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**AGRICULTURE AND RURAL DEVELOPMENT  
FOR REDUCING POVERTY AND HUNGER IN ASIA:  
PAST PERFORMANCE AND  
PRIORITIES FOR THE FUTURE**

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*Agricultural and Rural Development  
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## **Agriculture and Rural Development for Reducing Poverty and Hunger in Asia: Past Performance and Priorities for the Future**

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In the last thirty years Asia has experienced dynamic growth and structural transformation, and has achieved substantial poverty reduction. The extension of current trends will create a dramatically transformed Asia by 2015. The incidence of people living in poverty in the region has fallen from more than 50% in the mid-seventies to 18% in 2004, and the incidence of hunger from more than 30% to 16%. Currently the region is home to 520 million hungry people (as defined by FAO) and 600 million poor people (as defined by the World Bank).

By 2015 Asia's share of global GDP will approach 42%, however Asia will still be home to half of the world's poor and best projections indicate that three-quarters of these poor will live in rural areas. Currently 85% of those who live on less than a dollar a day live in rural areas. Generating productivity increases in agriculture and non-farm rural industries is critical in a region in which 60% of the population will remain living in rural areas in 2015. Answering the question of how to solve rural poverty in Asia is thus essential to facilitating the participation of the poorest in the region's growth. This issue needs to remain high on the development policy agenda for the next two decades.

This brief addresses these questions by examining the past achievements of rural poverty reduction in the region and some of the drivers of that change. The role of agricultural growth in contributing to Asia's poverty reduction experience is clearly evidenced. Current and future opportunities and challenges facing strategies for rural poverty reduction in Asia are examined.

### **Achievements to Date**

In 1975 agriculture accounted for between 30 and 40% of GDP and 49-94% of the workforce across the region causing growth in this sector to be a major source of overall economic growth well into the late 1980s (see Table 1). Agricultural growth was driven by productivity increases in agriculture evidenced in higher yields, expansion of irrigation, and higher agricultural labor productivity. Science and technology played an important role in this.

In South Asia these productivity increases were in large part due to the green revolution, whilst in other countries they were driven mainly by agricultural policy reform. Although early growth in agricultural income in China was accelerated by green revolution effects, later growth resulted from breaking up collective farms, introducing the household responsibility system, reforming the procurement system and liberalizing agricultural prices. Picking the "low-lying fruits" of agricultural reform was a not only a one-time gain but triggered a monumental expansion of the China economy.

The high concentration of poverty in rural areas and the continued dependence of many of the poor on the farm sector for their incomes caused agricultural growth to have a substantial impact

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on poverty reduction, regardless of agriculture's share in overall GDP. This is evidenced in both the experiences of China and India: states in India that saw the largest reductions in poverty were also the ones that experienced the highest agricultural growth, and the periods of largest poverty reduction in China were the ones when agricultural incomes increased the most. Agricultural growth contributed most to poverty reduction when land was equitably distributed (as in Indonesia), new technologies could be profitably adopted on farms of all sizes (such as the green revolution technology), rural infrastructure connected villages to local markets (as in the lowland areas of Vietnam) and farmers were able to diversify into the rural non-farm economy (such as in Bangladesh).

*Table 1: Share of agriculture in GDP and growth, and trends in poverty*

	Share of agriculture in GDP (%)		Share of agricultural growth in overall growth (%)		\$1 a day poverty (%)	
	1975	2005	1975-1985	1995-2005	1981 -1983	2004
<b>East Asia &amp; Pacific</b>	32	13	20	7	58	9
<b>China</b>	32	13	21	6	64	10
<b>South Asia</b>	40	19	18	10	50	31
<b>India</b>	41	18	17	9	48	34

Agricultural growth not only impacts rural poverty reduction through increased farm incomes, but also through stimulating the non-farm economic sector in rural areas and small towns. Studies in the 1980s showed that the impact of a US\$ 1 increase in agricultural value added in the region resulted in between a US\$ 0.5 and US\$ 1 increase in non-farm value added. Non-farm income—which includes rural trade, services, transportation, handicrafts, transfers of remittances, and small-scale manufacturing—is now an important source of income for rural households in Asia (the non-farm share of rural income is estimated at 51% for Asia). Even before the explosive growth of the 1990s the rural non-farm economy accounted for one third or more of rural employment, and there is evidence that growth of the rural non-farm economy contributed to reductions in rural poverty in parts of Asia (such as in India and Bangladesh). The contribution of the rural non-farm economy to reductions in rural poverty has been as much a result of indirect effects—tightening of rural labor markets and raising agricultural wages—as a result of a direct impact on generating higher income earning opportunities.

The rate of progress has not been uniform, however. In East Asia and the Pacific, the value-added in agriculture grew at about 4.7 percent during 1980s, 3.5 percent during 1990s, and 3.4 percent during 2000–2004, whereas in South Asia the rates of growth during these periods were 4.4, 3.2, and 2.1 percent. Within countries regional disparities have also been stark. In India, for instance, half of the poor are found in just three states. The most disadvantageous regions often suffer from poor agro-ecological conditions and limited market access; although their poorer record on poverty reduction can also be due to public policies or poor governance. Thus there are in fact many “Asias” today, and the policies to deal with poverty and rural development must be tailored accordingly.

There are also specific groups within the region that have benefited less from growth. Ethnic minorities located in the mountainous regions in South-East Asia (such as in Vietnam and Laos), tribal peoples in South Asia (such as in India and Bangladesh) and members of scheduled castes in India are examples of these excluded groups. The situation of women in Asia varies from country to

country but in general gender inequality remains an additional cause for concern. Inclusive agricultural and rural development strategies that offer real opportunities for improvements in well-being for these groups are needed.

### **Current and Future Challenges and Opportunities**

The continued concentration of the Asian population, particularly the poorest, in rural areas implies productivity increases in agriculture and non-farm rural industries remain a critical component of an inclusive growth strategy for the region. It takes time for growth in urban based manufacturing and service activities to pull and absorb the increasing labor force from the rural sector. In particular the transformation of small-scale farming towards a mix of increased scale, efficient part-time farming arrangements, and non-farm work takes time. In the meantime, agricultural and rural growth remain important in reducing rural income and containing the growing disparity in rural-urban incomes.

Since acceleration of rural growth is one of the key ways to reduce rural poverty, the primary challenge before policymakers is to strengthen incentives, technology, and institutions designed to promote rural growth. Second, measures have to be taken to ensure that rural poor farmers and landless can participate in the fruits of rural economic growth.

The components of a pro-poor development strategy include:

- Improved access to markets, land, and credit for the poor
- Land markets and land reforms to increase tenure security and access for smallholders
- The effective use of new and increasingly sophisticated technology in agriculture, and transactions cost cutting communications, and efforts to make these technologies available to small farmers and rural communities
- Innovations to bring small farmers into the orbit of (micro-)finance and insurance institutions through intermediaries, if appropriate
- Public-sector investment in crop- and biotechnology that has high social benefits for the poor
- Decentralization of extension services to encourage bottom-up flow from farmers, combined with adaptive, location-specific research

Encouraging growth in the sectors in which the poorest concentrate will not be enough to ensure that they are included. Investments in education, health, nutrition and safety nets are important in ensuring that the economic opportunities created by growth are available to the poorest. Social protection and safety nets must play a growing role in supplementing income and providing employment when incomes are jeopardized. A wide variety of social assistance measures such as labor-intensive public employment schemes, conditional or unconditional cash or food transfer or subsidy programs, as well as nutritional intervention programs have been tried in different countries. The lessons learned there need to be monitored and analyzed so that new and improved cost-effective and poverty-alleviating schemes can be devised and shared in the diverse region.

However, today's Asia faces different challenges and opportunities and policies for agricultural and rural development need to be adapted accordingly. Today, a new and much broader concept of agriculture is called for in Asia, which encompasses the whole supply chain of production, processing, and retailing, and the growing role of ecosystems services (such as biomass production for energy, carbon sequestration and watershed management) of economy wide and societal relevance. These aspects of agriculture require attention and incorporation in pro-poor

strategies. Also, the nature of “hunger” is changing and a broader concept of nutritional deficiencies beyond calories is needed in a pro-poor rural growth strategy. In particular rural development strategies need to adapt to the following:

### ***Changing nature of agriculture and new opportunities***

*Food markets* and agricultural production are rapidly changing in Asia. Cropping patterns are diversifying from reliance on traditional cereals and export crops toward newer and higher-value products such as fruits, vegetables, and flowers—all facing rising demand in response to income growth in domestic as well as in export markets. Livestock and dairy production is also increasing in response to rising demand. Food safety and animal health in extended food chains has become increasingly important and production systems have changed as a result. Consumers are increasingly willing to pay a premium for quality and food-safety and a larger share of consumer food purchases are now made through supermarkets that can ensure these demands are met.

*Agriculture energy* (bio-fuel) production has the potential to create an opportunity for farmers through increasing demand for agricultural products, including for bio-mass products. A modern bio-fuels industry could also provide farmers in parts of Asia with a use for crop residues and marginal land and, because bio-fuel production can be labor intensive, it may generate additional employment in rural areas.

*Enabling small-holder farmers* to produce for and connect to these new markets is a challenge for the public and private sector in the region. The farm size debate has been raging for quite some time. Can small farms take advantage of opportunities—technology, institutions, and incentives—and be viable and able to augment their income sufficiently to escape poverty? The productivity advantage of small farms is thought to be derived from lower labor costs, using family labor and working closely with hired workers. The new markets often entail higher capital intensity in production, greater risks (perceived and real) and demand new skills. Ensuring new crops and new technologies are scale-neutral, training farmers in new crops and markets, improving access to credit for farmers without collateral, and investing in supportive infrastructure such as cold storage facilities and the regulation of transport bio-fuel markets are all important points of entry for policy. The benefits can be large as the diversification of small farmers’ output raises the value added per head and helps them escape from poverty.

*Information and communications* technologies are increasingly used to provide farmers with timely and adequate access to information on inputs and output markets. Institutional innovations are also under way in credit markets. Economies of scale in supplying value-chains and meeting required quality and safety standards for high-value products can often not be met by small farmers acting individually. Producers’ organizations are thought to help overcome high transaction costs in factor and product markets, achieving economies of scale in input procurement and output marketing as well as obtaining market power in integrated distribution and marketing chains.

### ***The increasing role of non-farm income***

*Non-farm activities* make up a substantial share of the income of non-farm households in today’s Asia. Strategies that help the poorest farmers develop these businesses and invest in the small-scale businesses they currently have are required. Poor households have difficulty establishing and expanding these businesses which means many businesses operate on a small-scale (rarely employing any non-family members) and remain undercapitalized. Many of these businesses face infrastructural constraints, especially in the provision of electricity and telecommunications services. Improved access to credit and policies that provide reliable affordable electricity and telecommunications services would support these businesses. Reforms that encourage the

formalization of these businesses are also important in enabling this sector to play the role it needs to in markets that are increasingly quality-driven.

### ***Liberalized trade environment***

The agricultural and rural sector in Asia has recently been adjusting to the external forces of competition unleashed by agricultural trade liberalization. As countries deal with the evolving world trading regime they need to meet the challenge of liberalizing their own trade while using opportunities opened up by trade liberalization within regional organizations and with the rest of the world (undertaken unilaterally or under WTO auspices). For food-exporting countries, export trade liberalization would raise export prices and help small farmers by lifting their incomes and expanding production. But a rise in food prices in these countries could adversely affect poor consumers. The spread of trade liberalization and domestic market reforms may have to be gradual, subject to close monitoring of results and to short-term adjustments.

### ***Lagging regions***

The mountainous regions of Asia require specific attention in economic strategies. The high poverty rate in these and other lagging or marginal areas of Asia does not mean that a high proportion of the total poor of a country live in these regions. The majority of a country's poor frequently live in the *high-potential* areas, while in the *low-potential*, low-density areas, most people are poor. This poses an important dilemma for the policy choices on poverty alleviation. While the greatest impact on poverty in terms of numbers affected may involve promoting growth in the more favored regions with high agricultural potential and better market access, the extreme poor in the marginal areas (often ethnic minorities) are very vulnerable. Until these people migrate, policymakers face the daunting challenge of improving the productivity, stability, and resilience of their farming systems.

The marginal areas with low agricultural potential may be able to develop non-farm activities with linkages to urban and industrial areas. To aid this, it is important to emphasize the development of human capital—the *training and skills* appropriate to non-farm activities and also for eventual migration to urban areas.

Investing in *infrastructure* can also prove effective in reducing spatial disparities and fostering rural-urban linkages. However questions may be raised about whether heavy investment in infrastructure would be the most cost-effective way to promote growth and alleviate poverty in these marginal regions. Against this has to be set the policy of transferring income in the short run from the more favored areas to the poor in the less favored regions, supplemented by measures in the medium term to facilitate migration through investment in education and subsidized resettlement.

### ***Water and irrigation***

The decreasing potential for meeting expanding demand for water supplies and quality is a severe challenge in developing Asia and may reach crisis levels in many countries in the next decade or two. Since much of the future water requirement is to be met from existing supplies, there is a need to change the institutional and legal contexts of water supply and use. Improved water management through the removal of subsidies and taxes that lead to the misuse of water, the establishment of property rights, greater participation of water users in management, and the development of water markets whenever possible to send correct signals about the real value of this basic resource are essential components of an agenda for action on water.

### ***Climate change***

Climate change in the next decade and beyond is a serious source of risk faced by Asia. The impacts will get progressively more severe as mean temperatures rise and climates become more variable, with a greater frequency of droughts, floods, hurricanes, and changes in monsoon patterns. Glacier melt in large parts of the Indian subcontinent will jeopardize water supplies for irrigation and drinking in areas dependent on seasonal water runoff from glaciers.

Adaptation to climate change includes a broad range of policies—changes in land use and timing of farming operations, adaptive breeding and technologies, risk management techniques including catastrophic or weather-risk insurance, climate forecast information, irrigation infrastructure, water storage, and water management. Whilst farmers may make some steps to adapt to climate change they will be limited by credit constraints and poor farmers in particular may need special help. Some action will require national and international planning and investment, especially for long-term weather forecasting, insurance, infrastructure, safety nets, and the dissemination of technology and drought- and flood-resistant crop varieties.

Agriculture's contribution to greenhouse emissions may be reduced by new crop and livestock breeding and planting technologies. In addition, the emerging market for carbon emissions trading offers new opportunities for farmers to benefit from land uses that sequester carbon. But the cost of reducing greenhouse gas emissions in farming may be much higher than the costs in the transport and power sectors. Little work has been done thus far to assess the agricultural mitigation potential.

### ***Risk and insurance***

Agriculture is subject to a variety of risks—from output and price fluctuations caused by weather variations and pest outbreaks to changes in demand and world markets—and new markets can be characterized by increased risk (as in the case of perishable fruit and vegetable production) or at least higher perceived risk (perhaps as a result of new production techniques or marketing unknowns). Building innovative insurance markets around risks that directly and indirectly affect Asia's rural poor is a real opportunity. Information and communications technology and institutional innovations provide the means for change. The use of savings by the poor to cope with these risks is hindered by the limited development of rural savings instruments and institutions for the poor, a situation being gradually remedied by innovations undertaken by microfinance institutions. Some of them have started to establish insurance schemes of their own, including health and life insurance, which is particularly important for the rural poor.

Microfinance institutions run by NGOs or self-help groups in several countries have helped smooth consumption and investment over time—increasingly by introducing flexibility in loan repayment arrangements. They can also act as intermediaries for insurance companies, thus lowering marketing and monitoring costs. The policy issue here is to find meaningful ways for scaling up. More-formal insurance mechanisms related to crop futures, including those organized or subsidized by the government, are currently underdeveloped in Asia and require careful assessment.

### ***Increased focus on people and human resources***

The main source of rural change in the future will be healthy, well nourished, trained and educated people. The health and nutrition agenda is to be part of this human resources agenda of rural poverty reduction, with increased attention to micro-nutrient malnutrition and food safety as well as to agriculture – health linkages, including animal health – human health links. Development of the food system is part of pro-poor agriculture and rural development.

### ***Increased need for transparent institutions***

Transparency about and access to information on the functions, policies, and decisions of local government, rural development institutions and agencies as well as of organizations of poor farmers, workers, and small businesses, is vital. The latter groups need to have clear oversight and monitoring functions in order to protect and preserve their own interests against the capture of power by the vested interest groups. Organizations of the poor can help expand and strengthen access to credit, supply chains, technology, and other public goods.

### **Conclusion**

Agriculture and rural development strategies are a critical component of an inclusive growth strategy for Asia, where despite the positive transformations, poverty remains predominantly rural. In developing these strategies for a changed Asia lessons can be learnt from Asia's agricultural and rural development history in the past 30 years, but trends cannot be simply projected. The challenge is to determine what these lessons mean for the future and where they cannot serve as a guide, and this challenge is partly country and location specific. Developing a modern rural development strategy for poverty reduction in Asia in the coming decades requires recognition of the changed institutional setup, the technological changes (especially in communications), the declining but relevant role of crop-agriculture for growth, and the growing role of agriculture broadly defined and diversified. A modern rural development strategy must also meet the key challenge of managing the transformation of the small farm economy.

In this context, priority action areas for achieving inclusive agricultural and rural development include the following:

- Utilizing technological innovations in new agricultural supply chains
- Investing in infrastructure and communications systems to reduce spatial disparities and foster rural-urban linkages
- Developing ecosystems services through public-private cooperation for meeting the challenges of water scarcity and climate change
- Encouraging development of finance and insurance interventions for the poorest
- Providing effective safety nets and nutritional improvement in rural areas

Effective and equitable implementation of these priority actions and other components of an inclusive rural development strategy require strong institutional and organizational arrangements and their good governance. The rural poor need to participate in the development of policies and programs and in their implementation. Decentralized rural political systems are an important instrument as are innovations in institutions that ensure gender equity, inclusion of minorities and participation of the poorest in markets and provision of services. The above mentioned priority action areas provide broad guidance, but will have different weights in the different regions and countries of Asia. A fresh initiative for identifying and implementing the appropriate actions for inclusive agricultural and rural development in those regions of Asia where most of the poor live, and where the most poor live, is called for.