



# Food Price Crisis FAQs

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## 1a) What were the main causes of the international food price spike in 2007-08?

Most analyses<sup>1</sup> agree on a common list of likely contributing factors, although not necessarily on their importance. They include:

- **Supply side:** poor harvests especially of wheat, lower grain stocks, and rise in oil price;
- **Demand side:** diversion of grains to distillation for biofuels, rising demand in China, India and other rapidly growing economies, and generalised inflation resulting from rapid growth of the world economy;
- **Policies:** export bans and restrictions, restocking in tight markets and reduced import tariffs; and
- **Financial:** depreciation of the US dollar and speculation on futures markets.

A better way of looking at what happened is perhaps through time. The evolution of the price spike can be seen as a combination of factors applying over the medium term from the early 2000s to late 2006, triggers operating in the short-run from 2006 to the peak of the spike in early 2008, and, in the very short run from mid 2007, reactions to the initial price rise that exacerbated price increases.

**Medium term factors** include:

- The slow-down in growth of production of cereals since the mid-1980s in the face of rising demand. In the first four marketing years of the new century global consumption exceeded production. Partly for this reason and partly owing to policies to hold smaller public stocks of grain in the USA, Europe, China and some other developing countries, stocks declined from 2000 onwards. For the three main grains, world end-of-season stocks as a ratio of use fell from more than 34% in the late 1990s to under 20% by 2005. Conventional wisdom is that “on a world basis, a stocks/use ratio for wheat under 20% has typically led to strong price advances. For corn, the comparable number appears to be under 12%”<sup>2</sup>;
- Rising oil price — from less than US\$20 a barrel in late 2001 to more than US\$130 a barrel in July 2008 — that pushed up costs of diesel and nitrogenous fertiliser on farms and of transport of cereals. Once oil prices pass a threshold between US\$60 and US\$70 a barrel of oil,<sup>3</sup> ethanol distilled from grains becomes commercially profitable so that demand for biofuels increases;
- Decline in the value of the US dollar against other major currencies meant that some importers found they could afford to bid more for cereals in dollar prices;
- Conditions in the world economy that saw rapid growth with commensurate increases in demand for most commodities, accompanied by expansion of the money supply that permitted general inflation across commodities. The metals price index, for example, more than trebled between late 2001 and mid-2007; and, much debated since there are doubts over its impact,
- Increased investment in cereals futures by index funds looking for returns in the medium to long run from the early 2000s onwards. This may have raised futures prices, but it is far from clear how this would have affected spot market prices. It may, however, have contributed to general alarm and fears that prices would continue to rise, come what may.

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<sup>1</sup> The main sources drawn on comprise: Abbot, Hurt & Tyner 2008, Collins 2008, Gilbert 2008, Mitchell 2008, Robles, Torero & von Braun 2009, Timmer 2008, and Trostle 2008.

<sup>2</sup> The ‘stocks-to-use ratio’ indicates the level of carryover stock for any given commodity as a percentage of the total demand or use. Quote taken from: [http://futures.tradingcharts.com/learning/stocks\\_to\\_use.html](http://futures.tradingcharts.com/learning/stocks_to_use.html)

<sup>3</sup> More strictly, it is the ratio of the oil price to that of feedstock. Of particular interest here is the ratio of oil prices to those of maize. A spike in grains prices then tends to reduce the demand for ethanol, since the rising cost of grain as feedstock can offset the incentive of high oil prices.

These trends pushed up cereals prices from 2002 onwards, but by modest amounts. Prices<sup>4</sup> in real terms rose from 2002 to late 2006 by 16% for maize, 49% for rice, and 35% for wheat. Those studying the markets, including grain traders, were acutely aware that as the stock-to-use ratios fell, the market was vulnerable to short-term shocks such as crop failures. So, for some grain traders, the price spike was not unexpected, but the timing and the magnitude were.

**Short-run triggers** then set off rapid inflation of grain prices. The triggers were:

- Poor harvests. World wheat harvests in 2006/07 were 5% down, and those of 2007/08 were 3% down on those of 2005/06.
- The effects of the 2005 Energy Act in the US with its mandatory targets for biofuels production and its discouragement of MTBE as a petroleum additive that led to its replacement by ethanol. Increased production of ethanol increased demand for maize as a feedstock.

Once prices start to rise rapidly, governments, traders and consumers reacted in alarm producing **positive feedback** that accelerated still further the price rises, through:

- Export bans applied to wheat and probably most damagingly to rice;
- Reduction of import tariffs that allowed consumers to maintain consumption in the face of rising prices that might otherwise have discouraged consumption (and caused them to switch to some other staple);
- Restocking by government agencies, determined to ensure locally available supplies, in the teeth of a tight market. This applied above all to rice; and perhaps, again for the case of rice,
- Stocking ('hoarding') of rice by households and traders concerned that rising prices might presage absolute shortages.

There is controversy over the relative contributions of the different factors. Since, however, their combined effect is multiplicative, it is probably impossible to assign fractions of blame to the different elements.

That said, three elements have been hotly discussed:

- **Increased demand for cereals in booming Asian economies.** No, almost certainly not: China and India hardly import any grain at all. Their demand for cereals is not growing that quickly: indeed, Chinese consumption of rice per capita is falling. The impacts of economic growth can be seen not on cereals markets, but on those for vegetable oils and oilseeds.
- **Biofuels.** Estimates of the contribution of increased demand for biofuels, in particular ethanol in the USA, to the price spike vary from negligible to 75%. The last figure is probably an exaggeration arising from a mis-reading of a World Bank report. US ethanol almost certainly contributed substantially to the rise in the maize price, but much less to wheat prices, and hardly at all for rice prices. Debate continues on the extent to which increased ethanol production in the US stems from policies including subsidies, and how much it reflects the commercial viability of ethanol once oil prices rise above US\$60 a barrel; and,
- **Investment ('speculation') in cereals futures.** While there are correlations between massive increased investments in cereals futures and rising futures prices, it is far from clear how this affects spot prices. Statistical analyses of the relations are inconclusive. The prices of agricultural and mineral commodities for which there is virtually no futures market rose by as much as the prices of maize and wheat and in some cases by much more. In cereals, there is only a small futures market for rice, yet it was the rice price that showed the sharpest spike.

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<sup>4</sup> Quoted in US dollars

## 1b) Which countries were worst affected?

Several agencies<sup>5</sup> made estimates of the potential vulnerability of different countries to high international food prices. Their criteria included poverty, fiscal capacity, and dependence on cereal imports in the staple diet. The countries highlighted as at greatest risk were:

- **In Asia:** Afghanistan, Bangladesh, Cambodia, Indonesia, Timor-Leste, Kyrgyz Republic, Mongolia, Myanmar, Nepal, Pakistan, Sri Lanka, Tajikistan, Uzbekistan
- **In Africa:** Benin, Burkina Faso, Burundi, Central Africa Republic, Congo Democratic Republic, Cote d'Ivoire, Eritrea, Ethiopia, Gambia, Ghana, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Malawi, Mali, Mauritania, Mozambique, Niger, Nigeria, Papua New Guinea, Rwanda, Sao Tome e Principe, Senegal, Sierra Leone, Somalia, Sudan, Tanzania, Togo, Uganda, Zambia, Zimbabwe
- **Elsewhere:** Haiti, Yemen

However, many consumers in lower-middle-income countries not on the list above were also seriously affected by the price spike – as evidenced by food riots in Egypt and Cameroon, among many others. Food is still a major component of the household budget in these countries<sup>6</sup>, and an increase in its price means less money for other household items. Food prices are politically sensitive in nearly all countries.

The actual impact of high food prices in a particular country also depends on its policy response – see [Which countries responded well to the crisis?](#)

## 1c) What is the impact of high food prices on poverty and hunger?

Food is a large component of the budget for many poor families in developing countries: estimates vary from around 50 to as much as 90%<sup>7</sup> (compared to about 15% on average in the UK). Food price rises therefore have an immediate impact on the overall household budget.

When prices rise, one of the first responses of poor households is to call on any cash savings and/or borrow money (both formally and from their family and friends). In Bangladesh, where microfinance facilities are relatively well developed, over 60% of families in one study reported taking loans<sup>8</sup>. In another study in the same country, nearly a quarter of the poorest quintile (fifth) of rural households reported taking 'loans from an NGO'. This compares to less than 5% in the same sample receiving any social protection benefits from the government. This points to the importance of developing financial markets for the poor to help them get through such crises. See: [What are the main policy lessons from this crisis for the international community?](#)

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<sup>5</sup> WFP <http://www.odihpn.org/report.asp?id=2988>, AsDB <http://www.adb.org/Documents/Policies/ADB-Response-Food-Crisis/IN185-08.pdf> and University of California [http://www.agecon.ucdavis.edu/extension/update/articles/v12n2\\_7.pdf](http://www.agecon.ucdavis.edu/extension/update/articles/v12n2_7.pdf) The EC Food Facility based its programme on an index comprising GNI, Hunger Index, Caloric intake from imported cereals, Balance of Payment impact, Economic Importance of Agriculture; Agricultural Production Index and Foreign exchange reserves.

<sup>6</sup> For example, food is weighted as 39% of the Egyptian Consumer Price Index [http://www.imf.org/external/pubs/ft/weo/2007/02/c1/Box1\\_1\\_2.csv](http://www.imf.org/external/pubs/ft/weo/2007/02/c1/Box1_1_2.csv)

<sup>7</sup> See [http://www.imf.org/external/pubs/ft/weo/2007/02/c1/Box1\\_1\\_2.csv](http://www.imf.org/external/pubs/ft/weo/2007/02/c1/Box1_1_2.csv)

<sup>8</sup> Raihin, S. (2009) Study on Impact of Food Price Rise on School Enrolment and Dropout in the Poor and Vulnerable Households in Selected Areas of Bangladesh. Report commissioned by DFID, Dhaka. [http://www.bracresearch.org/publications/monograph\\_dfid1.pdf](http://www.bracresearch.org/publications/monograph_dfid1.pdf)

To keep hunger at bay, many families also cut back on 'luxuries' such as healthcare and schooling. They may also take on extra work to make ends meet, such as woodcutting/charcoal burning and day labour.

When the price of rice rises, that doesn't mean that poor families will necessarily eat less rice – in fact they may eat more rice. Instead they are likely to cut out expensive foods such as animal products and vegetables from the diet, which may threaten nutrition. They may consume more gleaned and wild foods (such as edible 'weeds'). The quality of staple food consumed may<sup>9</sup> also go down. Nutritional impacts, particularly on small children and pregnant women, may be severe<sup>10</sup>.

Watch out for ODI's forthcoming paper on this which will have more details on the [project site](#)

## 1d) Weren't the high food prices in 2008 good for farmers and rural people in developing countries?

The short answer is no – only a minority benefited in most places.

A surprisingly high percentage of rural households are net buyers of staple foods. For example, around 60% of rural smallholders in Bangladesh are net buyers of rice<sup>11</sup>, and a similar proportion of rural households in Kenya and Mozambique are net buyers of maize<sup>12</sup>. This means that high food prices hurt more rural people than they help, in the short term.

In theory, high food prices are good for farmers! However, in many countries only a minority of farmers have enough land and capital to produce a significant food surplus to sell. For example less than 2% of farm households accounted for more than half of all sales of maize (the staple food) in four countries studied in S/E Africa. In the short term, high prices mainly benefit this small minority.

If higher food prices are sustained in the medium term, they may lead to higher food production. Being able to increase production would help many farm households who are currently net buyers of food or who produce only a very small surplus for sale. It would also generate growth and employment, both directly on farms and through trade, industry and services. Increased food production would also benefit the balance of payments of countries which import food – for example many African countries, which have gone from being net food exporters in the 1970s to net food importers in recent years<sup>13</sup>.

However, to increase their production, farmers either need to plant more acreage, raise more crops per year or increase their crop yields. It is not always easy to scale up quickly in response to rapidly-moving prices, given the constraints many small-scale farmers face. These include: small plots, high fertilizer prices, dependence on rainfall, inability to access loans and in some cases distance from markets. In 2008, fertiliser

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<sup>9</sup> In some poor urban settings, a switch from refined to cheaper unprocessed foods may actually improve the nutritional value of the diet, as was documented in the UK during the Second World War. However this is unlikely to affect the poorest households.

<sup>10</sup> See for example Sulaiman, Munshi; Monira Parveen and Narayan Chandra Das (Jan 2009) Impact of the Food Price Hike on Nutritional Status of Women and Children BRAC Research Monograph 38 [http://www.bracresearch.org/monographs/Monograph\\_38.pdf](http://www.bracresearch.org/monographs/Monograph_38.pdf) and Klotz, C., de Pee, S., Thorne-Lyman, A., Kraemer, K., and Bloem, M. (2008). Nutrition in the perfect storm: Why micronutrient malnutrition will be a widespread health consequence of high food prices. *Sight and Life*, Vol 2 (2008). 6-13 [http://www.sightandlife.org/images/stories/pageimages/content/magazine/s&l\\_magazine\\_0208.pdf](http://www.sightandlife.org/images/stories/pageimages/content/magazine/s&l_magazine_0208.pdf)

<sup>11</sup> De Janvry and Sadoulet 2008 The global food crisis: Identification of the vulnerable and policy responses [http://are.berkeley.edu/~sadoulet/papers/FoodCrisis\\_AREUpdate.pdf](http://are.berkeley.edu/~sadoulet/papers/FoodCrisis_AREUpdate.pdf)

<sup>12</sup> Jayne, A. Chapoto, I. Minde, and C. Donovan (MSU) Presentation at African Agricultural Markets Policy Workshop, Nairobi, Kenya, December 11, 2008 [http://www.aec.msu.edu/fs2/outreach/Jayne\\_COMESA-AAMP-Dec\\_11\\_08.pdf](http://www.aec.msu.edu/fs2/outreach/Jayne_COMESA-AAMP-Dec_11_08.pdf)

<sup>13</sup> For all these reasons, sustained higher food prices for producers may be of benefit for growth. However, urban consumers – often a politically powerful group – naturally have a strong interest in keeping prices low. Describing the many attempts of governments to resolve this contradiction would require more space than is available in these FAQs.

prices, irrigation, processing and transport costs were particularly high owing to high world oil prices. On top of that, rising food prices themselves are an immediate drain on the cash that farmers need to invest in inputs, unless they already have a surplus. For all these reasons, an FAO analysis<sup>14</sup> concluded that increases in world supply owing to higher prices were “concentrated mostly in the developed countries and, among developing countries, Brazil, China and India. [Elsewhere] cereal production actually fell between 2007 and 2008 in developing countries”. In a few countries such as Vietnam, where a large percentage of small-scale farmers had a surplus of rice for sale, they did however reportedly benefit from high world prices.

Many of the projects set up in response to the food crisis, for example under the FAO’s Soaring Food Price Initiative and the World Bank’s Global Food Crisis Response Fund (see [What were the international responses to the food crisis?](#)), were intended to give a quick increase in small farmer production, often by supplying inputs such as seeds and fertiliser direct to farmers. We look forward to the evaluations of these projects to see how quickly and well this worked.

### 1e) Why did prices go down so quickly after their peaks in the first half of 2008?

The very high prices that were evident by late 2007 caused farmers to plant larger areas, apply more inputs, and cultivate more diligently in expectation of record prices for the harvests of 2008. Cereals production for marketing year 2008/09 thus rose by 7% over the previous year to reach 2,285M tonnes, an historic record. Production is estimated to have exceeded use by 84M tonnes, thus allowing stocks to be partly replenished. [FAO data]

Most of the production increase, however, is reported by FAO to have come from farmers in OECD countries with limited response by farmers in developing countries.

Once the large harvests of 2008 were in, prices of all cereals plummeted in the second half of 2008 although by the end of the year they had yet to get back down to the levels seen before the acceleration to the spike began in 2007. By October 2009 wheat and maize prices were back to their pre-spike levels — but more than they were, in real terms, in the early years of the new century. Rice prices, however, remained high, probably as a result of re-stocking.

Once world prices began to fall back, governments of some wheat and rice exporting countries relaxed the restrictions they had placed on exports, although some remained, most notably for rice from India.

Oil price reductions at the end of 2008 also helped to bring prices down, though they trended up again in 2009 and are presently around 70 to 80 US dollars a barrel.

### 1f) Were speculators to blame for the 2007/07 food price crisis?

Since the early 2000s, index funds, apparently seeking better returns than those to be had on stocks and property, have increased markedly their investments in commodities futures on the main US exchange in Chicago, including agricultural commodities and cereals.

For example, the quantity of maize futures held by index funds on 12 March 2008 was 60.4Mt, up from 6.1Mt just over five years before on 01 January 2003; while for wheat futures, the increase was from 4.5Mt to 30.9Mt. Increased interest by index funds has been accompanied by rising futures prices. For example,

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<sup>14</sup> <http://ftp.fao.org/docrep/fao/012/i0854e/i0854e.pdf>

from March 2003 to March 2008, the futures prices for maize and wheat rose by 134% and 314% respectively. This is then argued to have contributed to the price spike: over the same period spot market prices for maize and wheat rose by 223% and 310%. [Masters' testimony data 2008]

There are several objections to this plausible line of argument:

- Much of the increase in index positions on grain futures came before the period of the price spike. Indeed, between the first quarters of 2006 and 2008, increases in long positions taken by (commercial) hedgers on maize futures considerably exceeded those of index fund moves (Irwin 2009);
- Statistical tests, using Granger causality models, of the relation between index investments and spot prices of grains for most periods and agricultural commodities fail to show any relation — see, for example Gilbert 2008, Robles et al. 2009, Sanders et al. 2008;
- Not all the agricultural commodities into which index funds have invested have seen large increases in prices, while some farm products for which there is little or no futures market did see price spikes. Of the main grains, rice barely has a futures market and yet the price spike for rice was by far the largest; and, most damning of all,
- What is the link from futures to spot market prices? If futures prices were to affect spot prices, it would be through speculators buying up physical produce from the markets and storing ('hoarding') this in anticipation of profiting later. There is simply no evidence that this took place. Index funds neither operate nor rent grain silos.

This has not stopped the US Senate, however, from concluding that index trading in farm futures did help drive up prices; drawing trenchant rebuttals from some US agricultural economists. But then again scapegoating speculators has a long history.

## 2a) Should we still worry about the food price crisis – hasn't it been overtaken by the financial crisis?

**Yes we should.** International staple food prices have fallen from their peaks in mid 2008 but this is only part of the picture:

On average, prices remain well above the low levels of a few years ago<sup>15</sup>, and are characterised by a large degree of uncertainty. The domestic situation is **extremely varied**, with food prices remaining high in many countries—for example owing to supply shocks (conflict, weather), distribution issues (poor market development), and government policy decisions (stock procurement, trade restrictions).

Chronic hunger and malnourishment did not reverse with declining international prices (FAO estimates of undernourished increased to over 1 billion in 2009). Furthermore, secondary effects of the crisis have yet to work their way through the global food system—including a reduced confidence in markets and a shift in certain trade relationships. For example, India was for several years a major rice exporter—but recent export bans and restrictions have meant traditional buyers must source supply from elsewhere. FAO predicts Vietnam may reach record rice export in 2010, filling a gap left by India among others.

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<sup>15</sup> See for example domestic prices on FAO GIEWS database: <http://www.fao.org/giews/pricetool/>, or WFP quarterly price-monitoring bulletin: <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp209556.pdf>

For these reasons, high food prices continue to pose a serious obstacle to poor consumers—including many producers—see: [Aren't high prices good for farmers and rural people?](#)

The **financial crisis** comes on the back of the food and fuel crises of 2008, and manifests as a food crisis for impoverished people<sup>16</sup>

- Reductions in employment, access to credit, and remittances—combined with higher rates of inflation—translate to reduced incomes and power to both purchase and grow food (agricultural inputs).
- Recent crises may have eroded household resilience via exhaustion of coping strategies (such as drawing down on assets or increasing indebtedness); meaning many households enter the financial crisis with already weakened resilience.
- For impoverished people spending large budget shares on food, the bottom line may be a deepening hunger and vulnerability.

## 2b) How can we see short-term trends in food prices in domestic markets around the world?

Where household food security is concerned, it is most useful to see market prices presented on monthly levels to account for intra-annual fluctuations. Daily and weekly prices are of more value to traders, while annual prices are most useful for examining very long-term trends, and often mask considerable short-term variation.

- **FAO's GIEWS** has launched a platform available here: <http://www.fao.org/giews/pricetool/> for displaying and downloading domestic monthly price series as part of the Initiative on Soaring Food Prices (See [What were the international responses to the high food prices?](#)). It is under constant expansion and improvement, and as of late 2009 covered 864 price series for major foods<sup>17</sup> in 68 developing countries, as well as international cereal export prices.
  - Various organisations including national statistical agencies, agriculture and consumer affairs ministries, private companies, stock exchanges, regional networks, FAO, WFP, and FEWSNET collect the data GIEWS have collated and publicised. Type of information available varies considerably from country to country—in terms of number and variety of markets covered, type of staple marketed (variety, wholesale vs. retail), and timeframes over which prices can be accessed.
  - Prices are also provided where possible in local currency units, local currency in real terms, and nominal US dollars.
  - On some occasions it serves to emphasise intra-national differences in prices—something that may be masked by national average price quotes.
  - This valuable tool can only benefit from expansion and improvement—both spatially (more markets) and temporally (longer series). Longer historical series provide vital perspective on sharp price movements, particularly in markets poorly integrated with world markets.

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<sup>16</sup> See for example, IDS case studies: <http://www.ids.ac.uk/index.cfm?objectid=6323060D-5056-8171-7B3FD11536632EF8>

<sup>17</sup> “About 70 percent of the quotations in the database are for cereals and cereal products with the remaining 30 percent represented by beans, potatoes, cassava and some animal products” See: <http://www.fao.org/docrep/012/ak340e/ak340e04b.htm>

- **IFPRI's Food Security Portal** available here: <http://www.foodsecurityportal.org/commodities> also publishes information on domestic prices:
  - Monthly country-level commodity prices in nominal US\$/kg, as well as month-on-month percentage change are displayed for **maize** and/or **rice**, and/or **wheat** for 5 countries in Asia, 5 in Latin America and the Caribbean, and 10 in Sub Saharan Africa. These can be downloaded on a month-by-month basis from Jan 2007.
  - IFPRI is currently in negotiations to make available longer price series on this platform

Other key bulletins reporting periodic price movements in domestic markets (though actual prices are not available for download) are:

- **WFP's quarterly price monitoring bulletins**: For example, from October 2009 which covers 60 countries: <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp209556.pdf>. These can be searched for on the WFP website under their section on food security reports: <http://www.wfp.org/food-security/reports>. They are also now providing a global update in food security monitoring bulletin, the first of which is online here: <http://documents.wfp.org/stellent/groups/public/documents/ena/wfp209292.pdf>
- **USAID's FEWSNET price watch bulletins**: <http://www.fews.net/Pages/archive.aspx?pid=660>
  - FEWSNET has been monitoring prices in markets in a number of countries for several years, mostly in Africa (17 countries), but also Afghanistan, Haiti, and Guatemala.

Not all of these platforms provide the same information. For example, WFP bulletins report on prices from Cambodia and Indonesia—countries not covered on the FAO database—while FEWSNET has much longer price series for many African countries than are available on the FAO or IFPRI portals.

Plenty of data exist—not least those series collected by national government bodies—and much effort has gone into making the platforms and bulletins mentioned above user-friendly; with for instance helpful graphics, currency conversions and reports of percentage shifts over time. However, room for development is recognised by all parties, who continue to announce expansions and improvements. Relatively minor improvements in cooperation among the main actors could lead to major efficiency gains—saving time for the organisations involved and improving synergies between those concerned with policy implications.

### 3a) Which countries responded well to the crisis?

Governments around the world responded quickly to the food price hikes. Responses included:

- price controls or price subsidies on basic foods;
- selling off government food stocks (existing or newly procured) to lower prices;
- banning exports of staple grain or reducing tariffs on imported grain;
- welfare programmes which distributed food or cash, or provided employment opportunities (cash or food-for-work) for the most vulnerable groups; and,
- subsidising farm inputs to stimulate local production<sup>18</sup>.

<sup>18</sup> See FAO <ftp://ftp.fao.org/docrep/fao/012/i0854e/i0854e.pdf>

Many governments also took long term measures to increase agricultural production and national grain reserves. Several countries, including China, Indonesia, Malaysia, the Philippines and Senegal, have declared that they are aiming for food self sufficiency, in some cases after years of relying heavily on international markets. (See [Is country self-sufficiency in food a good policy?](#)) Countries as diverse as the Philippines and Mozambique are rebuilding national or strategic grain reserves<sup>19</sup>. (See [Is it better for countries to keep large grain reserves to avoid price spikes?](#))

What is a good policy response? There is no one right answer but a number of criteria against which to judge potential responses have been suggested. These include:

- (a) Targeting and coverage. This includes an analysis of the number and potential losers as well as potential winners. For example, poor food sellers may suffer from price controls. Farmers and traders may suffer from export bans, as well as consumers in importing countries.
- (b) Ability to achieve specific objectives, for example nutrition of small children, keeping children in school, or preserving key family assets. The wider aim is to prevent the crisis causing irreversible harm to poor families
- (c) Cost to the government budget in relation to the extent and coverage of benefits
- (d) Speed and ease of implementation, with minimal risk of corruption or distortion for political ends. For example, setting up a new welfare employment programme or giving farmers inputs for the next season, although these may have medium-term benefits, may take too much time and expertise to be an effective quick crisis response.
- (e) Political acceptability to the public, minimising the risk of conflict and protests, especially in main urban areas.
- (f) Medium term effects. For example, measures which limit prices will likely discourage farmers from planting the next season. However, price expectations (rather than current prices) will drive decisions, so policy predictability and reversibility are key to whether this happens in practice or not.

Economists normally judge export bans, subsidies and price controls to be relatively inefficient (including little or no targeting to the vulnerable) and expensive policy responses with negative long-term effects. However, they often score well against criteria (d) and (e) which is why they are so widely used.

In general, countries which had large social protection schemes already in place which could be called upon in a crisis, such as India's National Rural Employment Guarantee Scheme, performed well during the food price spike. Most of these were medium-income countries such as Brazil and Mexico. See [Isn't it better just to give cash to the poor so they can buy food?](#)

### 3b) What were the international responses to the food crisis?

Responses included:

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<sup>19</sup> Strategic grain reserves tend to be much smaller than national grain reserves and are intended for emergency use rather than price stabilisation.

- The UN set up a [High Level Task Force on the Food Crisis](#) to coordinate action, and agreed a [Comprehensive Framework for Action](#) (CFA) in July 2008. They are currently revising the CFA and are involved in promoting GPAFNS—an emerging Global Partnership for Agriculture and Food and Nutrition Security with a long-term view—comprising member states, civil society, private stakeholders, regional bodies, research groups, producer groups and others<sup>20</sup>.
- [WFP](#) helped up to 80 countries with a variety of interventions, including targeted food safety nets, mother-child health programmes and school feeding. It also began to expand its role into supporting logistics, cash and voucher programmes and setting up forward purchase contracts with small farmers. WFP appealed for another \$500M in March 08 due to higher world food prices.
- International funding agencies channelled funds to developing countries through a variety of mechanisms. Prominent among these were The [FAO Initiative on Soaring Food Prices](#), the [EC Food Facility](#) and the World Bank's [Global Food Crisis Response Program](#) (see weblinks for more information). The majority of projects funded by these programmes had the aim of stimulating a quick supply of food through supplying inputs such as seeds and fertilizer to small farmers in developing countries, or else addressed medium term problems such as seed production and irrigation systems. See also [Aren't high prices good for farmers and rural people?](#)
- The World Bank is also scoping out the possibility of establishing a multilateral trust fund called GAFSP (Global Agriculture and Food Security Program) to scale up agricultural assistance to low-income countries. This is in the planning stage, but intends to coordinate efforts of the World Bank, The African Development Bank, the UN, FAO, IFAD, WFP, and other stakeholders in tackling food insecurity
- The IMF reformed its [exogenous shocks facility](#) and is designing two new facilities, which are intended to give countries more choices and faster access to funds.
- The UN set up a new [Global Impact and Vulnerability Assessment System](#). GIVAS aims to draw on a variety of information sources and use up-to-the-minute technology to provide decision-makers with high-quality real-time information on the immediate impact of global shocks on the poorest and most vulnerable populations.
- The food and financial crises also led to calls for the establishment of a [global social protection floor](#) to protect people and help them to realise their rights to essential public services. This has links to the [Right to Food](#)<sup>21</sup> laws now going through India, Mexico and other countries. FAO has set up an advisory service and [toolbox](#) for countries who wish to establish Right to Food legislation.
- The food price crisis has revived international interest in support to agriculture, after a long period of [neglect](#). International meetings in 2008 led to large pledges (e.g. [\\$20B from the G8](#)). What has changed from the old days is the 'country led approach': most donors now opt to support national or regional plans, rather than their own pet projects. The African Union's [CAADP](#) and its pillar on [food security](#) are major examples of this approach.

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<sup>20</sup> See interview with David Nabarro, head of the HTLF in: [http://www.reliefweb.int/rw/lib.nsf/db900sid/EGUA-7WSQSG/\\$file/icco-right-to-food-oct09.pdf?openelement](http://www.reliefweb.int/rw/lib.nsf/db900sid/EGUA-7WSQSG/$file/icco-right-to-food-oct09.pdf?openelement)

<sup>21</sup> The Special Rapporteur on right to food, Olivier De Schutter, has suggested that the CFS needs to include functions for monitoring right-to-food, and also tracking policy responses and commitments made by nations.

### 3c) Isn't it best just to give cash to the poor so they can buy more food?

In theory, usually, yes. Social protection programmes have been set up in many countries to do just this. Giving cash rather than food allows people to choose their own spending priorities, and is more cost-effective than shipping and storing vast amounts of grain. International research evidence shows that poor people – especially women - usually use money from social protection and welfare programmes well.

However, judged against the criteria under [Which countries responded well to the crisis?](#), social protection programmes did not rise to the challenge in all countries. It proved difficult to scale up such programmes quickly enough<sup>22</sup>, and in many countries they are still at a pilot stage and only cover a small fraction of the people in need (e.g. 4% in Malawi<sup>23</sup>).

Debates also rage about the design of social protection programmes in different countries: how they should be targeted, whether they should require recipients to carry out work or other obligations such as vaccinating their children, and whether this is the most cost-effective way to ensure that nutritional objectives are achieved<sup>24</sup>.

Finally, when food prices are skyrocketing, it may be difficult for welfare programmes to keep up. In such cases, poor people may ask agencies for food rather than cash, as happened in Ethiopia<sup>25</sup> and parts of West Africa<sup>26</sup> last year. (See guidelines used by CARE/USAID<sup>27</sup>)

### 3d) Is country self-sufficiency in food a good policy?

As mentioned under [Aren't high prices good for farmers and rural people?](#), a number of countries are now pursuing self-sufficiency policies in staple foods. Why is this, and is it a good idea?

For many years, agricultural production in developing countries was discouraged by implicit taxation, as well as heavy subsidies for agriculture in wealthy countries which kept international food prices low. With transactions costs also being highly skewed - in some capital cities, it cost less and was more reliable to source and transport grain from far-away ports than from farmers up-country – many countries came to depend on the international markets for a substantial portion of staple food needs. After the international price spike and high oil prices of 2008, understandably self-sufficiency looks attractive.

The main economic arguments against self sufficiency are:

- It requires the country to buffer against harvest failure by keeping large national grain stocks, which can be expensive (see [Is it better for countries to keep large grain reserves to avoid price spikes?](#))
- It is more efficient for countries to specialise (the classical theory of comparative advantage). A policy of self-sufficiency—even if technically feasible, which is not a given—can divert funds from limited

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<sup>22</sup> See reports from the Andean Region: <http://idbdocs.iadb.org/wsdocs/getdocument.aspx?docnum=1936582>

<sup>23</sup> McCord, A. (2009) Cash Transfer Affordability and Sustainability. ODI Project Briefing Note.

<sup>24</sup> See for example: Slater R and Farrington J (2009): Targeting Cash Transfers ODI Project Briefing Note. Bassett, Lucy (2008) *Can Conditional Cash Transfer Programs Play a Greater Role in Reducing Child Undernutrition?* Social Protection Discussion Paper October 2008 NO. 0835 World Bank and <http://wahenga.wordpress.com/2009/10/10/who-should-benefit-from-social-protection-new-evidence-on-targeting/>

<sup>25</sup> Ethiopia - see <http://www.odihpn.org/report.asp?id=2997>

<sup>26</sup> See <http://blogs.cgdev.org/globaldevelopment/2009/03/cash-or-food-for-thought-the-d.php>

<sup>27</sup> [http://aem.cornell.edu/faculty\\_sites/cbb2/Papers/2008%20CARE%20Research%20Brief%20\(Lentz%20et%20al.\).pdf](http://aem.cornell.edu/faculty_sites/cbb2/Papers/2008%20CARE%20Research%20Brief%20(Lentz%20et%20al.).pdf)

country budgets that could have higher gains in other sectors such as health, education, or infrastructure.

- Finally, self-sufficiency in food does not automatically ensure said country will be free of hungry or malnourished people. Indeed, self-sufficiency policies presuppose hunger is a function of availability—when access (poverty) and utilisation factors (water, sanitation, health, care) are often equally important or more important factors in individual food security (see [Will increased international support to agriculture solve the problems of hunger?](#)).

Having said this, self-sufficiency is a more practical proposition in large countries which have a variety of regions which can trade amongst themselves, and where imports would potentially be so large as to affect world market prices. China is one example.

### 3e) Is it better for countries to keep large grain reserves to avoid price spikes?

Large national grain reserves have historically been kept for two key purposes: 1) to maintain stable prices for consumers, and 2) to maintain fair prices and a reliable market for producers.

In practice, they are very costly to manage (including ensuring funds are available to purchase enough stock in the face of falling prices, and to store it under sometimes difficult conditions—i.e. preventing spoilage), difficult to manage well (including preventing them being used for patronage), and prone to inefficiencies in that they are better at keeping prices high than preventing volatility—indeed large public stocks could increase volatility as they undermine the market when traders spend time second-guessing government intentions, or find themselves unable to trust the actions of the government (surrounding for example procurement)<sup>28</sup>.

If large grain reserves are being held solely as insurance against price spikes, there are few places where this might make sense—i.e. in very large countries such as China, India, and Indonesia, where holding large stocks is advisable for political reasons—large countries also benefit from economies of scale in stockholding.

- In early to mid 2008 for example, it is lucky that Indonesia, which pursues a self-sufficiency policy in rice and stocks it in large quantities, did not need to turn to the international market for rice—as this would likely have put even more pressure on skyrocketing prices. China's holding of large stocks also has a calming effect on international markets.
- A country able to use stock-release policy to smooth price spikes benefits from the ability to blanket-control prices to consumers and doesn't have to worry about targeted policies missing vulnerable people—however such policies are very costly, and by their blanket nature, prone to inefficiencies—i.e. they may not bring low prices to vulnerable people in isolated or distorted markets.

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<sup>28</sup> These elements famously contributed to the failure of buffer stock schemes related to International Commodity Agreements set up around the 1960s. For more information on economics of stockholding see for example Wright & Williams: <http://www.jstor.org/pss/2232552>

### 3f) What about strategic grain reserves for emergency purposes only?

The issue becomes more complex when the purpose of holding a grain reserve is limited to having emergency supplies available for distribution in the event of transitory food insecurity (caused for instance by bad weather). This is the primary objective of a **strategic grain reserve** (SGR), as outlined by Lynton-Evans (1997).<sup>29</sup> Other objectives, including price stabilisation and loans of grain to organisations or agencies (such as WFP) were mentioned—with the qualification that they should only be undertaken if they do not undermine the ability of the SGR to fulfil its primary objective. Lynton-Evans stated *“As a general rule, the greater the number of responsibilities which a strategic grain reserve is required to undertake the larger will be the size of the reserve, or the resources required by the reserve. Government has therefore to make a value judgement of the additional benefits which could be obtained from broadening the role of the reserve against the likely additional cost.”* The fact that SGRs can be used to meet multiple policy objectives leads to policy confusion<sup>30</sup>. In some instances, SGRs have been conflated with national buffer stocks<sup>31</sup>, and it is not uncommon for buffer stocks and SGRs to be maintained side-by-side. A recent example of this last is in India, which on top of holding national stocks of key staples<sup>32</sup> set up a strategic grain reserve in 2008 in response to the food price crisis to hold 5 million tonnes of grain<sup>33</sup>. Also recently, Afghanistan’s ministry of Agriculture, Irrigation, and Livestock issued a concept paper outlining plans for an SGR to fulfil ambitious multiple roles<sup>34</sup>.

Many developing countries could maintain larger stocks than they currently do—not for the purposes of price-smoothing, but to ensure emergency supplies are available in the event of a supply shock (this must be combined with appropriately engineered safety nets and social protection systems). For instance, Bangladesh—a country with high chronic poverty and food insecurity—has held over the 2002-2008 period a stock of rice amounting to only about one week of use. In contrast, the EU recommends holding enough key staples for almost two months’ worth of use—which is a relatively small amount compared to what is held in some other OECD countries. The optimal level of stock a country holds will naturally vary depending on its particular ability manage the risk of a sudden supply shock in adequate time—which is itself a shifting measure in a landscape of uncertain international prices, uncertain donor commitments, uncertain government policy and so forth.

SGRs are still expensive and at risk of mismanagement<sup>35</sup>, but since in their most limited form they are smaller than national buffer stocks, the inefficiencies may be well worth the increased resilience in food access and availability that they afford. Chances of their being misused for political gain can also be reduced by for example, contracting private management of public grain stocks. Mozambique for instance has hired the private company OLAM to manage the SGR it is establishing beginning 2010.

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<sup>29</sup> <http://www.fao.org/docrep/w4979e/w4979e00.htm>

<sup>30</sup> Murphy 2009 (<http://www.iatp.org/tradeobservatory/library.cfm?refid=106857>)

<sup>31</sup> This can cause serious problems if emergency reserves are used in ‘ordinary’ price stabilizing activities by buffer stock managers to the extent that they are unavailable in the event of an emergency.

<sup>32</sup> On average from 2000 to 2005, India’s beginning stocks of rice and wheat amounted to about 30 million tonnes (combined value for milled rice and wheat beginning stocks, calculated from USDA FAS data for marketing years 2000/01 to 2005/06)

<sup>33</sup> <http://english.cri.cn/3130/2008/04/07/1781@342645.htm>

<sup>34</sup> The four objectives are: 1) providing emergency food assistance to transitory food insecure, 2) Supporting communities and farmers with storage facilities, 3) Assisting producers secure a minimum price for their produce at harvest time, 4) Providing domestic consumers price support (market intervention) to procure food at a reasonable price. Online at: [http://www.mail.gov.af/m/english/PDF%20Concept%20papers/SGR\\_Infrastructure%20Concept%20Paper%20Final%20April%202009.pdf](http://www.mail.gov.af/m/english/PDF%20Concept%20papers/SGR_Infrastructure%20Concept%20Paper%20Final%20April%202009.pdf).

<sup>35</sup> Mismanagement of Malawi’s SGR contributed to the famine there in early 2002. See for example Devereux 2002: [http://www.actionaid.org.uk/\\_content/documents/malawifamine.pdf](http://www.actionaid.org.uk/_content/documents/malawifamine.pdf)

- Complementary options include holding financial stocks (in offshore, interest-earning contingency funds); and call options on futures markets—both of which could be exercised in the event of local harvest failures.

#### 4a) What is the medium-long term outlook for food prices?

In the medium term, food prices are expected to rise, by 20 to 40 percent over the historic lows of 2000 – 2002. Three factors are very likely to put pressure on cereals markets in the medium term:

- **Higher oil prices**, if and when peak oil production is reached, will push up transport rates and costs of production – e.g. nitrogenous fertiliser or diesel fuel for farm machinery. Complying with **biofuels mandates** in the US and EU will also tend to raise cereal prices.
- **Water scarcity**, particularly in areas where copious use of water for irrigation conflicts with rising demands from industry and human use in fast-growing and urbanising economies.
- **Climate change**, expected to lead to altered rainfall belts and temperatures, loss of some valuable coastal lands to incursions by high tides, changed incidence of pests and diseases, and perhaps most damaging, to more frequent extreme weather.

Indeed, some are alarmed over the medium term prospects. Professor Sir John Beddington, chief scientific advisor to the UK government, warns that by 2030 severe scarcity of food, fuel and water could arise, causing mass migration and conflict – unless measures are taken to produce more food, save water and shift away from dependence on fossil fuels.

#### 4b) Is there likely to be another global price spike in the near future?

The oil price and biofuels policy could potentially lead to another global price spike. If the oil price rises much above the expected ten-year level of US\$60–70 a barrel, which appears increasingly likely then the demand for biofuels will increase considerably. This would have an obvious knock-on effect on prices of biofuel feedstocks and related food products such as maize, wheat, oilseeds and sugar. However, advances in biofuel technology that use the cellulose in grasses and wood could also lower demand for grain and other current feedstocks. This will be an area to watch.

There is also uneasiness about international trading systems—particularly in the rice market—which has proven to be fragile. Other factors which may have contributed to globally-thin markets and the 2007-08 spike, such as low world grain stocks, are less likely. Many countries have rebuilt stocks over the past two years.

However, drought, floods and other natural disasters, and conflict, may still result in high food prices in particular regions of the world. Extreme weather events are likely to increase with climate change<sup>36</sup>, as are seasonal shifts<sup>37</sup>.

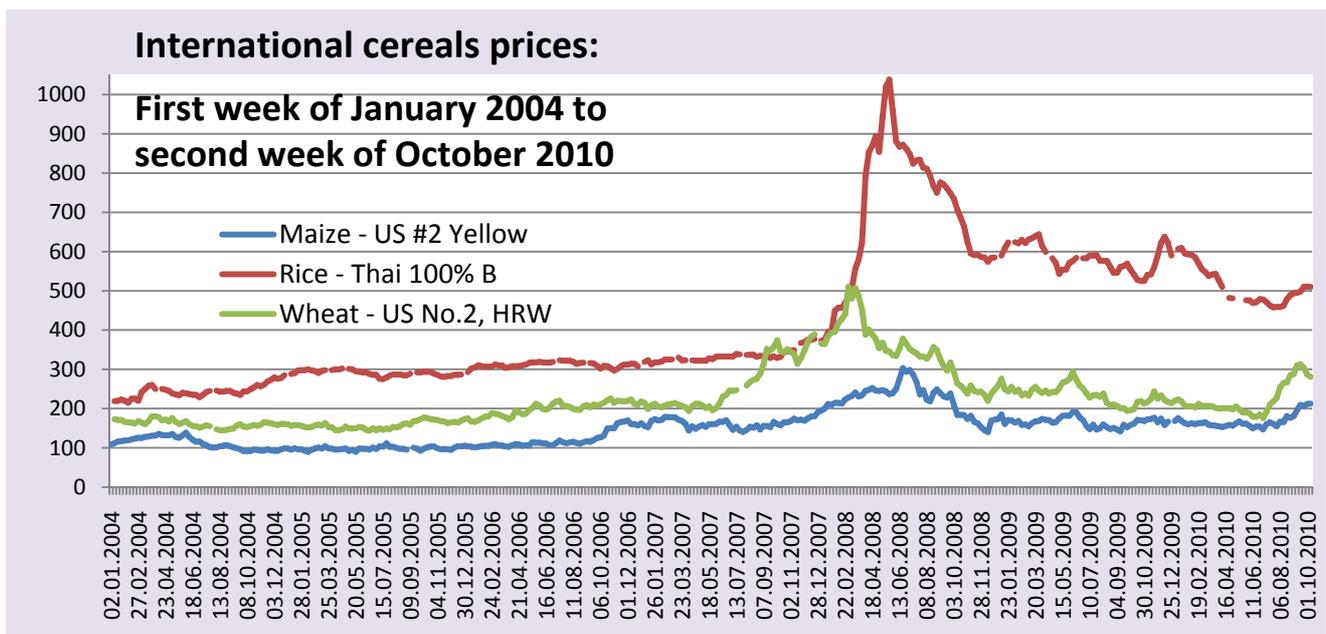
<sup>36</sup> <http://siteresources.worldbank.org/INTWDR2010/Resources/5287678-1226014527953/Chapter-3.pdf>

<sup>37</sup> Preliminary evidence suggests this is already occurring, see:

[http://www.oxfam.org.uk/resources/policy/climate\\_change/research-where-are-the-seasons.html](http://www.oxfam.org.uk/resources/policy/climate_change/research-where-are-the-seasons.html)

Although good harvests in 2008 and 2009 allowed some rebuilding of stocks, traders and governments remained nervous, worried a new spike might appear. When production estimates in July 2010 showed how hard drought had hit the black Sea region wheat harvest, wheat prices began to rise—see the figure below. Russia’s announcement of an export ban in early August 2010 gave extra impetus, pushing up futures prices by US\$55 per tonne in three days of trading after the announcement. Spot prices for wheat too climbed, as they did to some extent for maize also.

While the 2010 rise is worrying, most analysts do not expect a repeat of the rises seen in 2007/08, when the wheat price climbed 160 percent in nine months. Even with some disappointing harvests, 2010 is expected to see one of the largest cereals harvests ever worldwide.



Source: FAO ESC. Original sources: Maize – USDA. Rice - Jackson Son & Co. (London) Ltd. Wheat - IGC

#### 4c) Will increased international support to agriculture solve the problems of hunger?

Partly! It is well known that availability of food is only one cause of hunger, and often not the most important one. People who have no money to buy food can starve in the midst of plenty. If we define hunger as malnutrition, the issue becomes even more complex, because having a full belly does not guarantee that people (especially pregnant women and young children) are receiving all the micronutrients they need, such as iron, iodine and vitamin A<sup>38</sup>. Overcoming malnutrition may depend on the empowerment of women as well as the quality of health, education and water and sanitation.

Having said this, increased agricultural production can help increase poor people’s access to food in a number of ways. First, if they have land, they may be able to produce more of their own food needs. In many countries crop yields are very low, so there are poor returns to farm labour. Second, increased supplies and local storage of food will lower prices throughout the season, which may diminish seasonal hunger. Thirdly, increased agriculture may generate wealth and employment. However, the manner in which any support to agriculture production is organised will affect all three objectives. For example,

<sup>38</sup> See Berti PR, Krusevec J, FitzGerald S. A review of the effectiveness of agriculture interventions in improving nutrition outcomes. Public Health Nutr 2004;7:599–609.

poorly-targeted subsidies might benefit a small fraction of farmers rather than helping the food security of the poorest.

#### 4d) What are the main policy lessons from this crisis for the international community?

Can price spikes be forecast with sufficient warning to head them off, or dampen price rises, or at least prepare to deal with the consequences? The 2008/09 spike arose from multiple factors that make reasonably reliable prediction difficult. Two things might be considered to warn of potential spikes. All spikes seen in the last 40 years have been associated with low stock-to-use ratios. Better information on stock levels and more awareness of the dangers of low ratios might help. Ideally traders should be tracking stocks and investing in additional storage as ratios fall in the expectation of making profits as and when prices start to rise. But some actions are risky and may be too risky for the trade. Additional public storage may be indicated. Tracking ratios would at least make it clear when such issues need to be addressed.

The other potential tool would be a model that generates results over the same time scales as price spikes, that is by the week, month or quarter. Current models of commodity markets usually solve for intervals of a year, which is probably too long to reflect the dynamics of price spikes. Building models for shorter time periods is, however, technically, more difficult and would require a great deal of information on short run behaviour in markets. It may be possible: it deserves consideration.

That said, early warning systems are only useful if policy-makers are prepared to react to warnings and not to wait until prices have already started to rise quickly.

Otherwise, what might be done to prevent price spikes? This depends in large part on the analysis of the price spike. Was it a wake-up call from a world food system that needs radical change? Or was it just one of those things, a once-in-34-year event arising from the extraordinary combination of circumstances? It is, of course, difficult for policy-makers to accept the second proposition: it looks like complacency.

On balance, one might conclude that the system, whilst no doubt having become rather efficient, showed two shortcomings during the price spike. It was clearly not resilient to shocks: neither was it equitable. Global leaders thus need to consider how much they would like to see the system made more resilient and equitable, and how then best to achieve this. Almost anything that is done to push the system in these directions will have costs to government budgets and primarily to those of the OECD countries.

These costs, of course, need to be compared alongside those costs to the outrageously large number of people who go hungry in a world that produces more than enough food to feed everyone adequately. The costs of hunger, it needs to be remembered, are not just costs to the unfortunate individuals and households suffering. In the medium to long term they drag down economic growth to the detriment of all of us. Poverty and hunger, moreover, may not be closely related to insecurity, but they hardly contribute to a safer world.

What, then, might be done?

For *resilience*, consider:

- Holding more public stocks of cereals and staples to act as buffer against shocks. But this will be costly and as public stocks mount, private stocks may be drawn down. Rules for the use of public stocks need to be transparent and credible if they are not to introduce yet more uncertainty on markets;

- Finding a way to divert cereals used for animal feed and industry to human use when price spikes start to form. Good idea, but how can this be done? And,
- Integrating markets through better provision of timely information and by investing in transport and logistics infrastructure. Although some will see this as the cause of the problem, there is clear evidence that variations in price are less the larger the market, and the more varied the sources of production. Less than 10% of rice is traded internationally: the thin market was thus vulnerable to the highest of the price spikes. There are large parts of the world that could be brought into staples production to provide a more varied production base, less vulnerable to regional harvest failures. The guinea savannah of Africa is just one such area, little used for lack of infrastructure.

For *equity*, consider:

- Economic growth, broadly based, to raise incomes of the majority;
- Social protection that allows all deserving households a minimum income. Make sure that welfare systems can be expanded when households suffer sudden reductions in purchasing power. Old age pensions, public employment schemes are examples of these measures;
- Develop insurance and savings vehicles that meet the felt needs of poor people, so that they can help themselves when faced by temporary shocks. Social protection is all very well, but in many crises studies show that most of the coping is by the initiative of households and individuals, not by state responses. Some of these vehicles could be combined with social protection, as for example when the state pays part of the premium on insurance policies, or matches savings in banks and formal financial institutions with a public credit. This way public welfare does not displace self-reliance or undermine the self-respect of the poor; and,
- Invest in the nutrition of the most vulnerable of all: infants, from weaning to age 3 years. It is not so much access to food that matters, but their health and care. Ensure that their families have access to clean water and sanitation. Provide universal coverage of basic primary health care: immunisation; bed nets against malaria; and regular health checks including growth monitoring. Invest in schooling for girls: few things do more for infant nutrition than having literate and numerate mothers. Have schemes for vulnerable group feeding ready to expand when shocks do arise so that vulnerable infants can be fed. These and other similar measures will pay huge dividends in the next generation of workers and citizens, as they have in East Asia.