

## The global food crisis

Jayati Ghosh

Public Lecture at the University of Turin, Italy

21 May 2008

This is not a sudden and unexpected crisis: the signs have been around for some time now. Even though international bureaucrats have been referring to the current problems in the world food situation as "a silent tsunami", the truth is that this one could easily have been seen to be coming. Even so, its impact has been powerful and already quite devastating, as food shortages and rapidly rising prices of food have adversely affected billions of people, especially the poor in the developing world.

It is also very much a man-made crisis, resulting not so much from ineluctable forces of global supply and demand as from the market-oriented and liberalising policies adopted by choice or compulsion in almost all countries. These policies have either neglected agriculture or allowed shifts in global prices to determine both cropping patterns and the viability of farming, and also generated greater possibilities of speculative activity in food items. Cultivators in developing countries have been ravaged by the fearsome combination of exposure to import competition from highly subsidised agriculture in developed countries, removal of domestic protection of inputs and reduced access to institutional credit - to the point that even the global increase in agricultural prices after 2002 did not compensate sufficiently to alleviate the pervasive agrarian crisis in much of the developing world.

What are the symptoms of this crisis? The most immediately evident feature is the recent rise in food prices. Globally, the prices of many basic food commodities have not risen faster for more than three decades. In fact, even in recent years, food prices internationally had shown only a modest increase until early 2007. But since then they have zoomed, such that the IMF data show more than 40 per cent increase in world food prices over 2007, and even more rapid increases in the first three months of this year. The FAO food price index, which includes national prices as well as those in cross-border trade, suggests that the average index for 2007 was nearly 25 per cent above the average for 2006. Apart from sugar, nearly every other food crop has shown very significant increases in price in world trade over 2007. This trend has accelerated in the first few months of 2008.

The increase has been marked in essential food grains that are staples for most of the world's population. Global prices of wheat prices increased by 77 per cent in 2007 and rice prices increased by nearly 20 per cent, which are some of the most rapid annual increases in the past half-century. Since the start of 2008, world rice prices have soared even more, increasing by nearly 150 per cent in the first 100 days of the year. Wheat prices have been highly volatile in the current year, increasing by 25 per cent in one day and then falling even more sharply in early April, but still well above the levels of most of last year. The price of corn - another major staple especially in Latin America - has more than doubled in the past two years.

Across developing countries there is evidence of growing shortage of food in retail trade, even if not always in domestic production. Price rises for food grains have varied in intensity according to how well different governments have been able to manage the global impact in their own countries and ensure domestic supply. And prices of other food items - ranging from meat and vegetables to edible oils - have also sky rocketed.

The impact of this has been felt most sharply in poor countries where most people tend to spend around half of their family budgets on food items. There have already been food riots in countries as far apart as Haiti, Guinea, Mauritania, Mexico, Morocco, Egypt, Senegal, Uzbekistan, Yemen, Bangladesh, Philippines and Indonesia. And many more countries are threatened by social unrest as rising food prices cause not merely dissatisfaction but the spread of hunger. In several countries in Asia, such as Pakistan and Thailand, troops have had to be deployed to guard food stocks and prevent seizure of grain from warehouses.

Even the multilateral institutions that have encouraged policies that have brought the situation to this pass have had to sit up and take notice. The World Bank President now estimates that such high food prices could cause more than 100 million people in low-income countries to be pushed back into deeper poverty.

There are many explanations being offered for the recent increase in global food prices. One of the most common arguments, given greater impetus by its endorsement by George Bush and the US administration, is that this is essentially demand-led - the result of several years of rapid economic growth, rising incomes in some of the most populous nations (particularly China and India) and therefore the growing demand for food. It is pointed out that as per capita incomes rise, even though people may spend less of their income on food, the absolute amount of demand still increases. And even when they consume less

food grain directly because of change in food consumption patterns, the indirect demand for grain still increases, often more than proportionately, because of more demand for animal products, since livestock also need to be fed and some like cattle require even more grain than humans. (It is estimated that each kilo of beef requires seven kilos of grain to be produced.)

However, this argument regarding increasing global demand is not just overplayed, but actually misleading. It is certainly true that there has been some diversification of production and food consumption of the rich in China, India and other fast-growing developing countries. This does lead to greater absorption of food grains directly and indirectly - but only of the group of the relatively well-off, which is very much a minority in both countries. And because income distribution in these emerging markets has been worsening quite rapidly, the bulk of the population is not part of that tendency. In fact, per capita consumption of food grain in India as a whole is *lower* now than it was in the 1980s! And even in China, per capita food grain consumption actually fell quite sharply between 1996 and 2003. While it has risen thereafter, the level in 2005 was still below the level of 1996.

In both China and India, the rate of population growth has been slowing down, so total food grain demand from these two countries has been increasing at a slower rate than they were in the previous decade, when world prices of food were relatively low even in historical terms. So rather than demand from these growing developing countries, global supply conditions must have been significant in changing the trend in food prices.

Even a recent study by Germany's National Office for Agricultural Produce Prices has rejected the claims that growing demand in China is the main reason for the current spike in world food prices, pointing out that China's alleged influence on global markets is exaggerated. It noted that while over the past decade Chinese domestic consumption of milk and dairy products rose by more than five times, the bulk of this increase in demand was satisfied by a simultaneous expansion in Chinese production. Currently China meets more than 90 per cent of its needs in wheat, maize and rice, and is aiming for producing 95 per cent of its estimated future demand for these items.

It is of course true that in certain food products as well as in oil, China's involvement in global markets has played a role in affecting world prices. In 2006 and part of 2007 Chinese domestic pork production collapsed because of animal disease, causing higher imports of both pork and corn feed for pigs to increase domestic pork supply. This did lead to higher prices of both pork and

corn, although in the case of corn the impact of the US in world trade has been much greater, as we will see. Similarly, 40 per cent of world production of soya bean is currently imported by China, largely for use as animal feed. Chinese imports of other primary products such as cotton, vegetable oils, rubber, timber and animal skins have soared. But these are not responsible for higher world prices of wheat and rice, which are the focus of so much current concern.

In any case, it should be noted that this is not the first time that the world economy has witnessed increases in income of a significant portion of the population, and these phases have not been accompanied by such sharp increases in food prices in the past. Rather than these simplistic explanations, it is likely that there are other forces at work, which come not from changing demand so much as supply. Five major features of recent supply conditions have been crucial in changing the global market situation for food crops.

First, there is the impact of high oil prices, which affects agricultural costs directly and indirectly in a variety of ways. This is because of the growing significance of energy as an input in the cultivation process itself as well as in transporting food. Changing cultivation technology has meant ever growing reliance on chemical fertilisers, whose production costs (for nitrogenous fertilisers in particular) are directly affected by oil prices. Greater mechanisation of agriculture in the form of tractors, harvesters and threshers requires more oil to run these machines. The spread of irrigation, especially ground water exploitation, requires energy in the form of diesel or electricity to run pump sets.

This rise in energy costs has had more of an impact than before on costs faced by farmers because in most countries, especially in the developing world, governments have reduced protection and subsidies on agriculture. This means that high costs of energy directly translate into higher costs of cultivation, and therefore higher prices of output.

Second, there is the bio-fuel factor: the impact of both oil prices and government policies in the US, Europe, Brazil and elsewhere that have promoted bio-fuels as an alternative to petroleum. This has led to significant shifts in acreage to the cultivation of crops that can produce bio-fuels, and diversion of such output to fuel production. For example, in 2006 the US diverted more than 20 per cent of its maize production to the production of ethanol; Brazil used half of its sugar cane production to make bio-fuel, and the European Union used the greater part of its vegetable oil seeds production as well as imported vegetable oils, to make bio-fuel.

The US has led this shift globally. President George Bush provided an impetus to domestic ethanol production by providing large subsidies, in a desperate attempt to reduce dependence upon petroleum once it became evident that the imperialist attempt to control Middle East oil supplies had come unstuck with the failed invasion of Iraq. According to the IMF, corn ethanol production in the United States has accounted for at least half of the increase in global corn output since 2006.

In addition to diverting corn output into non-food use, this has also reduced acreage for other crops and has naturally reduced the available land for producing food. Soya bean production has been adversely affected by the acreage shift, and therefore oilseed prices have gone up. Meanwhile, the use of maize to make ethanol has caused corn prices to rise, and increased the price of animal feed, thereby causing increased prices of livestock and therefore meat and dairy products.

The irony is that bio-fuels do not even fulfil the promises of ensuring energy security or retarding the pace of global warming. Ethanol production is extremely energy-intensive, so it does not really lead to any energy saving. Even in the most "efficient" producer of ethanol - Brazil - where sugar cane rather than corn is used to produce ethanol, it has been argued that the push for such production has led to large-scale deforestation of the Amazon, thereby further intensifying the problems of global warming. Indeed, recent scientific research suggests that the diversion of land to growing bio-fuel crops can produce an enormous "CO<sup>2</sup> debt" from the use of machinery and fertilisers, the release of carbon from the soil and the loss of CO<sup>2</sup> sequestration by trees and other plants that have been cleared for cultivation.

Yet, as long as government subsidies remain in the US and elsewhere, and world oil prices remain high, bio-fuel production is likely to continue to be encouraged despite the evident problems. And it will continue to have negative effects on global food production and availability.

Third, the impact of policy neglect of agriculture over the past two decades is finally being felt. The prolonged agrarian crisis in many parts of the developing world has been largely a policy-determined crisis. Once again, even international officials are now admitting what has been obvious to independent observers for several years. Jacques Diouf, Director of the U.N.'s Food and Agriculture Organisation, has admitted that the crisis had been building for

decades: "The situation we are in is the result of inappropriate policies over the past 20 years."

These inappropriate policies have several aspects, but they all result from the basic neo-liberal open market-oriented framework that has governed economic policy making in most countries over the past two decades. One major element has been the lack of public investment in agriculture and in agricultural research. This has been associated with low to poor yield increases, especially in tropical agriculture, and falling productivity of land. Greater trade openness and market orientation of farmers have led to shifts in acreage from traditional food crops that were typically better suited to the ecological conditions and the knowledge and resources of farmers, to cash crops that have increasingly relied on purchased inputs.

But at the same time, both public provision of different inputs for cultivation and government regulation of private input provision have been progressively reduced, leaving farmers to the mercy of large seed and fertiliser companies, input dealers. As a result, prices for seeds, fertilisers and pesticides have increased quite sharply. There have also been attempts in most developing countries to reduce subsidies to farmers in the form of lower power and water prices, thus adding to cultivation costs. Costs of cultivation have been further increased in most developing countries by the growing difficulties that farmers have in accessing institutional credit, because financial liberalisation has moved away from policies of directed credit and provided other more profitable (if less productive) opportunities for financial investment. So many farmers are forced to opt for much more expensive informal credit networks that have added to their costs.

The lack of attention to relevant agricultural research and extension by public bodies has denied farmers access to necessary knowledge. It has also been associated with other problems such as the excessive use of ground water in cultivation; inadequate attention to preserving or regenerating land and soil quality; the over-use of chemical inputs that have long run implications for both safety and productivity. Similarly, the ecological implications of both pollution and climate change, including desertification and loss of cultivable land, are issues that have been highlighted by analysts but largely ignored by policy makers in most countries.

Reversing these processes is possible, and of course essential. But it will take time, and also will require not only substantial public investment but also

major changes in the orientation and understanding of policy makers. So until then global supply conditions are likely to remain problematic. And meanwhile, increases in global prices of food are likely to be exploited by large agribusinesses based in the North rather than benefiting farmers in low income countries.

In the broader economic strategy context, there are also issues related to the loss of cultivable land because of industrialisation. Predictably, this has been most rapid in recent times in fast-growing Asia, but that is also because the process was already more advanced in the more industrialised regions of Latin America. For example, in Vietnam it is estimated that around 40,000 hectares of rice paddies are lost every year to urban construction, industrial zones and roads. In Thailand, the world's major rice exporter, the amount of land under rice cultivation dropped by more than 13 per cent between 1995 and 2005.

Fourth, there is the impact of recent climate change, which has caused poor harvests in different ways ranging from droughts in Canada and Australia to excessive rain in parts of the US. Scientists are projecting that warmer and earlier growing seasons will increase crop susceptibility to pests and viruses, which are expected to proliferate as a direct result of rising temperatures. Some more arid regions are already more drought-prone and in danger of desertification. The rapid melting of glaciers in Asia is of huge consequence to China and India, where important rivers such the Yangtze, Yellow and Ganges are fed by such glaciers. This will deprive the hinterland of much-needed irrigation water for wheat and rice crops during dry seasons. This is of global significance since China and India together produce more than half the world's wheat and rice. Once again, official policy has been tardy in considering such problems, much less in addressing them.

Fifth, there is the more proximate impact of changes in market structure, which allow for greater international speculation in commodities. It is often assumed that rising food prices automatically benefit farmers, but this is far from the case, especially as the global food trade has become more concentrated and vertically integrated. A small number of agribusiness companies worldwide increasingly control all aspects of cultivation and distribution, from supplying inputs to farmers to buying crops and even in some cases to retail food distribution. This means that marketing margins are large and increasing, so that direct producers do not get the benefits of increases expect with a time lag and even then not to the full extent. This is certainly

known to be true in developing countries where large corporate players, both national and multinational, are able to control markets and prevent farmers from getting most of the gains of international price increases. But it is also true in the United States, where giant agribusinesses rather than farmers have been reaping the rewards of higher government subsidies and higher global prices.

This concentration in global agribusiness also enables greater speculation in food, with more centralised storage. Financial innovations, such as the development and expansion of commodity futures exchanges, have aided and accelerated this process by allowing purely financial speculators to engage in transactions in commodity markets as well. Even in the United States, there is now an intense ongoing debate on the role that the large influx from hedge and index funds into commodity futures are playing in the present situation, when both commodity price levels and their volatility have reached unprecedented highs.

It is probably not a coincidence that this has happened over the same period that governments across the developing world in particular (with the notable exception of China) have reduced public holding of food stocks. The US Department of Agriculture estimates that global stock holding of wheat is at its lowest level in thirty years, despite substantially increased world demand. It should be noted that the same multilateral donors (the IMF and the World Bank) whose representatives are now breast-beating about the food crisis have earlier played a major role in this reduction of state involvement, by encouraging or forcing developing country governments to reduce "wasteful" and "expensive" holding of food grain stocks. Such a policy promoted especially by the World Bank had already led to major famines and humiliating dependence on aid for food imports in countries like Malawi and Ethiopia a few years ago.

Even in other countries where the governments were not forced to do so, there has been a general reduction of publicly held stocks as part of the wider climate of reduced government involvement in all economic matters. This has inevitably reduced the capacity of public intervention to prevent speculative activity from dominating markets and prices. And because public food reserves necessarily take time to build, they cannot quickly be created to ensure a reduction of speculation-induced price rises. The point has been made bluntly, if belatedly, by Jose Graziano, the UN Food and Agriculture Organization's Regional Representative for Latin America and the Caribbean: "The crisis is a



speculative attack and it will last... Speculative attacks become possible when you have low reserves."

Such speculation is not likely to dissipate any time soon. As the global financial system remains fragile with the continuing implosion of the US housing finance market, investors will continue to search for other avenues of investment to make up their losses and find new sources of profit. As already noted, commodity speculation has increasingly emerged as an important area for such financial investment. Such speculation by large banks and financial companies explains at least partly why the very recent period has seen such sharp hikes in price. Once again, government policies, especially with respect to the financial sector, are largely responsible for this, since financial deregulation has allowed many more complex forms of speculative activity that affect trade in commodities.

The role played by private traders and speculators has been especially evident in countries where aggregate domestic supply has been adequate to meet demand but there have not been enough stocks in the hands of the public agencies. Thus in India, in the previous year private trade played a role in pushing up prices of essential food items even though there was no absolute shortage in aggregate terms, because the public food distribution agency had not procured enough to dampen market expectations of prices rises.

So it is clear that the entire process that has led to the current food crisis has been largely policy-driven. This may actually be good news in a way, because it means that reversing such policies and developing alternative strategies can also reverse the process. But it is important for governments to recognise the precise role played by specific policies and think strategically on how to change them in a progressive and sustainable manner, rather than simply engage in knee-jerk reactions.

Unfortunately, it seems that knee-jerk responses are dominating at present. Of course, some of these are necessary to deal with the immediate crisis and ensure access to food especially for the poor. Of 58 countries whose reactions are tracked by the World Bank, 48 have imposed price controls, consumer subsidies, export restrictions or lower tariffs. But another response has been to slash import duties: at least 24 nations have reduced duties and value-added taxes on food items and allowed cheaper imports. Many countries are restricting or prohibiting exports, especially of rice or wheat. These include Egypt, Argentina, Kazakhstan, Cambodia, India and China. Meanwhile, net importers, often poor countries in Asia and Africa, are scrambling to secure

supply contracts as the domestic production of food staples cannot meet consumption requirement.

Meanwhile, one positive result is that governments are once again turning their attention to the need to maintain public food stocks. In January, the Malaysian government announced that it would create a new agency to stock up on oil, rice and other items. Other countries in Asia are also busy stockpiling grain. The Indian government has recently put fresh energy into ensuring that the public agency procures enough wheat from the recent harvest to ensure more than adequate buffer stock.

Another possibly less desirable fallout of the food crisis is the greater willingness of some governments to consider genetically modified crop production. Thus, the Mexican government, which had banned GM crops for a long time, is now considering lifting the ban on genetically modified corn. It is possible that similar bans in the European Union and some countries of Africa could also be reconsidered if the aggregate shortages continue.

In this context it is worth considering the case of countries that have managed to avoid severe crisis. Venezuela in Latin America stands out as a country where food prices have increased only marginally, largely because oil revenues have been used to subsidise essential items consumed by the poor. In Africa, Malawi was one of the countries earlier laid low in terms of food self-sufficiency because its government relied on World Bank advice. But now it has not only weathered the current storm but has achieved recent success in food production, allowing it to achieve food self-sufficiency and even to export food, by ignoring World Bank advice and extending substantial subsidies for fertiliser and other inputs to farmers. Even China, blamed so often for high global prices, has actually increased domestic production to meet domestic needs and also stockpiled large quantities of grain, so that rice and wheat prices have not increased much in China despite rapid global inflation in these crops.

In India, the banning of futures trading in four essential commodities last year, the recent control of foreign trade and the ability of the government to use public procurement to feed the Public Distribution System have played some role in keeping grain price rises below the global increases. However, in India even small increases in food prices directly impact upon the poor and adversely affect food consumption, because most workers do not get inflation-indexed incomes. The problem is more severe because such a large proportion of the population is already malnourished and thereby more prone to debilitating illness and inability to achieve normal growth. Even small reductions in food

consumption can have devastating social effects in such a context, quite apart from the political destabilisation that can occur.

All this suggests that real solutions to the present food crisis will not be found until governments across the world seriously reconsider the neoliberal economic strategies that have created the crisis in the first place. This means that unless there is much wider public outcry and socio-political pressure against such policies, the food crisis is likely to continue.