by the poor and the sustainable use of these resources.

4.4.1. Access to Land.

Land plays an indispensable role in agricultural production, in accessing credit markets, in accumulating wealth and transferring it across generations. Land also confers social status and identity. Therefore, it is necessary to understand the institutional framework within which land is owned, transferred and used. An initial step is to develop a full understanding of the systems of land rights and to identify where and how these systems have been changing in recent years.

Key questions on land

1. Access to land by different groups of the rural poor

- How much land do poor households have, and how do their holdings compare in size with the holdings of others?
- To what extent are the holdings of poor households made up of several separate parcels of land?
- What proportion of the rural poor have no land of their own, and what proportion are unable to access land even temporarily?
- How many of the rural poor currently rent land?
- How important is access to common property resources by the rural poor (e.g., pasture, forests, lakes and ponds)

2. Tenure Systems

- How important to the rural poor is access through customary mechanisms or through mechanisms provided under statutory law?
- How do systems of property rights in land vary between different regions of the country?
- Do customary tenure systems offer farmers and herders sufficient security of tenure to make long-term investments in land and livestock?
- To what extent does national land legislation acknowledge and protect customary access rights of the poor to communal resources?
- Do women enjoy the same effective rights of land access and ownership as men under the various tenure systems through which the poor access land?
- Is the formal land titling and registration system functioning effectively, and can it provide security of tenure and access to financial markets for poor farmers?
- What are the most common types of land rental contracts (e.g., sharecropping, fixed-rent) among the poor?
- Have technological changes, new market access, epidemics, or extended periods of civil war and social violence brought about changes in property rights in land?

3. Transfers of property rights

- What are the rules of inheritance among small farmers?
- How are women treated compared to men under these rules?

4. Implications of changes in existing systems:

- Are customary land use rights well specified, understood and generally recognized by the local population?
- Does the exercise of such rights give rise to conflicts?
- How robust are the local organizations and institutions which oversee these rights, particularly in the area of dispute resolution?
- How may these organizations and institutions be strengthened in a sustainable fashion, and at what cost?
- If individual titling is to be undertaken, which groups may be adversely affected, such as herders, women or the members of ethnic minorities, and how can they be compensated?

Data sources for Land

(Numbers indicate topic for which the data is relevant)

- Agricultural Censuses (1)
- Household surveys (1)
- Farm management studies (1)
- Anthropological monographs (2,3)
- Land registry records (2,3)
- Land law (2, 3)
- Court records of land disputes (2,3)
- Tenancy legislation (3)
- Focus group meetings with small farmers (1, 2, 3)
- Focus group meetings with women (1, 2, 3)
- Participatory Rural Appraisal (1,2,3)

Policies to improve access to land

- Provide the poor with more secure access and strengthen institutions which manage land under customary tenure.
- Recognize customary tenure systems and incorporate them into the legislative framework;
- Promote women's rights to land, particularly through reform of inheritance laws;
- Promote development of rental markets; codify rights of tenants.

1. Promote active and diverse land markets

- Promote land reform initiatives whereby large landowners sell small parcels to qualified beneficiaries.
- Introduce a land tax to induce land owners to sell or rent out areas of land.
- Ensure that a diverse set of land rental markets exists to accommodate a variety of different contracts and to improve access to land by the poor.
- Introduce a land titling program to stimulate the rental market indirectly.
- Lift any prohibitions on the subdivision of land.
- Introduce measures to reduce the transactions costs of renting and buying land.

2. Land redistribution

- This can take the form of either negotiated or compulsory land reform.

Further details on land tenure may be found in **Technical Note 1**.

4.4.2. Access to water

Where water is a binding constraint on agricultural output, relevant questions include:

- What are the formal & informal rules governing access to water from different sources by different groups (including water markets)?

- What are the consequences of these rules for the distribution of income?
- Are water rights linked to land rights?
- Are there conflicts between different users of water? If so, what are they?

Data sources for access to water

- Farm management studies
- Anthropological monographs
- Land registry records
- Land Law
- Irrigation users' associations
- Regional studies
- Focus group meetings with small farmers, herders and other groups

Public action to improve access to water

The single most important dimension for poverty alleviation in the water resources sector is participation of the water users, in particular the poorer users, in the investment and management decisions that affect their lives. This has the double benefit of ensuring that the priorities of the poor are heard and in empowering them to control their own destinies. It means opening up the process of design to groups including the poor themselves and NGOs working with and for them. Poor women should be viewed as a specific sub-set of the poor who need to be ensured representation.

The dual challenge, in enhancing the benefits to the poor, is to (i) introduce direct benefits to the poor through non-conventional approaches and (ii) enhance and expand the range of indirect benefits to the poor. This might include:

- Developing new irrigation (including supplemental) in rain-fed areas with concentrations of poor people with some land.
- Redistributing water rights.
- Allocating new water rights to the poor.

Other policy initiatives in this area might include:

- Considering the introduction of user fees for farmers with water rights and exploring ways to develop markets in irrigation water
- Examining institutional mechanisms for mediating conflicts between water users.

Technical Note 2 illustrates four types of interventions along these lines:

- Development of small watersheds to enhance the biomass and water yield;
- Groundwater exploitation through small, affordable pumps;
- Resettlement projects providing irrigated land to small or landless farmers; and
- New construction or rehabilitation of surface irrigation schemes.

4.4.3 Sustainable natural resource management

As noted above, the degree of dependence of the poorest on the natural resource base is often larger than what is realized and, second, that sound management of the asset is of particular importance to the poor. These issues may be considered under two heads:

1. ensuring adequate consideration is given to the current pattern of use of environmental assets by the poor in any proposals to change use rights; and

2. placing adequate emphasis on measures to foster the sustainable use of natural resources in development of policies and programs.

A. Key issues on use of environmental assets:

- What percentage of poor people depend directly or indirectly on natural resources for their livelihood (other than using land to produce crops or graze livestock)?
- What percentage of poor people depend on them in times of crisis?
- Are there overt conflicts over natural resources?
- Which groups have access to which resources?
- Are the resources vulnerable to actions by other groups (e.g. coastal fisheries being depleted by over-fishing in other parts of the coastal zone)?
- How secure are these access rights?
- Does the existing legal code and/or macroeconomic policies provide incentives for the extensive use of the natural resource base?

Policies to improve or protect access to resources:

- Identification of areas in which poor people are highly dependent upon natural resources, and areas in which conflicts are occurring or in which competition is increasing;
- Identification of areas for protection;
- Modification of law relating to land and other resources to clarify rights, ease disputes and, where appropriate to strengthen rights of local disadvantaged groups (especially indigenous groups).

B. Key issues on sustainable use of resources.

- Is there evidence that the natural resource base is being degraded? In what way?
- Does this result from increases in population, or the pattern and practices of use in the absence of population increases?
- Is there evidence of stagnation or decline in yields because of increased incidence of pests or diseases?
- Do farmers or other users have viable alternatives to their current pattern of use (i.e. other crops or livestock that they could profitably produce, if they chose)?

Policies and programs to support sustainable use:

Development and dissemination of technologies was discussed in section 3.1.A To mitigate the type of problems noted above attention might be given to supporting efforts such as:

- Improvement in market system so as to increase the range of viable alternatives open to farmers.
- Promotion of intensification rather than incursion (e.g. removing subsidies or legal rules that promote incursion into "natural areas".
- Promotion of technologies that enable land fertility to be maintained without excessive use of purchased inputs (e.g. increasing use of crop residues or other natural nutrient sources, and use of Integrated Pest Management). These approaches may require research to modify practices developed elsewhere to local conditions.

5 Increasing Security for the Rural Poor

Risk can affect all households, but it is the poor who are truly vulnerable. Very poor households have few, if any assets, to protect themselves against severe shocks to their well-being. Significant numbers of households in poor countries have seen their lives ravaged by repeated conflicts and war, droughts and other natural disasters, AIDs and other epidemics, macro-economic shocks, not to mention periodic crop failures or seasonal food shortages. Some of these risks are highly localized, while others are more general, or even global in nature. Rural areas tend to be more vulnerable to most of these risks than urban areas³. For example, rural households, heavily dependent on production of primary commodities, and with few alternative economic opportunities, tend to be less able to adjust to major economic shocks⁴.

Among the rural poor the most basic source of insecurity is the lack of means and the inability to ensure an adequate food supply for the family at all times, generally referred to as food security. This section first deals with the problem of food security and then to more general problems of risk and vulnerability.

5.1 Food Security

Since the poor spend such a high proportion of their incomes on food, volatility of their consumption expenditure is generally treated as a problem of 'food security'. Food security has two aspects: (i) access to an adequate diet now, as measured by current health or nutritional status, and (ii) a high probability of access to an adequate diet in the (near) future. The latter is sometimes termed 'low food vulnerability'. Where seasonal or annual food entitlements are extremely volatile, these two aspects of food security may not be closely correlated.

The rural poor will tend to be heterogeneous with respect to their food entitlements. This heterogeneity implies that any single policy measure, such as reducing food subsidies or devaluing the currency, will affect different groups among the rural poor in different ways.

Most social protection policies address the problem of a low mean return to the poor's assets rather than variability of asset returns.

Key questions on food security:

- What proportion of the rural poor are net buyers/sellers of food?
- How do these proportions vary by region?
- What are the staple foods consumed by the poor in each region?
- Where and how frequently do the poor buy staple foods?
- Can they buy food on credit? If so, from whom, and under what conditions (interest rate, length of repayment period)?

³ Vulnerability refers to the ability to manage risk, i.e. the ability of individuals, households, or communities to reduce the impact of potential disasters.

⁴ Although, paradoxically, some particular shocks, such as a devaluation of the currency, may benefit them by increasing the relative value of the goods they are selling.

- Do staple food prices vary greatly from *year to year*, *month-to-month* and *season-to-season* in different regions?
- Does food consumption/capita vary greatly from *year to year*, *month-to-month* and *season-to-season* in different regions?
- How does food consumption/capita vary among members of the household over any given period (week, month, year)?
- If a poor household suffers an unexpected decline in income, how does this affect the consumption of each of its members (particularly of women and children)?

Data sources for risk and food security

- Ministry of Agriculture (yields & prices of crops and livestock)
- Household surveys of income/expenditure, employment, nutrition and health.
- Administrative records of rural health clinics
- Anthropological monographs (informal insurance arrangements, intrahousehold distribution of consumption)

Policies to increase food security

Technical Note 8, Food Security and Food Policy as an element of Rural Development, discusses the operation of food security programs in detail. Two types of public action can increase food security among the rural poor:

- Measures to reduce *ex ante* exposure to food consumption risk, including earlier and more accurate predictions of adverse shocks. These address the sources of risk, and so should increase food security directly.
- Measures to improve the *ex post* capacity of the poor to cope with food consumption risk: the effect of adverse shocks to farm income on food consumption can be mitigated by informal insurance arrangements, remittances, off-farm employment, borrowing and asset sales.

5.2 Reducing more General Risks faced by the Rural Poor

The risk management strategies⁵ employed by poor households generally involve three elements:

In conditions of risk and uncertainty they draw on their *social capital*, i.e. the extended family or other social networks.

They draw on *human, physical and financial capital*, e.g. selling off livestock.

They attempt to obtain access to information.

Their major problem is that the poor, by definition, have more limited assets than the population as a whole and are likely to be the last to receive critical information such as

⁵ Risk management is not covered elsewhere in the Sourcebook. For elaboration of the issues touched on here see World Bank (2000) *Dynamic Risk Management and the Poor: developing a social protection strategy for Africa*. (Draft October, 2000) Human Development Group, Africa Region

that related to the extent of disasters. However, development itself increases the level of human, physical and financial capital and, generally, increases the availability of important information (e.g. the accurate forecasting over the radio of the location of deadly storms enables people to prepare and, if necessary, leave the most threatened areas).

Key questions on risks:

- What are the major expected risks (adverse events) in the region or country under review (drought, cyclones or other excessive rainfall and floods, diseases such as AIDs)?
- Are there potential adverse events that could have catastrophic consequences, e.g. the spillover of insurgency from neighboring regions; ethnic tensions that could erupt?
- What are the main existing mechanisms used by the local population (and particularly by the poor) to try to mitigate the impact of these adverse events? How effective are they?
- Are there public sector actions that could be taken to either strengthen existing coping mechanisms, or to mitigate the impact of the event *ex post* and speed the recovery from the shock?

Actions to mitigate risks.

The pattern of risks will vary widely between areas and the following check list of questions covers some of the typical issues relevant to each type of public action at the country level:

1. Reducing exposure to risk *ex ante*

Improved prediction of shocks.

Introduction of an early warning system module in 'light' annual household surveys to identify vulnerability of individual rural communities and/or households.

Exposure to production risk can be reduced by improving rural infrastructure. Public/private partnerships might be encouraged to invest in those areas with the highest incidence and greatest severity of rural poverty.

Exposure to some price risks can be reduced by increasing the integration of markets over time and space.

Examination of the costs and benefits of introducing a system of price support for major crops grown by small farmers.

Increased public expenditure on sanitation and access to safe drinking water, distribution of mosquito nets impregnated with insecticide, vaccination campaigns and health clinics. (See Chapter 11.3, **Water** (Section 3, **Poverty, Water and Sanitation**), and Chapter 15, **Environment**.)

Women's bargaining power may be augmented indirectly by policy interventions to improve their and their children's food security.

2. Strengthening the rural poor's coping capacity *ex post*

Temporary labor migration to search for off-farm employment can be extended by improving the transport and communications infrastructure.

Public works programs can be initiated quickly and are designed to be self-targeted (see Chapter 10.1 on **Social Protection** and its **Technical Note 3**).

Access to consumption credit allows a household to cope with a shock without selling assets, when informal assistance through networks of kin and friends is insufficient. The state should attempt to foster competition between old and new sources of consumption credit in rural areas.

The government could play a more active role in promoting the emergence of new insurance markets targeted at the rural poor.

6. Exit Strategies From Rural Poverty

There are two other strategies by which members of low income households can escape poverty:

1. Migration out of rural areas, which affects both migrants and those left behind.
2. Receipt of public transfers .

6.1 Migration and remittances

Labor migration plays a critical role in shaping the livelihoods of poor households in developing countries

Members of low income rural households may participate in different types of migration. Some are seasonal, while others are permanent. In the long run, rural-urban migration is an integral part of the process of structural change and a powerful mechanism for reducing rural poverty

However, this migratory process may inflict external costs on urban residents in the form of greater congestion (for living and travelling), increased pollution and lower quality of life (larger classes in public schools lead to lowering of educational quality,). Whether such migration generates external benefits or costs for rural residents seems less clear.

Private remittances are an important aspect of migration, particularly for family members who remain in the migrant's area of origin. There are two factors which shape remittance behavior:

- Portfolio diversification in the face of risk: migration forms an integral part of an implicit insurance contract between the individual migrant and the household members who remain behind.
- Bequest strategy: remittances are often used to invest in household assets which in turn may be inherited by the migrant. This has been used to explain differences in remittance behavior between men and women stemming from gender-differentiated inheritance rules.

Evidence suggests that, while urban remittances not only finance rural consumption, but also on-farm investment in fixed and working capital, informal transfers are weak in facilitating risk management by households.

Key questions on migration and remittances

- What is the magnitude of different flows of labor migration within and into/out of rural areas?
- What is the age and gender composition of each of these flows?
- How have rates of intra-rural and rural-urban migration changed in recent years?
- Is most rural outmigration from the poorest regions and communities?
- Are most rural migrants from the poorest households in a given community?
- How are migration decisions by members of low income rural households related to the individual life-cycle?
- Is the share of remittances in household income high for the poorest households?
- Who controls remittances received by low income households and how are they spent?

Data sources for migration and remittances

Population Census
Migration and Employment Surveys
Nationally representative household surveys
Anthropological monographs
Studies by rural sociologists
Focus group discussions with groups of the rural poor

Policies to allow poor rural households to benefit from migration

Unrestricted population movement should be accepted as the norm and policies should be adopted which enable the rural poor to benefit from migration

Removal of formal barriers to migration is appropriate because policies that restrict migration hurt the rural poor more than the rich. However, systems for facilitating and monitoring the flow of migrant populations in destination areas may be needed.

6.2 Public transfers

Rural households with few economically active members and a high dependency ratio may receive little direct benefit from the types of public action discussed so far. For some, the receipt of remittances from migrant kin may be an important source of income, but for others, public transfers may represent the only route out of poverty.

Key questions on public transfers

- What public transfer programs exist for the rural poor?
 - Cash transfer programs (to widows, elderly, disabled)?
 - Child allowance programs (income transfers tied to child education, visits to health clinics)?

- Nutritional supplement programs for mothers and children?
- Food aid programs?
- Food-for-work programs?
- How many eligible rural households are not covered by each of these programs?
- What are the reasons for this incomplete coverage, eg. lack of information, high transactions costs?
- How many ineligible rural households are covered by each of these programs?
- What are the reasons for their inclusion, eg. high costs of more accurate targeting?
- What is the benefit incidence of each of these programs across the size distribution of rural income?
- Do public transfers 'crowd-out' private transfers, such as remittances?

Data sources on Public Transfers

- National/local government statistics/information on public expenditures by program type (1, 2, 4)
- Nationally representative household surveys (1-6)
- Focus group discussions with different groups of the rural poor (1, 2, 3, 7)

Policies relating to public transfers

Chapter 10.1 on **Social Protection** provides a general discussion of public and private transfers.

In the rural context, it may be noted that:

- Improvements in transport and communication infrastructure should lower the transactions costs of sending and receiving remittances.
- Poor transport and communications infrastructure in rural areas may limit the delivery of benefits at certain times of year. The take-up of benefits by eligible claimants may also be low as the transactions costs of making a claim tend to be higher in rural areas.

Many cash and in-kind transfers need effective targeting mechanisms which ensure full coverage of relevant groups of beneficiaries, while minimizing leakage to other groups.

7. Measuring Progress In Reducing Rural Poverty

There are at least four reasons why a country should measure progress in reducing poverty:

- To inform its citizens about the society in which they live, so that they may debate priorities more clearly, judge trade-offs more rationally and hold politicians to account;
- To promote evidence-based policy-making by civil servants;
- To inform donors who have committed resources to reducing poverty;
- To allow feasible poverty reduction targets to be set for the future.

7.1 Choice of indicators

The key steps in developing a poverty reduction strategy are to choose indicators of poverty, establish a base line and set targets for poverty reduction within a given timeframe. A general discussion of indicators and targets may be found in Chapter 4 on **Monitoring and Evaluation**, while Chapter 3, **Poverty Data and Measurement**, reviews relevant data sources. The desired characteristics of poverty indicators are that they should be reliable, and quick and cheap to collect.

It is more useful to identify a small number of indicators, measure them well and use the results for policy-making than to enumerate a long list of indicators, measure many of them badly and not use the results for policy decisions at all. Below is a priority list of indicators proposed for monitoring outcomes of poverty oriented rural development strategies. In selecting these, attention has been focussed on development outcome indicators. The exceptions are the inclusion of 'paved roads' and 'access to credit (output indicators), which play catalytic roles in rural poverty reduction.

1. Head count index (rural population living in extreme poverty)
2. Gender development index (health and education)
3. Percentage of rural children malnourished.
4. Percentage of biologically significant habitat protected.
5. Rural illiteracy index (proportion of rural people 15-50 years, who cannot read or write)
6. Rural infant mortality rate (<5 years)
7. Access to water (percentage of rural population with access to safe water)
8. Access to sanitation.
9. Rural paved roads.
10. Percentage of rural households with accounts in financial institutions.

Detailed definitions of these indicators and a set of alternative indicators are given in **Technical Note 10**.

7.2 Establishing a baseline

Once the indicators have been chosen, it is necessary to establish a base line in relation to which targets can be set and future progress measured. In the case of income poverty, the base line might include values of the headcount ratio and other standard poverty measures calculated from the most recent household survey. If there has been no survey for several years, the base line can either be set retrospectively, or drawn in the present by projecting changes in poverty using the country's growth rate since the survey year with an assumed poverty reduction elasticity.

7.3 Selection of targets

A target is a value which a specific indicator should attain by a particular date, eg. reducing poverty incidence by half by 2015. Where possible, policy makers should focus on outcome targets. However, outcome target ranges could be set rather than point targets.

While there are strong arguments for monitoring indicators at a sub-national level, there are inherent dangers to setting disaggregated poverty reduction targets. It may be useful to calculate regional and sectoral poverty indices, so that if a national poverty reduction target is not being met, it is possible to trace where the problem lies. So, while all targets necessarily imply indicators, not all indicators require targets.

The selection of targets should be subject to at least two consistency checks: long-run poverty reduction goals and objectives defined within a Medium Term Expenditure Framework (MTEF). Checking for consistency between short and long-run targets requires governments to make explicit how they want to get from now to the set date, while targets set for the PRSP should be consistent with targets set within the MTEF.

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