

AGRICULTURE AND RURAL DEVELOPMENT: HUNGER AND MALNUTRITION

World Bank Seminar Series: Global Issues Facing Humanity

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In a world of growing prosperity and agricultural abundance, about 800 million people still suffer from hunger and malnutrition. The United Nations has set the goal of cutting this number in half by 2015. Eliminating hunger and malnutrition is one of the most fundamental challenges facing humanity (Lomborg, 2004). The international community and developing countries must work together to achieve this goal.

Malnutrition and its associated disease conditions can be caused by eating too little, eating too much, or eating an unbalanced diet that lacks necessary nutrients. This paper focuses on two different types of malnutrition and then looks at the links between poor nutrition and agriculture. The first type is undernutrition, defined as failure to consume adequate energy, protein, and micronutrients to meet basic requirements for body maintenance, growth, and development. This is the leading nutrition problem in low-income countries and is characterized by low height for age (stunting), low weight for height (wasting), and low weight for age (underweight).

The second type of malnutrition involves two issues: overweight (excessive weight relative to height) and obesity (excessive body fat content). These coexist increasingly with undernutrition problems in developing countries. The key causes of overweight and obesity are increased consumption of energy-dense foods high in saturated fats and sugars, along with

reduced physical activity. Overweight and obesity are strong risk factors for major diet-related noncommunicable diseases, such as type II diabetes, cardiovascular disease, hypertension, stroke, and certain types of cancer.

A number of conceptual frameworks are now being used to address the range of factors influencing nutrition; major factors include food security, care of household members, and health (UNICEF, 1990; Food and Agriculture Organization, 2004; World Bank, 2006). This paper analyzes malnutrition from the agricultural perspective, and in particular food security in its different dimensions. Other perspectives on malnutrition will be treated separately in this seminar and should not be considered as competing concepts but rather as complementary.

THE GLOBAL SCALE OF MALNUTRITION

Malnutrition is one of the most devastating problems worldwide and is inextricably linked with poverty. Recent data (Food and Agriculture Organization, 2005) show that the proportion of undernourished people in the developing world (about 17 to 20 percent of the total population) remained fairly constant from 1990-92 to 2000-02. The vast majority of the world's undernourished people live in Asia (60 percent of the total) and Africa (28 percent), where undernutrition has decreased very little over the last decade (by 4 percent in Asia and 3 percent in sub-Saharan Africa).

The extent of malnutrition has been studied best among children, in extensive surveys conducted since the 1970s.¹ Using data from the World Health Organization on child growth and malnutrition since 1980, de Onis, Frongillo, and Blössner (2000) show that the prevalence of stunting in preschool children in developing countries worldwide fell from 47.1 percent in 1980 to 32.5 percent in 2000. Thus, although the trend is positive, child malnutrition remains a major global problem.

In Africa, although the prevalence of stunting likewise declined, from 40.5 percent in 1980 to 35.2 percent in 2000, the absolute number of stunted children increased by more than one-third over the same period. Within Africa, stunting is most prevalent in eastern Africa,

¹ The scale of undernutrition has also been studied among other populations and age groups, such as pregnant and lactating women (Rouse, 2003), elderly people (Tucker and Buranapin, 2001), and people living with HIV/AIDS (Salomon, De Truchis, and Melchior, 2002; Piwoz and Bentley, 2005).

where, on average, 48 percent of preschool children are affected. In western Africa the prevalence of stunting has changed little (from 36.2 percent to 34.9 percent), whereas northern Africa has shown considerable improvement (from 32.7 percent to 20.2 percent). Meanwhile Asia has made substantial progress: stunting there decreased from 60.8 percent in 1980 to 43.7 percent in 2000. Yet stunting remains widespread, particularly in South Asia (Afghanistan, Bangladesh, Bhutan, India, Nepal, and Pakistan), where child malnutrition is extremely common.

The effects of malnutrition on child mortality in developing countries are devastating. It has been estimated that protein-energy malnutrition is a causative factor in 49 percent of the approximately 10.4 million annual deaths among children under 5 years of age (World Health Organization, 2000, 2005a).

The other face of malnutrition is the soaring rate of obesity in many developing countries, where it is estimated that over 115 million people suffer from obesity-related problems (World Health Organization, 2005b). Although nationally representative and reliable longitudinal surveys on obesity prevalence remain few in many developing countries, several trends can be observed (Caballero and Ibn Tofai, 2001). High levels of overweight and obesity among adults are reported in many middle-income countries such as Brazil, China, Egypt, Mexico, Morocco, South Africa, and Thailand. Compared with the United States and most European countries, where the prevalence of both overweight and obesity are rising by about 0.25 percentage point a year, rates of change are very high in many of these countries (Popkin and Du, 2003). A growing prevalence of obesity has been particularly noticeable among adult men and women in Latin America and the Caribbean (Sinha, 1999; Uauy, Albala, and Kain, 2001). For example, Martorell and others (1998) show that a substantial proportion of Latin American and Caribbean women—ranging from 8.9 percent in Haiti to 35.5 percent in Peru—are either overweight or preobese, with several countries matching or exceeding the U.S. prevalence of 26.5 percent.

The prevalence of overweight among preschool children in developing countries as a whole is reported to be relatively low, at 3.3 percent (de Onis and Blössner, 2000). Some countries and regions, however, have considerably higher rates, including northern Africa (6.8 percent in Morocco, 8.6 percent in Egypt) and Latin America and the Caribbean (6.2 percent in Costa Rica, 7.5 percent in Chile). Both Africa and Asia, however, have rates of wasting that are 2.5 to 3.5 times higher than rates of overweight, highlighting the fact that undernutrition remains a major public health burden in these regions.

The implications of obesity for public health are immense. Obesity is recognized as an underlying risk factor for many noncommunicable diseases, which are predicted to become the cause of over 60 percent of the disease burden and mortality in developing countries by 2020 (Murray and Lopez, 1997).

Finally, malnutrition has a significant economic impact. The economic loss to a nation where malnutrition is prevalent can be easily estimated in terms of lost productivity per individual worker. For example, the annual economic loss in Nigeria due to malnutrition in children under 5 in 1994 has been estimated by this method at \$489 million, or about 1.5 percent of GDP (Food and Agriculture Organization, 2004). More sophisticated econometric techniques can be used to measure and project the costs of undernutrition and diet-related noncommunicable disease on the basis of World Health Organization mortality projections, dietary and body composition survey data, and national data sets of hospital costs for health care. Using these methods, Popkin and others (2001) estimated that obesity and related noncommunicable diseases cost China about 2 percent of its GDP each year.

THE FORCES SHAPING THE PROBLEM OF MALNUTRITION

This section analyzes malnutrition and its determinants from an agricultural point of view, guided by the notion of food security. Food security, as defined at the 1996 World Food Summit in Rome, is achieved at the individual, household, national, regional, and global level when all people, at all times, have physical and economic access to safe and nutritious food sufficient to meet their dietary needs and food preferences for an active and healthy life. Food security is thus a multilayered concept, determined by several factors, including food availability, access to food, and food consumption, working at several levels: global, regional, national, household, and individual.

a) Food Availability

Food availability refers to the supply of food at the global, regional, national, or local level, without regard to the ability of individuals to acquire it. Sources of supply may include home production for consumption, domestic commercial food production, food stocks accumulated in earlier periods, commercially purchased imports, and food aid (Diskin, 1994). There are presently no signs of a food availability problem at the global level. In fact, global food production has more than kept pace with increasing world population in recent decades,

increasing in per capita terms by 0.9 percent annually, and even faster in such populous developing countries as China and India.

At the regional level, important changes are occurring in food production and in trade patterns between different regions of the world. There is a trend toward greater food imports in many developing regions: sub-Saharan Africa is a region of particular concern in this regard. This trend reflects the poor performance of the agricultural sector in the region, where yields for cereals (1 ton per hectare), roots and tubers (8 tons per hectare), and pulses (0.5 tons per hectare) are well below world—and even developing country—averages. The main culprits are shortages of inputs such as fertilizers, lags in technological change, and the region's marginal position in global trade and investment. Each of these proximate causes of poor performance in turn stems from a wide variety of problems confronting African agriculture, including domestic policies that are often hostile to agriculture, trade barriers in industrial countries, unsuitable climate, poor infrastructure, and weak education systems. Food availability is also lowest in sub-Saharan Africa, at 2,150 kilocalories per person per day.

At the national level, food availability has often been viewed mistakenly as a food self-sufficiency problem. As a result, government food security strategies have frequently emphasized increased domestic food production, through the distribution of Green Revolution technologies, as the key means for addressing malnutrition (Harriss, 1987; Kennedy and Bouis, 1993). However, domestic production strategies are not necessarily the best way to increase availability: many economists (for example, Jayne and Rukuni, 1993) have shown that some degree of reliance on imports may be a less costly way of procuring domestic food needs. Moreover, increased food availability at the national level does not ensure increased access to food at the household level. As Sen (1981) argues, "starvation is the characteristic of some people not *having* enough food to eat. It is not the characteristic of there not *being* enough to eat."

b) Access to Food

Access to food refers to the ability of households to obtain food, whether through home production, commercial purchase, or transfers. In most circumstances the main cause of food insecurity is not lack of availability but lack of access due to a lack of purchasing power and insufficient household agricultural production—both characteristics associated with poverty. Access to food is a large problem in South Asia, where, although crop yields and food

availability are higher than in sub-Saharan Africa, access to food remains limited by very low income per capita (\$380 a year on average) and the large share of the population (43 percent) living in poverty. However, access to sufficient food at the household level does not guarantee that all individuals have adequate food intake. That depends also upon the distribution of food among household members, methods of food preparation, dietary preferences, and mother-child feeding habits.

c) Food Consumption

Food consumption refers to the quantity and quality of food ingested at the household or individual level. Although often measured in terms of food expenditure, it is conceptually closer to "food intake" as measured by calories or by quantities of different nutrients.

Nutritional status, in turn, refers to a person's physical condition as a result of the ingestion, absorption, and utilization of nutrients. Nutritional status thus depends not only on food intake, but also on the body's ability to utilize these nutrients, which may be influenced by other, unrelated health factors.

Much evidence (for example, Jayne and Chisvo, 1991; Kennedy and Bouis, 1993) suggests that one cannot simply assume strong and straightforward linkages all along the pathway from food production to nutritional outcomes. For instance, increased food availability may not lead to increased food access, if the former is achieved in such a way that it does not increase the real incomes of low-income households. Also, many factors other than household food production and income may affect rural food consumption, such as intra-household resource allocation patterns. Similarly, many factors other than food consumption, such as infectious disease, may affect nutritional status.

The challenge for policymakers and analysts concerned with achieving food and nutrition security is to understand how these various determinants—food availability, access to food, and food consumption—are linked to one another; how closely they are related in various contexts, and what important intervening variables affect the linkages among these variables to nutritional outcomes (Kennedy and Bouis, 1993; Diskin, 1994).

CONTROVERSIES AND ALTERNATIVE VIEWS

No one disputes the responsibility of national governments and the international community to combat hunger and malnutrition. The question is how to achieve better nutrition. Here we

present some alternative perspectives and approaches, such as the role of food aid, school feeding interventions, and the use of agricultural biotechnology and genetically modified crops.

[a]Food Aid

Food aid is the international provision of food commodities, usually the surplus of donor countries, for free or on highly concessional terms. Food aid is a contentious issue, because although it can clearly help some of the most needy in society, it may also cause economic harm to others (Barrett and Maxwell, 2005; Del Ninno, Dorosh, and Subbarao, 2005). The challenge of food aid lies in determining whether it can be an effective component of development policies aimed at achieving food security and improved nutrition.

On the one hand, food aid can fill the gap when food availability from local production and commercial imports is insufficient and markets fail to respond to demand: this generally occurs in acute humanitarian emergencies. On the other, food aid may undermine agricultural production by reducing domestic prices for farm produce, which now has to compete with free food aid. In addition, food aid may create a disincentive to invest in agricultural inputs, processing plants, and markets, thus impeding economic development. Because both these arguments have some truth to them, food aid must be carefully managed so as to minimize the negative impacts.

Donors need to clarify their policy on the use of food aid, because it is generally recognized that food aid-in-kind sent by industrial countries, often at great cost, is not the best way for developing countries to attain long-term food security. In certain situations food aid may be essential to the well-being of vulnerable segments of the population, if it is provided on time, cheaply, and in a manner that does not destroy local production incentives.

Arguments for or against the use of food aid should be made on the grounds of its efficiency as an instrument to address specific objectives and situations, such as preserving lives during natural and man-made disasters and protecting vulnerable social groups such as refugees, disabled people, or AIDS orphans. Food aid should always avoid disrupting local markets and production and should be linked to longer-term strategies for agricultural rehabilitation and development. Alternatives to food aid delivered from donor countries should be considered. For example, it may be preferable for donors to provide cash to recipient governments with which to buy food on the international market. Another alternative is for donors to buy food in

nearby developing countries with adequate food supply and then donate it to poor, food-short countries.

[b]School Food Programs

Providing free or subsidized food to children in school is another contentious issue, because it is not clear that school food programs are a cost-effective investment for improved nutrition. Many governments justify such programs for their supposed nutritional benefits. However, the consensus in the research community is that such aid may come too late: the damage caused by malnutrition to human growth, brain development, and human capital formation is greatest—and largely irreversible—during gestation and the first two years of life (Shrimpton and others, 2001). Any such investments after this critical period are much less likely to improve nutrition. School food programs can, however, sometimes be justified as providing an incentive for children to go to school and to perform better. But earlier intervention is a more effective means of dealing with undernutrition in children.

[c]Agricultural Biotechnology

The use of agricultural biotechnology, and specifically of genetically modified organisms (GMOs), to improve food security and nutrition is a highly contentious issue (Omamo and von Grebmer, 2004). GMO advocates often insist on the potential benefits of genetic engineering: not only the food and nutritional benefits (for example, from genetically engineered, protein-rich wheat and millet, or from “golden rice” containing vitamin A), but also the potential for increased agricultural production (disease-resistant cassava, salt-tolerant crops) and reduced postharvest losses (delayed overripening of fruits and vegetables, better storage and transport).

On the other side, environmental activists see great threats and risks from GMO technology. For example, the transfer of genes from one species to another may transfer characteristics that cause allergic reactions in people; the breeding of plants to generate toxins to pests may encourage resistance in those pests or harm beneficial species. Biotechnology is also very expensive, and many developing countries lack the capacity to assess the advantages and disadvantages of biotechnology and GMOs for their own environments and people. Nevertheless, an increasing number of developing countries are investing in biotechnology, and in GMOs, with some success (especially in Brazil, China, India, and South Africa).

ACTIONS

Because malnutrition is related to poverty and lack of development in many ways, a wide variety of development actions are needed to improve food security and nutrition. Some of these can be undertaken by national governments; others must be addressed by the international community. Detailed strategies and actions at the country level can only be defined through a country-specific analysis of the forces driving malnutrition. Here therefore we make only a few general recommendations.

[a] Domestic Policies and Investment

Malnutrition can be often attributed to shortcomings in the domestic political framework or the domestic economic environment. In order to bring about food security, governments should put in place policies and institutions that foster growth and reduce poverty. This requires a clear strategy to ensure that economic growth is pro-poor and that the poor have access to productive assets, markets, institutions, and services. As the incomes of the poor rise, generally they purchase more and better food. This will not cure the problem of hunger and malnutrition, however, because the cause is not just low income; it will, however, contribute to a solution at the household level.

Several authors and task forces (for example, UN Millennium Project Task Force on Hunger, 2005) have made a number of general recommendations for governments to reform their policies and increase their investment in agriculture in order to achieve food security. An integrated and multisectoral policy approach is essential, because countries frequently lack a clear policy or strategy to address each of the three dimensions of food security. Also, institutional roles, mandates, and initiatives toward improved nutrition are often diffused across a range of ministries, donor-funded projects, nongovernmental organizations, monitoring networks, and the private sector. The drafting of poverty reduction strategy papers (PRSPs) provides a good opportunity for multisector planning and mainstreaming of food security in all areas of domestic policy. However, PRSPs are only a first step toward concrete domestic policy reforms (Food and Agriculture Organization, 2003; World Bank, 2004).

National governments must also make a financial commitment to increase public funding to the sectors essential in combating malnutrition, in particular the agricultural and

rural sectors. The Maputo Declaration on Agriculture and Food Security in Africa, adopted by the African Union in July 2003, is an example of such a commitment. This declaration endorsed a recommendation that African countries should invest at least 10 percent of their budget in agriculture and rural development.

Extensive research has been undertaken on how different agricultural policies affect domestic production and trade, and ultimately food availability. Most policies are intended to affect the price of a commodity to producers or consumers or both, or to affect producers' incomes. Policy must balance the interests of food consumers in low prices with those of producers and investors in high returns. General guidelines are available with which to design agricultural policies that support a healthful food supply and potentially reduce the risk of obesity and associated noncommunicable diseases (Nugent, 2004). However, general recommendations for agricultural policy reform are difficult to provide, because the causes of food insecurity and malnutrition are often country-specific. Broadly speaking, however, those policies and those investments are best which promote agriculture and food market development and rural infrastructure and stimulate private investment in agriculture and in agroprocessing, while providing safety nets for the poor. The devil, of course, is in the details.

[b]Removing Internal and Regional Barriers to Agricultural Trade

Trade is an essential element of food security. An export-led agricultural strategy focusing on areas of comparative advantage is likely to generate stronger growth and increased incomes and may be a better way to bring about food security. A strong external trade position also helps achieve food availability at the national level by strengthening the capacity to import.

However, low-income countries, which today account for less than half of 1 percent of global trade, have been largely excluded from the benefits of trade liberalization. Their export industries continue to face both internal obstacles (lack of a secure legal framework; weaknesses in infrastructure, information flows, and human resources) and market access restrictions imposed by industrialized countries (tariffs, quotas, and technical barriers to trade). It is essential that developed countries make greater concessions to open their markets to all types of products from low-income countries. Also needed is greater capacity for trade, achieved by tackling the different obstacles and helping exporters meet product standards, safety requirements, and certification procedures (Hoekman, English, and Mattoo, 2002).

Conversely, liberalization may result in increased exposure to foreign competition and the removal of government support for certain sectors. These adverse impacts may have

negative consequences for food security in the short term. In view of these risks, rules for special and differential treatment for developing countries are being negotiated in the WTO context (Newfarmer, 2005).

Regional integration can help achieve food security by expanding marketing opportunities, integrating food markets, and facilitating food transfer from areas of surplus to areas of shortage. In addition to the benefits of free trade areas and customs unions, regional cooperation is vital to solving common problems related to food insecurity. Environmental problems, agricultural pests and diseases, agricultural research, and infrastructure often have a cross-border dimension that requires effective regional cooperation. Finally, regional integration is also an important step in integrating developing countries into the global market.

[c]Strengthening Agricultural and Nutritional Research

The exceptional growth in agricultural productivity over the past century was primarily a result of investments in agricultural research, agricultural extension, irrigation, and rural infrastructure, combined with private investment in agriculture, agricultural input supply, and processing. Research generates new knowledge and technologies, which may or may not benefit the poor and increase food security. In industrialized countries, agricultural research is increasingly conducted by private companies and has benefited farmers and consumers in those countries. By contrast, less research has been done in low-income countries, and what little research has been done has focused on the staple crops grown by poor farmers (such as sorghum, millet, roots, and tubers) and on techniques suited to nonirrigated, low-input, risk-prone agriculture on marginal lands (InterAcademy Council, 2004). This has contributed, along with the other factors described above, to many poor farmers remaining poor.

International task forces (see, for example, UN Millennium Project Task Force on Hunger, 2005) recommend supporting a more active role for the public sector in agricultural research in developing countries by increasing national investment in research to at least 2 percent of agricultural GDP by 2015. Three-quarters of this should go to agricultural research—embracing sustainable crop, livestock, fish, and tree production systems and associated natural resource and ecosystem management—and the rest to nutrition research. This would more than double the current funding for such research. Rural infrastructure and other rural services (finance, marketing) also need significantly increased investment.

In addition, developing country governments and donors should enter into a new partnership with private companies with deep pockets for research. Governments, donor agencies, and the international agricultural research centers coordinated by the Consultative Group on International Agricultural Research should increasingly facilitate the transfer of technology between developed and developing countries and between the private sector and the public domain.

International agricultural research can support the fight against malnutrition and hunger in numerous ways:

- Crop breeding is perhaps the most direct approach toward improving nutrition through increased agricultural production. This was shown by the Green Revolution, which succeeded in increasing farm productivity and output in South Asia, leading to price declines and increased human food energy intake.
- More recent work has focused on plant breeding to improve micronutrient status by biofortifying staple crops (Stein and others, 2005).
- Livestock farming can improve nutrition both by raising producer incomes and by increasing consumption of high-protein animal-source foods.
- Fish provides proteins and a wide range of vitamins and minerals. However, increasing fish production to improve nutrition has proved to be quite a complex undertaking, and success at integrating fish production and nutrition appears to be largely context- and project-specific (Prein and Ahmed, 2000). There have, however, been some notable successes, particularly in China.
- Postharvest activities can affect nutrient availability in many ways, for example by increasing the nutrient density of foods consumed by infants and increasing consumption of nutrient-rich foods (Hagenimana and Low, 2000).

To be sure, both the potential and the actual nutritional benefits of these types of interventions will depend largely on the context and on the specific project, as well as on the other factors that affect nutrition.

[d]Actions by the International Community

The international community has committed itself on several occasions to fighting global malnutrition and hunger. The right of all people to adequate food and nutrition has been recognized in various international human rights instruments, both legally binding conventions and nonbinding declarations. Examples of the former are the 1948 Universal Declaration of Human Rights and the 1990 Convention on the Rights of the Child. Examples of the latter include the World Declaration on Nutrition, adopted at the Joint FAO/WHO International Conference on Nutrition, held in Rome in 1992, and the Rome Declaration on World Food Security, adopted at the World Food Summit in 1996. In the Rome Declaration, heads of state reaffirmed "the right of everyone to have access to safe and nutritious food, consistent with the right to adequate food and the fundamental right of everyone to be free from hunger." Although nonbinding, declarations such as these exert a measure of moral persuasion on the signatory governments.

Concrete targets were set at the UN Millennium Summit in 2000, where world leaders pledged to reduce hunger and extreme poverty by half. The nutrition target of the Millennium Development Goals (MDGs) is to reduce by half the prevalence of underweight among children under 5 between 1990 and 2015. The linkage with agriculture is also strong for the MDG of reducing poverty and hunger by half. Other MDGs also have direct or indirect linkages with agriculture (World Bank, 2005).

International donors also made a strong financial commitment in the Monterrey Consensus of 2002, which urged rich countries to raise their overseas development assistance from 0.2 percent of their combined GNP (\$53 billion at the time) to 0.7 percent. Reaching the Monterrey target would require raising total assistance to \$175 billion a year. Authors such as Jeffrey Sachs (2005) as well as various civil society groups have made a persuasive case for ending extreme poverty by 2025 by honoring the Monterrey Consensus and increasing assistance to sectors related directly to hunger reduction, such as agriculture, nutrition, water, sanitation, and markets related to agriculture.

Finally, international donor agencies must increase the effectiveness and coordination of their investments in agriculture, nutrition, and humanitarian food aid. Projects are often not as efficient as they could be because of their typically short horizon (three to five years), cumbersome procedures and reporting requirements, and failure to address problems on a national scale (Goodland and Cleaver, 2002). Suitable vehicles for donor coordination must

be sought through shared coordination mechanisms, adopting common monitoring procedures, and developing robust systems for sharing knowledge and results.

THE WORLD BANK'S ROLE IN ADDRESSING MALNUTRITION AND HUNGER

The World Bank is the single largest source of funding for agriculture and rural development in developing countries. In financial year 2005 total World Bank lending to agriculture was \$2.1 billion, and lending for all rural development activities was \$8.7 billion. About 70 percent of Bank lending to agriculture supports production of food and cash crops, irrigation and drainage, and the development and distribution of technology.

The agricultural dimension of the World Bank's approach to malnutrition and hunger is outlined in its rural development strategy as presented in *Reaching the Rural Poor* (World Bank, 2003). That strategy is aligned with the Bank's focus on poverty reduction and therefore sets broad-based economic growth and, specifically, economic growth in rural areas as one of its main objectives. At the country level, the Bank's support is mainly focused on policies that are agriculture-friendly, as well as projects and programs that pursue increased agricultural productivity and economic growth in other sectors. These projects and programs may contain nutrition components.

On the policy front, the Bank works with client countries to create an appropriate overall macroeconomic and agricultural-rural policy and a supportive institutional framework. That includes, for example, the liberalization of agricultural markets by both industrial and developing countries. The Bank urges the industrial countries to remove trade barriers to developing countries' products and to phase out agricultural subsidies. A concrete example of Bank support related to greater openness to trade is its review of the role and effectiveness of state enterprises in food crop production (for example, in India and Indonesia) and in producing crops for export (for example, in Burkina Faso, Ghana, and India).

Improved agricultural productivity and growth are a central focus of the rural development strategy, recognizing that, in many low-income countries, agriculture is the main source of rural economic growth and that agricultural growth is the cornerstone of reducing rural poverty (Timmer, 1997; World Bank, 2001). The World Bank has supported numerous interventions aimed at increased agricultural productivity in countries throughout the developing world. Major clients are found in Brazil, China, Egypt, Ethiopia, Ghana, India, Mali, Uganda, Vietnam, several countries in Central America, and some of the newly independent countries of the former Soviet Union.

Increased nonfarm economic growth is another objective of the rural development strategy, as it is an essential element in increasing rural incomes and food access at the household level. A concrete example of World Bank support is the Food Security Program in Ethiopia, designed to increase access to food for the population living in the various chronic food-deficit regions of the country.

Finally, the rural strategy underlines the need for a more sustainable management of natural resources (land, soil, water, and fisheries), as these support agricultural activities and other economic processes in rural environments.

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