

Challenges of Recent Trends in Globalization and Tasks for Sustainable Rural Community Development in Asia

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세계화의 도전과 아시아 농촌 지역사회개발의 과제

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Summary

국제연합 식량농업기구 (FAO)에 의하면 UR 협상과 WTO 체제 출범 이후 농산물 수출국가와 선진국에서의 소득균형은 일반적으로 향상되었으나 순식량수입국가나 개발도상국가에서는 소득균형이 더 악화되고 농업영역의 쇠퇴를 가져왔다. 더욱이 식량안정상황은 농산물의 급격한 수입으로 여전히 불안하고 농가 판매의 지속적인 악화, 농촌과 도시간의 소득격차가 큰 것으로 나타나고 있다. 특히 인간의 건강과 환경에 유해한 GMO의 거래는 소비자의 식품안전과 잠재적 위해 때문에 적절한 조치를 필요로 하고 있다.

아시아 지역 개발도상국가들에서의 식량의 안정적 공급과 농촌 지역사회 개발의 핵심적 과제는 인적자원의 개발, 기술역량의 신장, 하부구조의 개선, 농업기술 이전의 효율화 등으로 요약될 수 있다. 이러한 상황에서 농업교육, 연구 그리고 지도, 특히 아시아의 주요작물 영역에 대한 더 많은 투자가 필요하며 많은 아시아국가들에서 우선적으로 요구되는 농촌청소년교육은 빈곤퇴치, 식량의 안정적 공급 및 식품의 안전 그리고 지속적이고 균형있는 농촌개발 등이다. 이를 위한 정부와 국민, 특히 젊고 열정적인 사람들이 함께 협력해야 빈곤퇴치와 식량의 안정적 공급 및 식품의 안전 등 농촌의 사회경제적 발전이 가능할 것이다.

진행되고 있는 WTO 체제 하에서의 아시아 지역 농촌사회 발전과 식량문제 해결을 위해서는 교역과 환경, 그리고 개발의 총체적 접근이 중요하며 식량의 안정적 공급을 위한 농업, 농촌의 하부구조가 열악한 개발도상국 소농에 대한 우선적 배려가 필수적이라 할 것이다. 특히, 농업분야 생산 유통 분야의 개선을 위한 농업교육, 농촌지도의 국가적 강조와 농촌 청소년 교육 훈련과 육성의 중요성에 대한 인식과 이에 따른 국가적, 국제적 협력이 필요할 것이다.

Key Words : Globalization, Sustainable development, Rural community development, Rural youth, Education & training

I. Introduction

The globalization of production and the liberalization of trade offer opportunities for all countries and enable developing countries to play a more active role in the world economy. At the same

time, these processes have also increased the complexity and challenges involved in interdependence, which increases the risks of instability and marginalization. Technological advances, increased mobility of factors of production, and in some cases, regional trading arrangements have opened

the door to the prospect of considerable gains in productivity and wealth creation.

The challenge at the national and international levels is to create the conditions that will allow the flows of world investment and trade to help bridge the economic and social disparities among and within nations. The full benefits of globalization and liberalization can materialize only if rural people especially women are able to participate effectively in economic, social, and political development. Rural people including women are vital agents of change. Therefore, policies and programs must integrate regional and gender perspective in order to contribute to the empowerment of rural people and women and to achieve equality between women and men in all sectors of the economy.

The international community is confronted with various issues: a perpetuation of disparities between and within nations; worsening state of poverty, hunger, ill health, illiteracy, high unemployment, and underemployment; continuing deterioration of the ecosystem on which well-being depends. However, the integration of environment and development concerns, as well as a greater attention to them would lead to the fulfillment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve these objectives on its own. They can only be achieved through a global partnership for sustainable development consistent with the outcome of the Rio Summit and other relevant international conferences in this regard.

Technology is a critical factor for the ability of developing countries to participate in world trade and for achieving sustainable development. The prospects for the technological progress of developing countries are determined inter alia by the availability of technology including advanced tech-

nology on a sound commercial basis, proper enabling environment, and development of human resources.

Globalization and liberalization make all countries more susceptible to external developments, which accelerate the transmission of positive impulses and negative shocks. As a result, national and international policies are increasingly interrelated. While these phenomena may reduce some of the difficulties associated with barriers to trade and investment, they may still lead to other problems. Therefore, there is a vital role for international cooperation and partnership.

In many developing countries, particularly those in least developed countries (LDCs), commodity and market diversification require investment, human resources development, technological capacities, skills, and infrastructure support to augment levels of production and efficiency to meet the quality and delivery requirements of the global markets. International assistance, enhanced market access opportunities, development finance, investment, and technical cooperation can play a crucial role in complementing domestic efforts to create necessary conditions for economic growth and sustainable development, including the implementation of structural adjustment programs.

The ten 'Misunderstanding' vs. WTOs positions

- 1) WTO dictates vs. Decisions taken in the WTO are negotiated, accountable and democratic.
- 2) WTO acts blindly for trade vs. WTOs role is to provide platforms for negotiations on trade liberalization.
- 3) WTOs agenda ignores sustainable development vs. Sustainable development is a principal WTOs objective.
- 4) WTO is anti-green vs. WTO aims for the optimal use of the worlds resources, sustainable development, and environmental protection.
- 5) 'WTOs program neglects health issues vs. Safety concerns are built into the WTO agreements.
- 6) WTO wrecks jobs vs. The

relationship between trade and employment is complex. 7) Much of the burdens are on small countries vs. The rules are the same for all under the WTO agreement. 8) WTO is a tool for lobbies vs Governments can use the WTO to resist lobbying. 9) The weak are forced to join the WTO vs. Countries joined willingly. 10) WTO is largely undemocratic vs Decisions are by consensus and agreements are ratified in parliaments.

A particularly important area is that of integrating trade, environment, and development. A concern here is that environmental policies and measures could be used for protectionist purposes. In developing environmental policies with a potential trade impact, it is important to ensure that they are transparent and pay appropriate attention to the special conditions and development needs of developing countries. Relevant concepts include those contained in the Rio Declaration on Environment and Development and Agenda 21.

As globalization and liberalization also bring with them the globalization of competition, it is increasingly acknowledged that development policies, at both the national and international levels, need to be directed specifically at fostering viable and internationally competitive enterprises, including an entrepreneurial culture. Within this context, the particular need to foster the development and expansion of small and medium-sized enterprises is also vital.

II. The Marginalization of Globalization and Environment

One of the key benefits of globalization is an increase in the capacity to choose. The breakdown of barriers to trade has allowed the global market to provide individuals, communities, and nations with access to an increased diversity of consumer goods, entertainment options, and information

sources. These provide individuals with more power to choose and an increased capacity to understand these choices. The additional choices and their resulting benefits to individuals lead to an increased capacity for innovation and human development, which are necessary for economic growth.

Globalization is also enabling more interaction and a growing interdependence among nations and cultures. This can lead to the development of shared values, an appreciation of the diversity of worlds views, and the development, amidst the diversity of a global commitment to equitable human development. Since globalization has been driven by a purely economic bottom line (economic ideas), its impacts have been significant on other sectors of society including human rights, equity, human security, sustainability, development, and governance and democracy.

1) Impacts on Human Rights: Massive layoffs of workers already on the margins of poverty; increased child labor; dislocation of communities from ancestral lands; increased traffic in women, etc.

2) Impacts on Equity: Acquisition of intellectual property rights that raises the cost of technologies and robs communities of ownership of ancestral knowledge and free access to this technology; concentration of ownership and power in the hands of rich multinationals capable of negotiating and acquiring patents; reduced access to health care as a result of raised costs of drugs; higher impact on women than on men in many sectors; etc.

3) Impacts on Human Security: Financial volatility and economic insecurity; job and income insecurity; social unrest; health insecurity; cultural insecurity; and personal, environmental, political, and community insecurity.

4) Impact on Sustainability: Ownership and manipulation of life (through patents and genetic

engineering) that can significantly affect the planets bio-diversity and the overall environment, including human health; increased consumerism leading to waste and pollution; etc.

5) Impacts on Development: Loss of the capacity and time for caring and of love among individuals and between parents and children that greatly affect childrens development; weakened social cohesion, community development, and economic growth; increased marginalization of small businesses, particularly, in developing countries because of lack of skills, infrastructure and capacity to participate in the global economy and compete with multinational corporations etc.

6) Impacts on Governance and Democracy: Increased power of influence of corporations on decision-making about trade policies; the perception by politicians of their reduced power of influence over national, regional and international policies on trade and other matters; reduced power of national governments resulting from the authority of the policies of multilateral institutions like the WTO; etc.

1. Towards Globalization with a Human Face

Globalization, according to the United Nation Development Program (UNDP), has a much greater ability to contribute to growth than overseas development assistance, or financial aid. While aid continues to be important, facilitating the participation of the developing world in the global economy has the capacity to alleviate the cycle of dependency on foreign aid. If globalization can be "shaped, then what is needed now are measures that will enable right trade and private investment policies for the development of globalization with a human face. UNDP's sustainable human development (SHD) approach introduces a whole new set of values as the foundation

for global economic development activities. Contrary to the dominant model that aims mainly towards the growth in GDP, UNDP proposes that the ultimate goal of globalization be the improvement of peoples lives. The SHD approach also differs from the dominant model because it supports participation and equal partnership of developing countries as opposed to top-down and donor driven approaches. UNDP has identified a strategy that will work towards expanding the benefits of international trade to meet the needs of the poor and factor in social and environmental objectives. The strategy, presented by the Administrator in a speech to the Ministers of Trade of Least Developed Countries (LDCs) in February 2000, is composed of six key steps.

1) The Development Step

This first step is an acknowledgment of the continued need for development assistance in terms of financial aid for the development of the human and infrastructure capacity that developing countries need to participate in within the global economy.

2) The Knowledge Step

One of the main forces of globalization has been identified as the impact of information and communication technologies (ICTs) on all sectors of society. ICTs can provide citizens of the developing world with the information needed to participate in the economy while providing access to ongoing opportunities to acquire more knowledge and bridge the knowledge divide that is now exacerbating the cycle of poverty.

3) The Freedom Step

To provide developing countries with the

capacity to participate in the world economy, laws and institutions within a country must be transparent, honest, and protective of the freedom of its constituents. Such freedom and rights are fundamental for citizens to be active, informed, and creative participants in the world economy. In a knowledge-based economy, access to information is critical.

4) The Engagement Step

The UNDP believes in the importance of promoting and enabling an open debate about trade and globalization at the national level and also within civil society and other institutions. The rationale is that such national debates will permit the development of a social consensus that will allow selected policy priorities to be sustainable.

5) The Fair Trade Step

The participation of developing countries and particularly Least Developed Countries (LDCs) in global trade is impeded by numerous factors including their restricted human, institutional, and policy capacity. Legitimizing the WTO through a fair representation is important.

6) The Global Legitimacy Step

Because of its many negative impacts, globalization is under a legitimacy crisis. There must be a shared understanding and support for an approach to globalization that takes into consideration social objectives, environmental protection, human rights, etc.

The Human Development Report 1999 identifies seven key challenges that require national and international intervention. These are to 1) strengthen policies and actions for human development,

and adapt them to the new realities of the global economy; 2) reduce threats of financial volatility of the boom and bust economy` and all its human costs; 3) take stronger global action to tackle global threats to human security; 4) enhance public action to develop technologies for human development and the eradication of poverty; 5) reverse the marginalization of poor, small countries; 6) remedy the imbalances in the structures of global governance with new efforts to create a more inclusive system; and 7) build a more coherent and democratic architecture for global governance in the 21st century.

2. WTO Negotiations on Agriculture

The agricultural sector, which had received an exceptional treatment in the GATT system due to its specific characteristics, was integrated into the multilateral trading system through the Uruguay Round. During this process, net food importing countries and developing countries suffered a great deal. According to the FAO, while the balance of payments in the agricultural trade of food exporting countries and developed countries improved in general since the conclusion of the Uruguay Round, net food importing countries and developing countries experienced worsening of balance of payments and shrinking agricultural sector. Such findings strongly indicate that the Uruguay Round was not successful in reflecting, in a balanced manner, the interests of both developed and developing countries, and those of exporting and importing countries as well.

Furthermore, the food security situations of developing countries are still unstable and have been substantially affected by the deteriorated terms of trade for farm households and widened income gap between urban and rural areas, largely due to the sharp increase in agricultural import. By

and large, the provisions of the agreement regarding non-trade concerns did not fully take into account the diverse situations that each country faces. Provisions regarding non-trade concerns, including the multi-functionality of agriculture and special and differential treatment for developing countries, need to be revisited. The Agreement on Agriculture (AoA) lacks due consideration of non-trade concerns and developing countries that depend on small-scale subsistence farming. Consequently, AoA is not successful in balancing the interests of exporting and importing countries, as well as developed and developing countries. In order to carry out a sustainable reform where diverse forms of agriculture co-exist, the varying interests and concerns of member countries need to be reflected in an equitable way.

Since the conclusion of the Uruguay Round, there has been growing consumers concern over agri-food-related issues, such as food safety, health, environment, and biotechnology. Such changes mainly come from rapid growth of commercialization and trade of genetically modified organisms (GMOs), which need to be properly addressed. Member countries have the right to take necessary measures for the protection of human life and health. Appropriate measures should be taken within WTO regarding consumers concerns on food safety and quality, and potential risks of GMOs on human health and the environment. The need for precautionary measures to cover such issues as well as consumers' increasing demand for informed choice should be dealt with in the negotiations

In addition to the measures that are already exempt of reduction commitment under the current AoA, the following measures should also be exempt of reduction commitment:

1) Compensatory supports for multi-functionality of agriculture:

- supports such as direct payment for public goods generated in the process of agricultural production including food security, environmental protection, rural viability, and especially cultural heritage;
 - supports for maintaining domestic production capacity of staple crops, based on food security purposes, such as direct payments for farm households and farmland conservation.
- 2) Supports for enhancing income safety net that need to take into account the scarcity of financial resources of developing countries in setting the criteria for income safety net programs:
- extension of the scope for income safety net programs;
 - enhancement of the flexibility of their criteria to reduce income risks increased by, inter alia, market liberalization, weather anomalies and price fluctuations, ...
- 3) Supports for small-scale family farm households: supports for continued existence and productivity enhancement of small-scale family farms that are the basis for maintaining agricultural production in the rural communities of many countries.
- 4) Supports for agricultural and rural development in developing countries:
- supports for improving competitiveness and expanding domestic production capacity of developing countries;
 - supports for investment aid for infrastructure and structural adjustment, which take into account the disadvantaged agricultural conditions of many developing countries.

III. Integration of Environment and Sustainable Development in Asia

The sustainable development issues of the world

include environmental degradation, poverty, population, social equity and governance. Humanity's biggest challenge today is poverty reduction in a socially, environmentally, and economically acceptable manner. This challenge can be met if the political decision makers are prepared to bring about changes in thinking, deciding, and executing a truly pro-poor sustainable development action plan. The central theme of such an action plan should be the total integration of poverty reduction, social mobilization, and sustainable development, taking lessons from past programs and successes.

Sustainable development presents a unique challenge for the Asian region, where the needs of the people, the problems faced by them, and their lifestyles are very different from those in the more developed and industrialized countries of the West. Therefore, sustainable development issues should be looked at in the Asian context, and any policies and actions should be tailored accordingly. Poverty is not only the most pressing problem, but also the biggest obstacle to sustainable development in the Asian region.

The concept of sustainable development encompasses three dimensions: economic, ecological, and social. The economic approach to sustainability is based on the concept of the maximum flow of income that can be generated while maintaining the stock of assets or capital and at the same time contributing to economic growth. The ecological view of sustainable development focuses on the stability of biological and physical systems and their protection and management for posterity. The social dimension is people-oriented and seeks to maintain the stability of social and cultural systems leading to human capital formation.

The integration of environment and development is the key to sustainable development. There are three steps that lead towards integrating environ-

mental considerations into economic decision-making. The first step is to determine the environmental and social impacts of a project or a policy. The second step is to carry out an economic valuation of environmental and social impacts. The third step involves redesigning projects and policies to reduce adverse environmental and social impacts, thereby shifting the development process towards a more sustainable path. This objective can be achieved by strengthening the economic policy-planning and policy-analysis department or agency of the government. What appears to be necessary is to take the first step in this direction.

Environmental policy-planning is defined as a planning process through which environmental considerations are incorporated into socio-economic development for sustainable development. This is one of the principal means of ensuring the integration of environmental considerations into the development process. Measures such as free-market operations, environmental assessment, poverty reduction, removal of social inequities and obstacles, and management of technological transfer come under its purview. These are all aimed at facilitating policy analysis, policy planning, and management.

The ecological and socio-cultural foundations of the people in Asia are strong, deep-rooted, and as old as human civilization. Throughout history, Asians have established an enviable record of living in harmony with nature and sharing the benefits of common property resources. This unique way of life is intertwined with social organization, culture, religion, and customs, as well as traditions. The challenge is to customize a model of sustainable development specific to a sub-region, or to a country, which can be worked out and tested by way of a pilot project, a model aimed at poverty reduction, equity-based, growth-oriented and environmentally sustainable, instead

of replicating inappropriate models from elsewhere.

In the wake of a new wave of trade liberalization and privatization in Asia, there is a great deal of discussion on the beneficial and adverse impacts of these two measures on sustainable development and, particularly, on poverty reduction and the removal of social inequities. The increased economic activity, liberalized trade regime, and high rates of economic growth have increased income and employment but have not always been associated with poverty reduction, equity, or reduced pressure on the environment. In fact, the evidence shows that a rapid and unregulated growth has often led to increasing income gaps between the rich and poor, and to environmental deterioration. The main challenge is to devise and implement policies which ensure that trade liberalization and environmental health are harmonious and mutually supportive.

Environmental capacity-building can be defined as an amalgam of programs and projects whose objectives are to ensure integrated environment; development management planning and policy formulation; and ensure legislative, institutional, and human resources development. These objectives have to be attained in an efficient, sustainable and equitable manner by improving economic efficiency, enhancing environmental protection and natural resources management, and reducing poverty. Several principles governing environmental capacity-building in developing countries should be taken into consideration. The current institutional and sectoral approach to environmental capacity-building has to be upgraded to an integrated and holistic approach. The social dimension in relation to poverty, equity, and social justice must be given due consideration. People-centered development is the best form of development, hence the need to incorporate participation and collaboration. The key actions are the fol-

lowing: (a) to undertake a study of environmental capacity-building requirements, (b) to prioritize environmental capacity-building needs, (c) to formulate a plan of action for a phased implementation according to the availability of funds and expertise in infrastructure, and (d) to monitor progress and evaluate implementation of the action plan periodically.

1. Challenges to LDCs in Asia

The twin processes of globalization and liberalization are shaping a new system of inter-economic relations. Market mechanisms have become the pre-eminent instrument in the allocation of resources but are unable to solve all existing development challenges. Many opportunities for growth and development are inherent in these changes. However, developing countries, due in large part to various constraints beyond their control, including declining terms of trade, could well find themselves excluded from full participation in this process and from its benefits.

1) Globalization will not be sustained if the increase in imports from developed countries is not matched by an increase in exports to them. Financial openness brought about by liberalization and globalization reduces policy autonomy and produces instability when financial flows reverse themselves.

2) Globalization risks marginalizing countries, which have limited supply capacity.

3) Globalization has increased differences among countries. Differences in economic performance can be attributed to governance, environment for private and foreign investment, administrative reform, appropriate macro-economic framework, and investment in social sectors.

4) Globalization has posed difficult challenges to LDCs. These challenges encompass erosion of

preferences, new forms of protectionism, and asymmetry of benefits between rich and poor countries. Poverty is the most important obstacle to sustainable development.

5) Developing countries' participation in the world economy depends on a supportive international environment governed by a set of transparent, non-discriminatory, equitable, and fair principles and rules.

6) Some countries have benefited from globalization and liberalization, but some others, especially the least developed countries, have been marginalized. Gaps among developing countries have widened.

7) WTO strengthened the rule-making base of multilateral system, but regional arrangements proliferate. They should supplement rather than supplant the multilateral system.

8) Domestic efforts alone are not enough to achieve economic progress; such progress will require a favorable global environment and substantial external assistance.

9) Multilaterally agreed undertakings must be "relevant" and judged to be so by NGOs and the business community.

10) Reforms in the context of globalization are very complex. They require the right time frame, adequate financial support, technical know-how, and political commitment.

2. Global Community Development

During the business meeting at the annual conference in St. John, New Brunswick, the Goals and Policies Committee and the Practice Section presented recommendations regarding a revision of the Principles of Good Practice. The proposed revisions are based on several years of discussion among the committees and membership. The discussion includes an internet forum and a

grassroots membership deliberation by the attendees at the Portland conference. After some additional deliberation the principles were revised, adopted by the membership, and stated as follows.

Community Development Society (CDS) Principles of Good Practice: 1) Promote active and representative participation toward enabling all community members to meaningfully influence the decisions that affect their lives; 2) Engage community members in learning about and understanding community issues, and the economic, social, environmental, political, psychological, and other impacts associated with alternative courses of action; 3) Incorporate the diverse interests and cultures of the community in the community development process, and disengage from support of any effort that is likely to affect adversely the disadvantaged members of a community. 4) Work actively to enhance the leadership capacity of community members, leaders, and groups within the community. 5) Be open to using the full range of action strategies to work toward the long term sustainability and well being of the community. (Revised, July 2000)

The Community Development Society (CDS) Vision: Members of CDS believe community is a basic building block of society, and that 1) community is complex and multi-dimensional; 2) the human dimension, which is capable of growth and development, is the most critical aspect of community; 3) the development of each community can be fostered through improvement of individual, organizational, and problem-solving knowledge and skills; 4) the adherence to the CDS' Principles of Good Practice is essential to sound community development; 5) the Society must be proactive, providing leadership to professionals and citizens across the spectrum of community development.

A global community, those helping to develop

and sustain communities, must understand a variety of complex and ever-changing systems. The profession of community development integrates knowledge from many disciplines with community development theory, research, teaching, and practice; these important and interdependent functions are vital in both the private and public sectors.

3. The Livable Communities Initiative

Economic prosperity is central to any nation's future. Growing according to our values is critical to our quality of life. Livable communities embrace these values. In livable communities, young and old can walk, bike, and play together. Livable communities are places where we not only protect historic old neighborhoods, but where farms, green spaces, and forests add vigor, context, and beauty to the newest of suburbs. Moreover, livable communities are places where we work competitively but spend less time in traffic and more time with our families, friends, and neighbors.

Each community faces different challenges and will find its own solutions. Strategies to create more livable communities may include efforts to preserve green space, secure safe streets; strengthen local economies; reduce traffic and air pollution; provide transportation choices; create community-centered schools; foster citizen and private sector cooperation; promote collaboration among neighboring communities. Moreover, the fundamental principle is 'Communities know best --Every community is different. Decisions about how the communities grow are best made by the communities themselves. Therefore, it is the responsibility of the national and local governments to assist and inform ---not direct-- the patterns of future growth.

The Livable Communities Initiative (LCI) is an effort by the government to support locally-driven

efforts to build more livable communities. Its aim is to provide communities with tools, information, and resources that they can use to enhance their residents' quality of life, ensure their community's economic competitiveness, and build a stronger sense of community. LCI defines four primary roles for the national government in building livable communities: 1) Expanding Community Choices by Providing Incentives; 2) Expanding Community Choices by Providing Information; 3) Being a Good Neighbor; and 4) Building Partnerships. Tracking down relevant information and expertise can be complicated and time consuming. The LCI web site coordinates and streamlines information on federal resources -- programs, guides, and tools -- to help anyone improve the quality of life in a community.

IV. The World Community, Food Security and Developing Rural Asia

Food security is a human right, which must take precedence over macroeconomic and trade concerns, militarism, and the dictates of the marketplace. Assuring food security for all people within their territory must be the first priority of governments. Achieving food security for all also requires sustainable human development, which includes equitable access to economic opportunities for all people without discrimination, governmental policies, and programs to assist vulnerable groups in meeting their basic needs. In addition, the sustainable human development required to achieve food security includes protection of the environment and sustainable management of natural resources; peace; and transparent, accountable, and democratic government.

As the AoA expired in the year 2000, it must be renegotiated with a comprehensive food security

clause ensuring the exemption of all staple food crops from trade liberalization commitments, in support of the sovereign right of countries to protect their national food self-sufficiency. At the same time, governments should undertake the negotiation of a global convention on food security, to ensure a framework for macro-economic and agricultural policies that are open, democratic, participatory, and transparent -- engaging civil society fully. Such a global convention on food security would enable local, national, and regional self-sufficiency in staple foods, and stabilize prices through a decentralized system of local, national, and regional food reserves for staple crops.

The larger task of achieving universal food security and the implementation of the World Food Summit Plan of Action and Plans at the regional, national, and sub-national levels depend upon the full engagement and empowerment of all the relevant stakeholders of civil society and of the poor and hungry people. The work of governments and international organizations towards achieving food security must be carried out in collaboration with civil society.

Developing Asia as a whole has taken remarkable strides since the food crises of the 1960s. Improvements in food security, poverty reduction, and per capita income initiated by the green revolution have been substantial and lasting. Per capita gross domestic product increased by 190 percent between 1970 and 1995, and calories per person per day by more than 20 percent. In 1975, one out of every two Asians lived in poverty, but by 1995, the proportion of poor has declined to one-third. Similarly, the incidence of rural poverty decreased from one in two to one in three between 1975 and 1995, and the total number of rural poor fell by 7 percent despite a substantial increase in population.

Although life has improved for most rural

Asians, about 670 million still live in poverty, and they must tolerate the lack of health care, education, and general well-being than their urban counterparts. The vast majority of these rural inhabitants still rely, directly or indirectly, on agriculture, forestry, and fishing for their livelihoods. Such a dependence places enormous pressure on natural resources. The continuing degradation of these natural resources could well cause social conflict over remaining resources and discontent about the widening gap between urban and rural quality of life. These problems would be particularly severe in South Asia.

Achieving economic development in rural Asia requires further growth, but growth that is more equitable and environmentally sustainable than it has been in the past. Meeting this challenge will warrant more efficient application of the lessons already learned about agricultural growth, public-sector investment, rural poverty reduction, and natural resource protection.

Besides, there are emerging challenges that need special attention. Indeed, because the poor live mostly in rural areas and generally depend on the farm sector for their incomes, growth that stems from agricultural productivity and that raises the incomes of small-scale farmers and landless laborers is particularly important in reducing poverty. But growth alone will not rapidly reduce poverty. Policymakers must reach the poor directly, by investing in health care, nutrition, and education. In the case of particularly vulnerable or marginalized groups, policymakers can use income transfers or safety nets to help relieve short-term stress. For the poor to participate in growth, land must be redistributed relatively equitably; agricultural research must focus on the problems of both groups of small and large farmers; new technologies must be scale-neutral and profitable for all farm sizes; efficient input, credit, and product markets must

ensure that all farms have access to needed modern farm inputs and receive similar prices for their products; the labor force must be able to migrate or diversify into rural non-farm activities; and policies must not discriminate against agriculture in general and small farms in particular.

The 1997 economic crisis in East and Southeast Asia caused serious drops in real income and employment. The affected countries still need time to fully recover from the loss in real income and cuts in government investment in rural growth and safety nets. Governments and donors need to give high priority to restoring investment fundamentals in the crisis economies and strengthening safety nets. Good-governance reforms must seek greater transparency and accountability in public-sector activities and the regulation of financial institutions and corporations to reduce the possibility of future financial crises.

Globalization offers market, technological, and financial opportunities for further economic growth in Asia. Open markets and global integration have boosted rural growth, but such processes also risk economic losses to superior competitors, instability, and worsening inequality. The solution to these problems lies in creative policies. Competition can be managed, for example, through a phased transition, as many of the Southeast Asian countries have shown. The pace of liberalization should take into account institutional capacities, competitive readiness of agriculture and industry, and the effects on social and political stability. The management of the transition to globalization should favor an open economy and growth, macroeconomic stability, human capital formation, and poverty reduction.

V. Conclusion

New agricultural technologies in Asia are increas-

ingly complex, knowledge-intensive, and location-specific. They require a more decentralized research and extension system and more information and skills for successful adoption than the Green Revolution varieties and fertilizers did. Extension and research that is driven by information from the bottom up could help farmers cope with the complexity of the new technologies. The private sector could also help revitalize agricultural research, though with some risks. Biotechnology innovations are likely to increase private-sector involvement in agricultural research. But the public sector will continue to play an important role in agricultural research because corporations may not want to invest in technologies that governments consider important for equity and poverty alleviation. Moreover, the private sector has generally shown little interest in increasing the yield of key commodities such as the varieties of wheat or rice adapted to Asian agro-climatic zones. It has also made virtually no investments in tropical crops, fruits, and vegetables.

Population pressure on the land, agricultural intensification and inappropriate farming practices, and waste disposal from a rapidly growing livestock sector pose significant threats to the rural environment. But water scarcity and quality are probably the most severe challenges facing developing Asia and will reach crisis levels in many Asian countries in the next decade or two. Water is becoming scarce because of growing demand from agriculture, industry, and households on the one hand, and of the diminishing potential for expanding the water supply on the other hand. Deteriorating water quality will further aggravate water shortages. Policies that can improve water management will need to send correct signals about the real value of water.

Asian societies are changing because of rising incomes and globalization. People are demanding

greater participation in policy decisions, more democratic and decentralized forms of governance, and more accountability from public agencies. At the same time, the nature of many public goods is changing. Non-governmental organizations are organizing communities for collective activity and investment. These changes require that the roles of the public and private sectors and civil society be reconfigured to provide public goods and services in a more cost-effective manner, and in a way that better meets the needs of rural people.

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