

The World Food Crisis – An Asian Perspective

Chandran Nair

COUNTRIES ACROSS Asia, including China, India, Indonesia and Vietnam, are fighting to curb soaring food prices. After peaking at a record high of 238 points in February, the Food Price Index averaged 234 points in June, 39 per cent higher than the same period last year.¹ In Asia, it has translated into an average 10 per cent increase in food prices and could push 64 million Asians into extreme poverty.² In the Asia Pacific region, 578 million people were undernourished in 2010.³

The Neglect of Agriculture

The crisis, while triggered by recent trends such as rising consumption, environmental degradation, climate change and demand for biofuels, has its origins in flawed government policies. Lured by the arguments of 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 traditionally dominated by agricultural self-sufficiency to one mandated by the industrial and manufacturing sector. The common belief was that Asian countries could “manufacture their way out of poverty”. This led to policies that sowed the seeds of the exigency by not recognising that manufacturing-led economic growth would further push agriculture to the background and also result

¹ www.fao.org/worldfoodsituation/wfs-home/foodpricesindex/en/

² www.adb.org/documents/reports/global-food-price-inflation/food-price-inflation.pdf

³ www.fao.org/docrep/013/i1683e/i1683e.pdf

in worsening rural-urban disparities and unwittingly encourage over-consumption.

The critical role of the rural economy in being the breadbasket that feeds the nation as its people aspire to consume more, together with the consequences of giving priority to the industrial and manufacturing sectors and disincentivising the agricultural sector's workforce,⁴ 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 rural agriculture in the region was caused by institutional neglect and policy shortcomings. In particular, a lack of public investment in rural infrastructure (irrigation, water conservation, roads, electrification, housing and communication), social infrastructure (basic education and health care) and agricultural services (rural banking) exacerbated rural poverty, increased rural-urban migration and hastened the degradation of arable land – land vital to the survival of any nation.

Apart from the overemphasis on manufacturing, other strategies unfavourable to agricultural development have continued while politicians have paid lip service to the needs of the rural poor. On the supply side, increasing amounts of arable land have been usurped for the construction of factories, housing, resorts and golf courses. In China, for example, 8.2 million hectares of arable land were lost from 1997 to 2009.⁵ Today only 121.7 million hectares of arable land remain.⁶ A nationwide land regulatory system was implemented in 2006 to control land use strictly and reduce this shrinkage. However, China's arable land may still drop below the "red line" of 120 million hectares (the figure essential to maintain food security until 2020) because of unchecked illegal use and land degradation.⁷ This threat has led the Ministry of Agriculture to consider the seemingly implausible prospect of leasing agricultural land in Australia, Latin America, Africa and other areas.⁸

⁴ www.fao.org/docrep/009/ag089e/AG089E05.htm

⁵ Xinhuanet, news.xinhuanet.com/english2010/china/2010-10/18/c_13562418.htm

⁶ www.whatsonningbo.com/news-3840-china-has-7m-hectares-of-reserve-land-that-can-be-developed-into-arable-land.html

⁷ www.china.org.cn/english/GS-e/210817.htm

⁸ news.bbc.co.uk/2/hi/asia-pacific/7373213.stm

Confounding Factors

To add to this, in many countries, including the Philippines, Thailand and Vietnam, watersheds have been destroyed and soil has been degraded as a result of inadequate attention to natural-resource management. At the same time, the indiscriminate use of fertilisers 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 long-term detrimental impact on agricultural land. The heavy use of agrochemicals has led to a severe decrease in soil’s organic matter, which is crucial in determining crop output. Increased application of chemical fertilisers has also led to higher susceptibility of crops to pests⁹ and contamination of aquifers. China has been the world’s largest consumer of chemical fertilisers since 2007, using more than 50 million tons a year. Usage has quadrupled since the 1980s to 434 kilograms per hectare. China also uses 1.3 million tons of pesticides annually, with usage per unit area 2.5 times the global average.¹⁰ In India, fertiliser application has risen from less than one kilogram per hectare in 1951 to 133kg per hectare in 2011.¹¹ Agricultural centres like the state of Punjab, the largest producer of wheat in India, continue to struggle with this problem.

Within Asia, cultivated land will face mounting risks of yield decreases in the next few years as the degraded soil becomes less resilient to natural disasters such as drought, heat waves and windstorms, which are likely to become more severe owing to climate change. Another natural precursor of the food crisis is flooding. According to the UN World Food Programme, 57 countries, including 19 in Asia, such as India, Bangladesh and China, were hit by catastrophic floods in 2007.

Another factor relevant to the food crisis is that conglomerates have recently been allowed to have a much bigger influence on agriculture in Asia than in the past. In many ways they 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

⁹ www.agroeco.org/doc/soil-pestmgmt.pdf

¹⁰ *China Daily*, July 18, 2011

¹¹ *Economic Times*; articles.economictimes.indiatimes.com/2011-03-22/news/29174681_1_soil-health-chemical-fertilisers-soil-test-based

Nations, an estimated 30 per cent 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. The tonnage accounted for 73 per cent 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 per cent of China's soya bean-crushing industry.¹² Although arguments about the pros and cons of industrial agriculture are widespread, there is no disputing the evidence that the dominance of conglomerates has resulted in food shortages for the less privileged and a marginalised role for small farmers.

On the demand side, urban-biased policies are rampant. In addition to better social services and infrastructure in cities than in the countryside, as well as higher wages, the maintenance of artificially low prices for essentials such as rice – to reduce inflation and sustain political harmony in urban centres – has created undue stress in rural economies. With the exception of Japan, South Korea and Taiwan, which have strong policies supporting farmers' cooperatives, the result is that 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 linked to national security and economic development.

But national urban-weighted schemes aside, the current predicament can also be attributed to a number of 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 per cent of the world total, by 2011. Increasing prosperity has also resulted in a consumption binge among the growing number of middle-class Asians. About 30 years ago, the United Nations estimated that up to 40 per cent 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 per cent. However, with increasing prosperity, hundreds of millions of other Asians now enjoy a life

¹² IATP; www.iatp.org/documents/feeding-china%E2%80%99s-pigs-implications-for-the-environment-china%E2%80%99s-smallholder-farmers-and-food

of abundance steeped in over-consumption and waste. For example, in India 28.9 per cent of urban women were overweight in 2006, while 47 per cent of children below five were malnourished.¹³ The percentage of overweight Chinese has more than doubled, from seven per cent in 1982 to 15 per cent in 2006.¹⁴ The adoption of Western consumption habits means richer Asians are eating away at their own resource base.

Consumption-led economic growth has also created a rapid departure from traditional Asian values of moderation and frugality. The transformation is putting pressure on the food-supply chain. Long-established diets have also begun to change radically, 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 per cent since 1980, from 3.7kg per capita per year to 5.5kg today.¹⁵ Note that average meat consumption in the US is now 93.4kg¹⁶ and in China 58.8kg per capita per year.¹⁷ The growing availability of affordable meat is of concern because of its inherent inefficiencies as a food source and its extensive underpricing. To produce a kilogram of meat takes six kilograms of grain and more than 15,000 litres of water;¹⁸ as a result, livestock reared for meat are now eating the grain that would previously have fed the poor. It is estimated that today, 50 per cent of all grain grown globally is used to feed livestock.¹⁹

Prices have also increased owing to the rush to cash in on biofuel production. The rising demand for subsidised biofuels in the US and Europe, further stimulated by soaring oil prices, encourages calls for grains and edible oils for biofuels to be produced instead of food crops. The US ethanol industry now consumes more than 40 per cent of the 335 million tons of corn produced annually in the US, with government subsidies reaching US\$7.7 billion in 2010.²⁰ This diversion of resources to the growing of crops for fuel instead of food is not only inefficient but could prove catastrophic for the

¹³ UNICEF

¹⁴ *Financial Times*; www.ftchinese.com/story/001013374/en/?print=y

¹⁵ FAO

¹⁶ USDA

¹⁷ China Meat Association

¹⁸ www.waterfootprint.org/?page=files/productgallery&product=beef

¹⁹ www.diseaseproof.com/archives/cat-world-preservation-foundation.html

²⁰ Reuters, November 22, 2010

world food supply. Asian regulators are waking up to this and intervening: the Chinese government banned the use of grains to produce biofuel in 2007.²¹

Also aggravating the difficulty are the inequitable international trade rules that shield farmers in rich countries, leaving developing countries' agricultural sectors unable to compete on the world market. India is the strongest opponent of World Trade Organisation (WTO) rules and has taken issue with the United States 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. At the failed WTO'S Doha round of global trade talks in July 2008, Kamal Nath, then India's Minister for Commerce and Industry, insisted that "the most important thing was the livelihood security, the vulnerability of poor farmers, which could not be traded off against the commercial interests of the developed countries".²²

What can be done?

To help alleviate this crisis, one major focus of Asian governments should be to re-channel resources to solve agricultural and related policy problems. Doing so would help to rid the sector of the "poor cousin" stigma it has endured for the last 40 or so years. Part of making agriculture central to economic development entails integrating, in parallel, reforms in the rural sector with improvements in the industrial, manufacturing and services sectors. There must be a shift towards this parallel integration so that agriculture is not regarded as separate from, but central to, economic vitality.

Integration must also focus on improvements in the existing supply-chain inefficiencies that result in significant food waste: it is estimated that more than 30 per cent of fresh produce is squandered in markets such as India, owing to inadequate transport and storage and other industrial infrastructure. Produce from scattered farm plots in relatively undeveloped areas across Asia also requires additional handling outside existing food logistics. Compared to the US, where more than 90 per cent of meat, fruit and vegetables is transported in cold-storage vehicles, it is estimated that

²¹ *New York Times*; www.nytimes.com/2011/04/07/science/earth/07cassava.html

²² *The Guardian*; www.guardian.co.uk/world/2008/jul/31/wto.india

in China, only 15 per cent of meat and five per cent of fruit and vegetables is thus conveyed. The development of farmers' cooperatives, reforms of land ownership rights, access to loans for farmers, availability of insurance and price controls must be part of a rural economic transformation that is long overdue in many Asian countries. Such reforms overhauled the rural sector and increased agricultural productivity in Taiwan, South Korea and Japan in the decades following World War II. Improvements should also be closely tied to policies that make resource conservation and environmental management in rural areas central tenets of economic planning.

Land-management practices: land-use measures that emphasise ecological food production and water conservation

At the top of the agenda must be extensive investment to protect soil, water resources and biodiversity. Few countries have linked public-sector spending to their protection, even though they are essential to vibrant rural and therefore agricultural sectors. Conservation initiatives have been seen as impediments to development in most countries in their rush to industrialise their way to progress. But conservation policies are essential to the creation of long-term employment in rural areas – although they require a departure from the strategies employed by Asian governments relentlessly to pursue urbanisation and manufacturing in the name of job creation.

Fiscal measures: tax and other financial incentives aimed at reducing resource usage and emissions

The industrialisation of agriculture should be reversed. Agriculture must move towards a regime of low chemical fertiliser, herbicide and pesticide use. All should be replaced where possible by labour-intensive, integrated cultivation techniques and local vertical integration, including processing of produce at or near the source. Many of the practices of large-scale agro-industry are founded on an underpricing of inputs. The introduction of resource taxes for the 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. That, however, would also encourage a greater use of natural fertilisers such as organic compost and cover crops grown primarily

to add nutrients and organic matter to the soil. Environmental damage would be reduced as extensive use of fertilisers and pesticides was curbed. This would benefit small-scale local farming that remains widespread throughout the region and which should be at the core of economic policymaking.

Social resource practices: developing rural and urban environments that are sustainable and allow communities to flourish

Asian governments must ensure that all farmers have access to the tools, including irrigation and agriculture inputs, needed to improve productivity. This also demands that farmers be given access to capital on fair terms. In addition, governments should ensure farmers 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.²³ Governments can also play a role in linking farmers and markets. In Shandong, China, for example, the provincial government is urging supermarkets and school canteens to buy vegetables directly from local farmers.²⁴

Governments should support improvement of indigenous crops and make them available to farmers. For instance, Taiwan-based international non-profit research and development institution The World Vegetable Center breeds enhanced varieties of vegetables to extend their shelf lives. Diversifying diets based on local foods to build secure agricultural systems resilient to food-price fluctuations would benefit consumers and farmers.²⁵

Investment in education and health, with the aim of providing opportunities for the rural poor, is essential. And the opening of 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.

The current profiteering and overemphasis on biofuels is causing widespread harm. In the interests of food security, Asian governments must

²³ *China Daily*, 13 May 2011, Innovations that can ensure food security: usa.chinadaily.com.cn/opinion/2011-05/13/content_12505245.htm

²⁴ *ibid.*

²⁵ *ibid.*

introduce policies to ensure that production and prices are not influenced by the growing demand for biofuels. Asia could lead the world in introducing a certification scheme for such fuels that meet stringent criteria concerning the protection of food supplies and ecosystems. Cooperation with the European Union in this field would be a step forward.

More Asian governments should explore the adoption of genetically modified (GM) foods, viewed by some as a mechanism for the continuation of the “green revolution”. Japan and China are already importing GM grain for the production of animal feed and cooking oil.²⁶ In November 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.²⁷ 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 and look to biotechnology for sustenance. GM should not be seen, however, as a panacea, but as one component of a national food-security strategy. Public concerns about crops’ provenance should also be addressed.

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. Because climatic conditions, trade subsidies in rich countries, diversions for biofuels and speculative purchases in commodity markets are difficult to control, it is imperative that Asian political leaders reassess their manufacturing-led development models and support policies to address the complex food predicaments now prevailing. 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.²⁸ A history of reliance on aid has created a dangerous dependency that must be eradicated: Asia is capable of feeding itself instead of being fed. Poverty alleviation; managing the excesses of free markets; the use of technology (in fertilisers, genetic modification of

²⁶ www.geneticallymodifiedfoods.co.uk/gm-foods-asia.html

²⁷ *China Daily*, www.chinadaily.com.cn/china/2010-02/04/content_9424300.htm

²⁸ UNESCAP, www.unescap.org/65/documents/Theme-Study/st-escap-2535.pdf

food and so on); the role of 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.