

# An Asian perspective on the world food crisis and its impact on development

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INTERNATIONAL  
CONTRIBUTIONS

**Soaring food prices are impacting on the prosperity and development of countries across Asia, including China, India, Indonesia and Vietnam. After peaking at a record high of 238 points in February 2011, the Food Price Index averaged 234 points in June 2011, 39% higher than the same period last year. In Asia, it has translated into an average 10% increase in food prices and could push 64 million Asians into extreme poverty. In the Asia Pacific region, 578 million people were undernourished in 2010.**

## The neglect of agriculture

The crisis was triggered by trends such as rising consumption, environmental degradation, climate change and demand for biofuels, but has its origins in flawed government policies. Lured by Western institutions and economists concerning a fast track to prosperity through “Washington consensus” models of economic growth, Asian policymakers have shifted their focus from a development path dominated by agricultural self-sufficiency to one mandated by the industrial and manufacturing sector. The belief that Asian countries could “manufacture their way out of poverty” led to policies that sowed the seeds of exigency by not recognising that manufacturing-led economic growth would push agriculture to the background, worsening rural-urban disparities and unwittingly encouraging overconsumption.

The critical role of the rural economy as the national breadbasket when people aspire to consume more, together with the consequences of giving priority to the industrial and manufacturing sectors and dis-incentivising the agricultural sector, have been ignored by many political leaders owing to the conviction that the rural sector comprised a backward population and that agriculture was a “poor cousin” of industry.

The waning of Asian agriculture was caused by institutional neglect and policy shortcomings. A lack of public investment in rural infrastructure (irrigation, water conservation, roads, electrification, housing, communication), social infrastructure (education, health care) and agricultural services (rural banking)

has exacerbated rural poverty, increased rural-urban migration and hastened the degradation of arable land.

On the supply side, increasing amounts of arable land have been usurped for factories, housing, resorts and golf courses. In China, 8.2 million hectares of arable land were lost from 1997 to 2009. Today, only 121.7 million hectares of arable land remain.

A nationwide land regulatory system was implemented in 2006 to control land use and reduce this shrinkage. However, China’s arable land may drop below 120 million hectares (the figure essential to maintain food security until 2020) because of illegal use and degradation. The Ministry of Agriculture has considered the seemingly implausible prospect of leasing agricultural land in Australia, Latin America, Africa and elsewhere.

## Problems and issues with the “green revolution”

In many countries, including the Philippines, Thailand and Vietnam, watersheds have been destroyed and soil degraded from poor natural-resource management. Indiscriminate use of fertilizers and pesticides to increase productivity in the “green revolution”, which started in Mexico in the 1940s, spread to India in the 1960s and China in the 1980s, has had a detrimental impact on agricultural land.

The heavy use of agrichemicals has severely degraded soil’s organic matter and contaminated aquifers, which is crucial in determining crop output. China has been the world’s largest consumer of chemical fertilizers since 2007, using more than 50 million tons a year. China also uses 1.3 million tons of pesticides annually, with usage per unit area 2.5 times the global average. In India, fertilizer application has risen from less than one kilogram per hectare in 1951 to 133kg per hectare in 2011. Agricultural centres like the state of Punjab, the largest producer of wheat in India, struggle with this problem.

Within Asia, cultivated land will risk yield decreases in the next few years as degraded soil becomes less resilient to natural disasters such as drought, heat waves and windstorms, which are likely to become more severe with climate change. Another natural precursor of the food crisis is flooding. According to

the UN World Food Programme, 57 countries, including 19 in Asia were hit by catastrophic floods in 2007.

Conglomerates have been allowed a much bigger influence on agriculture in Asia in recent years and are beginning to play a more dominant role than governments, often shifting production to cash crops or grain for livestock. According to the Food and Agriculture Organisation of the United Nations, an estimated 30% of the Earth's ice-free land is directly or indirectly used for livestock production. In 2010, China imported more than 50 million tons of soya beans, mostly from the United States and Brazil. This accounted for 73% of soya bean consumption in China and was used exclusively in the production of livestock feed, with cooking oil a by-product. Transnational agribusinesses own about 70% of China's soya bean-crushing industry.

On the demand side, urban-biased policies are rampant. Cities benefit from better social services and infrastructure, higher wages and artificially low prices. This reduces inflation and sustains urban political harmony but creates stress in rural economies. With the exception of Japan, South Korea and Taiwan, which have strong policies supporting farmers' cooperatives, farmers who help to feed nations remain among their poorest people, not having benefited from the "Asian economic boom" of the last three decades. Improving the lot of the Asian farmer should not be treated by policymakers as a romantic attempt to help the poor, but as a critical manoeuvre for national security and economic development.

This predicament can also be attributed to trends affecting development at a global level. The first is continuing population growth. In Asia, the population expanded from 1.4 billion people in 1950 to 2.4 billion in 1975; then to 4.2 billion, or 60% of the world total, by 2011. Increasing prosperity has also resulted in a consumption binge among the growing Asian middle-class. About 30 years ago, the United Nations estimated that up to 40% of Asians were chronically undernourished. Huge progress has been made in food production and accessibility since then and by 2007 that number had been reduced to 15.6%. However, with increasing prosperity, hundreds of millions of other Asians enjoy abundance steeped in over-



consumption and waste. For example, in India 28.9% of urban women were overweight in 2006, while 47% of children below five were malnourished. The percentage of overweight Chinese has more than doubled, from 7% in 1982 to 15% in 2006. Adopting Western consumption habits means richer Asians are eating away at their own resource base.

Consumption-led economic growth has created a departure from traditional Asian values of moderation, pressurizing the food-supply chain. Long-established diets are changing, with many packaged foods including ingredients derived from agribusiness conglomerates. Meat consumption in India, a country with a strong culture of vegetarianism, has increased by almost 50% since 1980, from 3.7kg per capita per year to 5.5kg today. Average meat consumption in the US is now 93.4kg and in China 58.8kg per capita per year. The growing affordability of meat is of concern because of its inefficiencies as a food source and underpricing. To produce a kilogram of meat takes 6kg of grain and more than 15,000 litres of water. Livestock reared for meat now eat the grain that would have fed the poor. An estimated 50% of all grain grown globally is used to feed livestock.

Prices have increased in the rush to cash in on biofuel production. The rising demand for subsidised biofuels in the US and Europe, stimulated by soaring oil prices, encourages calls for grains and edible oils for

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Irrigation and water  
management are vital  
to Asia's staple crops.

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While research into biofuel crops such as *jatropha* progresses, the sector can harm food security in the developing world.

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biofuels to be produced instead of food. The US ethanol industry consumes more than 40% of the 335 million tons of corn produced annually in the US, with government subsidies reaching US\$7.7 billion in 2010. Asian regulators are intervening: the Chinese government banned the use of grains for biofuel in 2007.

Inequitable international trade rules that shield farmers in rich countries leave developing countries' farmers unable to compete on the world market. India, opposed to World Trade Organisation (WTO) rules, has taken issue with the US in particular, because the regulations favoured by the US benefit fewer than six million American farmers versus more than three billion people who depend on agriculture for their livelihoods.

#### What can be done?

Asian governments should re-channel resources to solve agricultural and policy problems and help rid the sector of the "poor cousin" stigma it has endured for the last 40 or so years. To make agriculture central to economic development, parallel reforms in the rural sector with improvements in the industrial, manufacturing and services sectors are needed. Agriculture should be regarded as central to economic vitality.

Supply chain inefficiencies result in significant food waste. It is estimated that more than 30% of fresh produce is squandered in markets such as India, owing to inadequate transport, storage and industrial infra-

structure. Produce from scattered farm plots in relatively undeveloped areas requires additional handling outside existing food logistics. Compared to the US, where more than 90% of meat, fruit and vegetables are transported in cold-storage vehicles, it is estimated that in China, only 15% of meat and 5% of fruit and vegetables is thus conveyed.

Farmers' cooperatives, reforms of land ownership rights, loans for farmers, availability of insurance and price controls must be part of a rural economic transformation in Asia. Such reforms overhauled the rural sector and increased agricultural productivity in Taiwan, South Korea and Japan after World War II. Improvements should be tied to policies that make resource conservation and environmental management in rural areas central tenets of economic planning.

Land management practices should emphasise ecological food production and water conservation. Investment to protect soil, water resources and biodiversity is essential. Linking public sector spending to their protection is essential to vibrant agricultural sectors. Conservation initiatives have been seen as impediments to development in countries in a rush to industrialise their way to progress. But conservation policies are essential for long-term employment in rural areas – although they require a departure from the strategies employed by Asian governments pursuing urbanization.

Fiscal measures, such as tax and other financial incentives, should be put in place with the aim of reducing resource usage and emissions.

The industrialization of agriculture should be reversed. Agriculture must move towards low chemical fertilizer, herbicide and pesticide use. All should be replaced where possible by labour-intensive, integrated cultivation techniques and local vertical integration, including processing at or near the source. Many of the practices of large-scale agro-industry are founded on an underpricing of inputs.

Resource taxes for raw materials used in agriculture – especially water, but also chemicals – plus an emissions tax on the energy required, and a proper pricing of the impact of run-offs and other pollutants, would inevitably raise costs significantly. But it would

also encourage use of natural fertilizers such as organic compost and cover crops grown primarily to add nutrients to the soil and curb environmental damage from overuse of fertilizers and pesticides. This would benefit the widespread small-scale local farming and should be at the core of economic policymaking. Rural and urban environments that are sustainable and allow communities to flourish need to be developed.

Governments must ensure that all farmers have access to the tools, including irrigation and agriculture inputs, to improve productivity. Farmers need fair access to capital and governments should ensure they receive practical help with production planning and sustainable, integrated cultivation techniques. Making weather and market information easily accessible can help farmers make business projections; and by diversifying the crops they grow, farmers can cushion themselves against market fluctuations and climate-related crop failure. Governments can help link farmers and markets. In Shandong, China, the provincial government is urging supermarkets and school canteens to buy vegetables directly from local farmers.

Indigenous crops need to be improved and made available to farmers. Taiwan-based international non-profit research and development institution The World Vegetable Center breeds enhanced varieties of vegetables to extend shelf lives. Diversifying diets based on local foods to build secure agricultural systems resilient to food-price fluctuations would benefit consumers and farmers.

Investment in education and health, with the aim of providing opportunities for the rural poor, is essential. Opening the rural sector to private investment by encouraging investors to capitalise on profitable, comparatively small-scale rural projects would unlock a new area of economic activity.

Profiteering and overemphasis on biofuels is harming food security. Governments must introduce policies to ensure that production and prices are not influenced by the growing demand for biofuels. Asia, in cooperation with the European Union, could lead the world in introducing a certification scheme for biofuels that meet stringent criteria concerning the protection of food supplies and ecosystems.

More Asian governments should explore genetically modified (GM) foods. Japan and China already import GM grain for the production of animal feed and cooking oil. In 2009, China's Ministry of Agriculture issued biosafety certificates to strains of pest-resistant GM rice and corn, and further trials are in progress before commercial production commences. As food prices soar and grain shortages persist, governments, food companies and consumers may be forced to overcome their entrenched resistance to genetically engineered crops. GM should not be seen, however, as a panacea, but a component of a food-security strategy.

#### Feed or be fed

For most people in Asia the food crisis is one of affordability. For a smaller percentage it is a range of issues, from lack of access to being unable to grow the minimum for subsistence. Climatic conditions, trade subsidies in rich countries, diversions for biofuels and speculative purchases in commodity markets are difficult to control so Asian political leaders must reassess their manufacturing-led development models and support policies to address the complex food predicaments. There can be no continued excuse for Asian countries' expectation of food aid from the West. Countries receiving food aid today include North Korea, Bangladesh, India and the Philippines. Reliance on aid has created a dangerous dependency: Asia is capable of feeding itself instead of being fed. Poverty alleviation; managing the excesses of free markets; technology (in fertilizers, genetic modification of food etc); industrial agriculture and investment (public and private) must be in equilibrium.

None of this will be possible unless Asian governments reject the consumption-led growth model and adopt instead an approach that makes resources conservation the heart of all policymaking.

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