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5 Food Security in Asia: The Changing Landscape



Emerging trends occurring both globally and regionally are threatening Asia's ability to feed itself.

INTRODUCTION

Asia's food security challenges are formidable, to say the least. The region has over 60% of the world's population, as well as some of its fastest growing economies, but only 34% the world's arable land and 36% of the world's water resources. What's more, emerging trends occurring globally and regionally are further threatening Asia's ability to feed itself. In order to maximize the potential of Asia's agricultural sector to improve food security in the region and beyond, governments must embark on a multi-faceted and integrated strategy, one that is broader in scope and adapted to these dynamic challenges.

FOUR EMERGING TRENDS AFFECTING ASIAN FOOD SECURITY

Asia's food security is under significant pressure from a variety of factors that include population growth and urbanization, the declining performance of agriculture, natural resource constraints, climate change, high and volatile food and oil prices and the rapid transformation of supply chains.

First, between now and 2050, the world's population is expected to increase by 2.4 billion, from the current 6.9 billion to 9.3 billion with Asia capturing the lion's share. At the same time, the population living in urban areas is projected to gain 2.9 billion, passing from 3.4 billion in 2009 to 6.3 billion 2050 with most growth concentrated in the cities and towns of the less developed regions.¹

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Asia, in particular, is projected to see its urban population increase by 1.7 billion with China and India alone accounting for about a third of the total increase. One predictable outcome of this massive population shift is urban poverty. Already, Asia accounts for over half the world's slum population. Today, Asia has eleven megacities, which are defined as cities with over 10 million inhabitants. By 2025, the number of megacities is expected to reach 29, with Asia gaining another five.

Urbanization, in combination with rising incomes, will increase food demand and accelerate the diversification of diets. As incomes rise, diets will come to include more resource-intensive food products, such as meat, dairy, eggs, fruits and vegetables, thus unleashing a rapid increase in demand for raw agriculture commodities

Second, agriculture's performance in the region has declined over the last few decades, with its share of gross domestic product (GDP) falling from 43% to 18% between 1961 and 2009 in South Asia, for example. The number of people working in agriculture has also steadily declined from 70% to 55% between 1980 and 2010, and is projected to further fall to 49% in 2020.² This is largely due to the fact that farmers are getting older across Asia.

A more worrying trend is the fact that annual growth in productivity, measured in terms of average aggregate yield, has been slowing over the years. Global aggregate yield growth of grains and oilseeds averaged 2.0% per year between 1970 and 1990, but declined to 1.1% between 1990 and 2007. Yield growth is projected to continue declining over the next ten years to less than 1.0% per year.

Third, many of the world's agro-ecosystems being used as food production systems are already showing worrying signs of degradation. Climate change will put additional pressure on natural resources and food security through higher and more variable temperatures, changes in precipitation patterns, and increased occurrences of extreme weather events. According to recent projections by the International Food and Policy Research Institute (IFPRI),

Asia's production of irrigated wheat and rice will be 14% and 11% lower, respectively, in 2050 than in 2000 due to climate change.

Fourth, international prices of major food commodities have risen sharply in recent months, only a few years after the 2007 – 2008 food crisis. Since June 2010, international maize prices have more than doubled, and wheat prices have almost doubled. Domestic food prices in many countries in Asia have also increased rapidly. For example, between June 2010 and May 2011, domestic rice prices in Bangladesh, China, Indonesia, and Vietnam have risen in the range of 13% to 46%.³

The rising costs of fuel, fertilizer and transport production further contribute to fluctuations in the price of food and rising fuel costs and also result in the expansion of biofuel production and its competition with food crops for available land. Biofuel production based on agricultural commodities increased more than three-fold from 2000 to 2008. Various policy measures driving the rush to biofuels, as well as tax incentives and import restrictions in developed countries, have been the main driver of this development.

Lastly, in just two decades, Asia has witnessed a rapid transformation of its supply chains which has changed the way food is being produced, processed, packaged, transported and distributed. The fast diversification of diets towards high-value agricultural products associated with urbanization and increasing incomes, and the rapid rise of organized retail in food, have resulted in a “supermarket revolution.” Over the past two decades, countries like China, India and Vietnam have

seen the share of supermarkets in food retail reach 5-20% of the market, thereby experiencing the fastest supermarket spread in history.⁴ This rapid transformation has obvious

implications for food security. While supermarkets may provide higher quality and cheaper produce for urban consumers, market participation by poorer farmers is lower.⁵

INCREASING IMPORTANCE OF URBAN FOOD SECURITY IN ASIA

With more and more Asians living in cities, urban food security will play an increasingly important role in maintaining peace and stability. The food crisis in 2007 – 2008 and the resulting food riots that occurred in cities all over the world not only exposed the vulnerability of the global food system, but more importantly, highlighted the increasing problem of urban food security. Food supply, food consumption, and food stability in cities are very different from traditional rural patterns, as some governments, (e.g. Egypt and Tunisia) have learned to their cost. As Ruth Oniang'o, the first woman Nutrition professor in the whole of sub-Saharan Africa and a current MP in Kenya rightly pointed out during a recent symposium on global agriculture and food security in Washington, D.C., "hunger is really devastating... a hungry person with low blood sugar is a very angry person—virtually ungovernable."

In the context of increasing pressure on global and regional food security the urban environment presents unique challenges which potentially render its residents more vulnerable to disruptions in the global food supply chain and to price fluctuations.

First and foremost, urban residents have to purchase almost all of their food as well as other goods and services. For the millions of urban poor who spend 50% to 70% of their income on food, soaring prices may mean going from two meals a day to one, or at worst, to no food at all. Urban residents face more threats to their economic access to food compared to their rural brothers.

BOX 1: 2011 GLOBAL HUNGER INDEX, FACT AND FINDINGS: ASIA

- South Asia has the highest regional 2011 Global Hunger Index* (GHI) score—22.6.
- The 2011 GHI score fell by 25% in South Asia compared with its 1990 score, and the 2011 GHI score in Southeast Asia decreased by 44%.
- The South Asia region reduced its GHI score by more than 6 points between 1990 and 1996, mainly due to a large decline in underweight in children under five. But the rapid pace of progress was not maintained; South Asia has lowered its GHI score by only one point since 2001, despite strong economic growth. Social inequality and the low nutritional, educational, and social status of women, which is a major cause of child under-nutrition in the region, have impeded improvements in the GHI score.
- Bangladesh and Vietnam saw large gains in improving their GHI score between the 1990 GHI and the 2011 GHI. Vietnam reduced its score by 56%, and Bangladesh reduced its score by 36%.)
- In Bangladesh, a country where 25% of the population is ultra-poor (living on less than USD \$0.50 a day), only about 7% of the population has access to social protection or safety net programs.
- The GHI score for North Korea increased by 18% since 1990. A weak economy, high military spending, weather-related crop failures, and systematic problems in the agricultural sector have hampered progress.
- Cambodia is the only country to improve from an "extremely alarming" to "serious" level of hunger since 1990.
- Bangladesh, India, and Timor-Leste have the highest prevalence—more than 40%—of underweight in children under five.

* 3 factors contribute to the GHI: mortality rate for children under five, the prevalence of underweight children, and the proportion of undernourished.

For more information, see 2011 Global Hunger Index at <http://www.ifpri.org/publication/2011-global-hunger-index>.

Second, due to increased incomes in towns and cities, the basket of food which households depend on for their existence has become more varied and more diverse in origin. Thus, the urban poor may be more vulnerable

drastically with limited capacity to produce their own food.

Fourth, because urban areas are centers of economic opportunity, there are more women working outside the home which may mean

industrialization. Thus the determinants of nutritional status go beyond income alone. Food availability is not enough for good nutrition, a reality which tends to impact city-dwellers more than their rural counterparts.

“Cities, with their unique features, must be included on the agenda of food and agriculture policy makers, planners and institutions and conversely, food security and agriculture...”

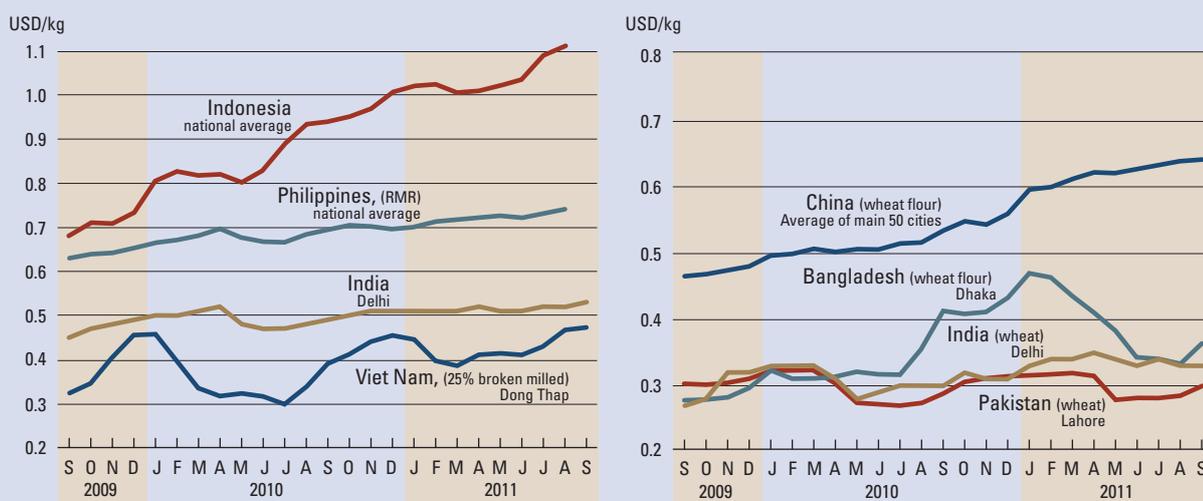
than their rural counterparts to variations in the international market since many of their food items tend to be internationally traded.

Third, many urban residents are also more vulnerable to global economic events since they depend on overseas remittances, exports, employment, and foreign direct investment. As the most recent food crises demonstrated, urban households can be among the hardest hit as they see their purchasing power decline

they have less time for traditional food preparation. In addition, because of greater exposure to advertising and easier access to supermarkets, urban dwellers often consume more processed and fast food, which mean higher intakes of saturated and total fat as well as sugar and lower intake of fibre. This diet, together with a more sedentary lifestyle in cities, increases the risk of chronic diseases including diabetes and obesity, diseases associated with wealth and

Fifth, the urban poor live in crowded living conditions with poor quality housing, poor to non-existent garbage disposal systems, unsafe drinking water, and non-functional or non-existent sewage systems—thus affecting their nutritional status. It is not enough that an individual is getting what appears to be an adequate quantity of food if that person is unable to consume the food because he or she is always falling sick. For the urban poor living in slums, their living conditions

FIGURE 1: FOOD RETAIL PRICES IN SELECTED ASIAN COUNTRIES



Source: UN FAO, Crop Prospects and Food Situation, No. 3, October 2011, p. 20, available at <http://www.fao.org/docrep/014/al980e/al980e00.pdf>.

could affect their nutritional status in the form of malnutrition and poor health.

Lastly, jobs of the urban poor are casual, insecure, uncertain, low-paying and vulnerable to outside forces such as macroeconomic policies, social security programmes, and of course, the availability of food through its impact on supplies in the market, and therefore on market prices.

THE CHALLENGES AHEAD

Feeding and nourishing a larger, more urban and increasingly affluent Asian population sustainably and equitably will be an unprecedented challenge that will require a more holistic approach to address food security

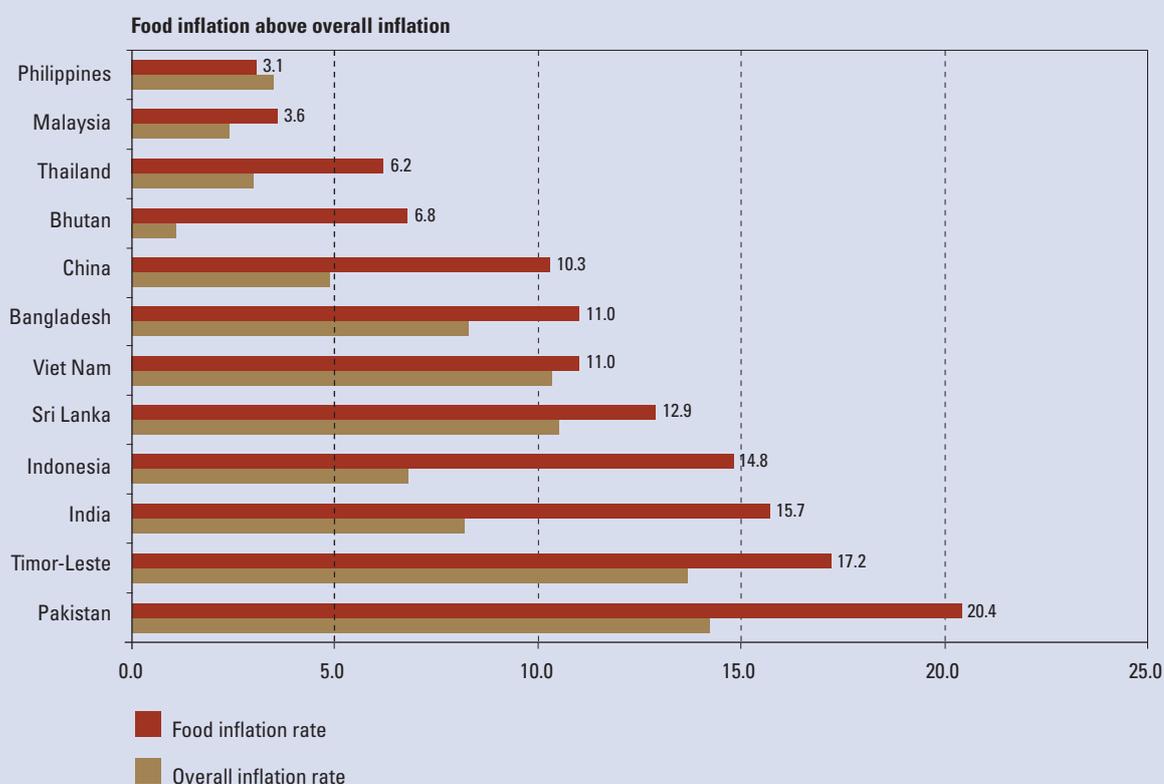
more effectively. The more obvious solution of increasing food production is only one among many strategies needed to meet this challenge.

While rural areas currently hold most of the world's poor and hungry and will continue to do so for many years to come, the urban dimensions of food security merit distinct attention and focus from national governments. As it is, the world is already witnessing the shifting of poverty and the food insecure to cities with most of the poor being absorbed into life-threatening slums. Factors of production, technologies, employment and indeed policies which were predominantly aimed at rural populations must now adapt to address urban situations. Specific

attention needs to be given to the links that connect urban and rural communities, shape the economic relationships between them and determine how resources can be shared and used sustainably.

Cities, with their unique features, must be included on the agenda of food and agriculture policy makers, planners and institutions and conversely, food security and agriculture must be integrated into the agenda of city planners and local urban authorities. By addressing urban-rural linkages from social, economic and environmental perspectives, a more coherent and holistic approach can be developed.

FIGURE 2: INFLATION AND FOOD INFLATION RATES IN SELECTED ASIAN COUNTRIES



Source: UN FAO Regional Office for Asia and the Pacific, "Asia Pacific Food Situation Update," February 2011, p. 1, available at <http://www.fao.org/docrep/013/al410e/al410e00.pdf>.

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¹ United Nations (2009). World Urbanisation Prospects: The 2009 Revision. United Nations Department of Economic and Social Affairs, Population Division. New York, 2010. http://esa.un.org/unpd/wup/doc_highlights.htm

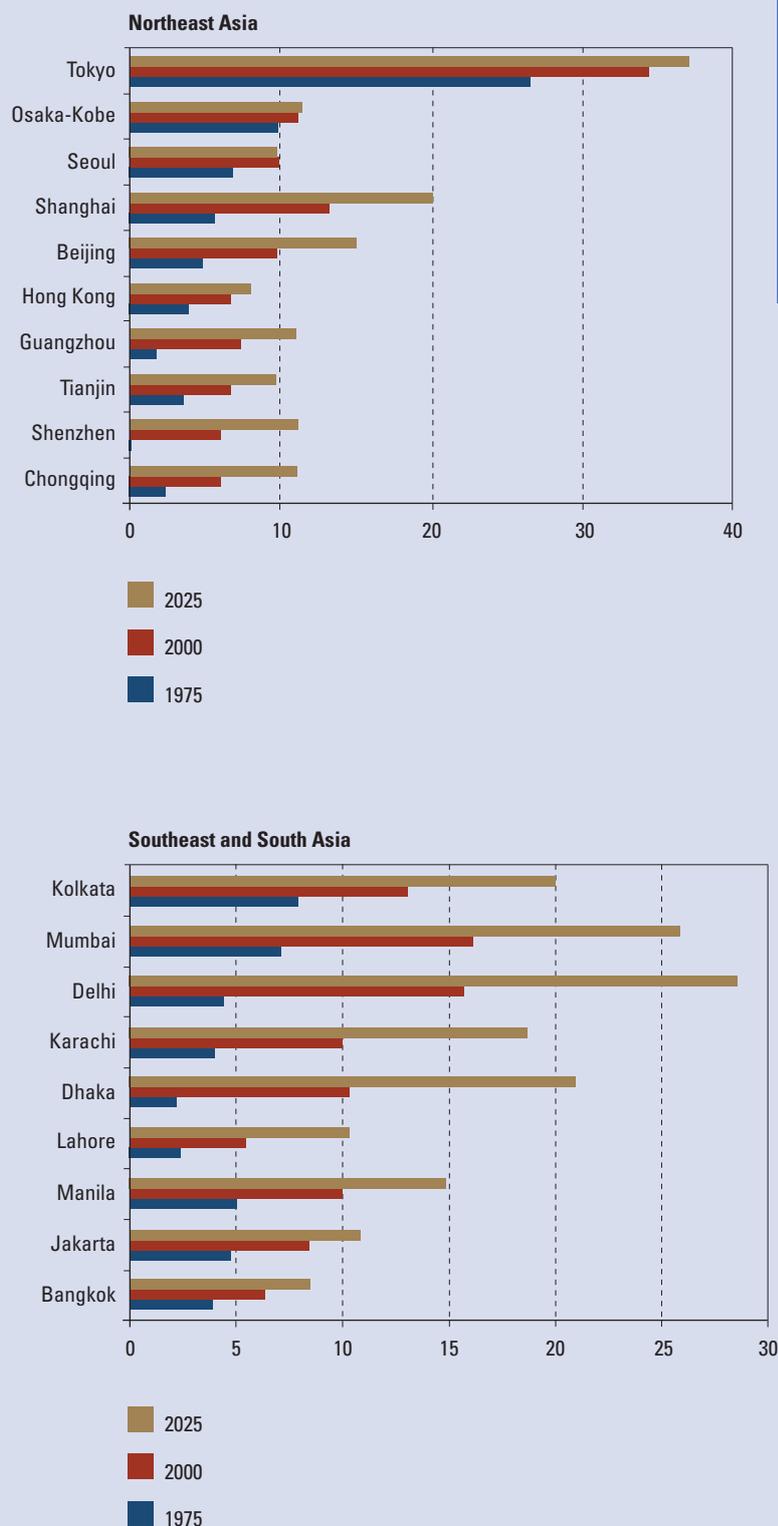
² World Bank. 2011. World Development Indicators database. Washington DC: World Bank. <http://data.worldbank.org/data-catalog/world-development-indicators> (Accessed July 3, 2011) and Food and Agricultural Organization (2010) The State of Food Insecurity in the World 2010 <http://www.fao.org/publications/sofi/en/>.

³ FAO, 2011.

⁴ Reardon, T. (2010) Agri-food Market Transformation: Development Assistance Strategies to Include the Poor. Paper presented at Partners in Agriculture Global Food Security Symposium, 7 April, in Tokyo. http://partners-in-agriculture.org/food_security_symposium/pdf/07E_Tokyo_Reardon_ppt_symposium_april_7_2010.pdf

⁵ Minten B. and Reardon T. (2008) Food prices, quality and quality's pricing in supermarkets versus traditional markets in developing countries. *Review of Agricultural Economics* 30:480-490.

FIGURE 3: PAST AND PROJECTED GROWTH IN ASIAN MEGACITIES (IN MILLIONS)



Source: United Nations Department of Economic and Social Affairs, *World Urbanization Prospects, the 2009 Revision*, available at <http://esa.un.org/unpd/wup/index.htm>.