

## **The Global Food Crisis:**

# **Creating an Opportunity for Fairer and More Sustainable Food and Agriculture Systems Worldwide**

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#### About the EcoFair Trade Dialogue:

The EcoFair Trade Dialogue is a project carried out by the Heinrich Boell Foundation and MISEREOR in cooperation with the Wuppertal Institute. It aims at promoting a framework to organize international agricultural trade in a socially and ecologically sustainable way. The main outcome of a two years first phase of the project was the report "Slow Trade – Sound Farming. A Multilateral Framework for Sustainable Markets in Agriculture" (2007), which emerged from an extensive consultation and exchange process that took place across all continents. This discussion paper is one out of several "implementation papers" that are based on the perspectives and proposals contained in the "Slow Trade – Sound Farming" report. [www.ecofair-trade.org](http://www.ecofair-trade.org)

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## Executive Summary

In 2008, agricultural commodity prices on world markets reached their highest levels in 30 years. In some cases, the nominal prices set new records. The price rises defied decades of volatile but fundamentally declining commodity prices, a trend only occasionally interrupted by short-lived, supply-related, price spikes. Initially, most developing country governments were not too alarmed. Many of them had pursued policies of trade liberalization and were party to trade agreements that locked other countries into open trade as well. They believed that global supply would be adequate to meet demand, so that if they were to face a domestic shortfall they could easily afford the food they needed on world markets. They were wrong. By late 2007, grain prices were breaking recent records and a number of governments started to panic. Food riots broke out. The media started to talk about food on a daily basis. Suddenly every international agency and most heads of state were talking about the food crisis, setting up task forces and pouring money into emergency relief programmes.

The crisis was an accident waiting to happen. The confluence of factors that led to dramatic price rises starting in 2007 highlights long-standing failures of public policies in relation to agricultural production and food security around the world. Rather than some overwhelming act of nature—described by too many commentators as a “silent tsunami”—the food price crisis is largely human made. Supply shortfalls are cyclical. The weather has always been “make or break” for farmers. But much of the food price crisis is the result of poor policy choices, especially at national and inter-governmental levels. There have been many mistakes, including the abolition of public stockholding, the failure to invest in appropriate agriculture and infrastructure that supports local food production, and the failure to protect ecosystems and natural resources.

Some of the policy mistakes are seemingly not directly related to agriculture, but have had a profound impact on production choices, and on what kind of food is available, and to whom. Policies related to finance and investment, services, and trade have encouraged a gradual global trend towards a more homogenous diet, modelled on the eating patterns established in rich countries. These choices have led governments to ignore biological diversity and the human knowledge associated with cultivating and collecting a broad range of crops and foods.

The authors believe that if governments aim to resolve the crisis by focusing on reducing prices back to pre-2005 levels, not only will they have missed a vital opportunity to strengthen food security and agriculture but they will also quickly find themselves back in crisis, as the underlying problems with global food and agriculture make themselves increasingly apparent. Rather than cheap food, governments need to focus on human and environmental health, on ecological resilience, on increasing

the development returns from agriculture, and on a fair distribution of those returns for farmers and farm workers.

Higher agricultural prices can provide the economic and social environment to invest in the transformation of agriculture. Higher prices attract investment because they signal unmet need. At least for now, demand is growing faster than supply. Both public and private investment will rush into the sector if prices remain higher than the historical trend for the foreseeable future. The challenge is to direct the new investment towards the transformation of agriculture: to reduce poverty, increase food security, and improve environmental performance.

Policies focused on securing higher prices to producers of agricultural commodities in developing countries will have to be accompanied by policies that provide support to the more than two billion people who live in poverty, unable or barely able to afford the food they need. But these people are poorly served by a policy that allows commodity prices to hit rock bottom, as they have in recent years. Governments should instead allow higher prices to reach producers while providing targeted consumption subsidies for poor consumers. Policies that pursue the establishment of minimum liveable wage offer a better path to equitable and sustained development than relying on extractive policies that undervalue food and agriculture. People living in poverty are poorly served by policies that allow wilful neglect and outright abuse of the natural resources on which many of them depend for their livelihoods, and which all of us ultimately depend on for our survival.

This paper explores the crisis and the opportunities it presents for transformative change. Building on the work of the EcoFair Trade Dialogue, the paper considers why prices rose, who was affected and how, and then makes proposals for how public policy responses to the crisis could lay the foundations for the transformation of agriculture to a fairer and more sustainable sector.

The policy proposals focus on both short and longer-term interventions. Twelve areas are considered: constraints on biofuels, improved humanitarian aid, regulated speculation, relaxing domestic constraints on trade rules, increased sustainable production, reform of the multilateral trading system, investment in infrastructure, investment in productive capacity, investment in institutions, regulation of market power, the establishment of food grain reserves and energy policy.

Some of the main recommendations include a built-in limit on incentives for biofuels production linked to agricultural prices, to allow technologies and production levels to respect the priority of access to food. Local and domestic use should be the priority for biofuels development. The environmental cost of bioenergy occurs mostly in production (in bad agricultural practices and in the conversion of environmentally sensitive land), while the benefits are mostly for the user of the bioenergy. By emphasizing local use, local benefits are maximized.

Funding for food aid that invests in agriculture in the regions facing shortages rather than relying on food sourced in donor countries is also important. An important pilot project is underway, led by the World Food Programme. Governments, particularly the U.S. Congress, need to re-establish controls over the extent speculators can invest in commodity markets. Countries need to be supported in their efforts to regain the right to both *raise* and lower tariffs to meet long-term development needs as well as to respond to short-term economic crises.

The model of agriculture supported by any new investment is vitally important. The current push by FAO, the World Bank and many bilateral donors to increase production has to be informed by past mistakes: the real costs of industrial agriculture are already evident, and the lessons learned from agro-ecological alternatives need to be shared and built upon to ensure increased production translates into viable livelihoods for small and peasant producers. Production should be about meeting local and national needs first, with export crops as appropriate but not at the expense of local development.

Governments need to support consumers to afford food at a price that respects producers (including farm workers, whether paid or unpaid members of the farm household) and the environmental constraints on production. Cheap food has proved very expensive for the global commons on which we depend for our survival. Ensuring access to food for all also depends on a reliable grain reserve, both to protect against dramatic price increases when a harvest falls short, and to protect long-term investment in agriculture. Governments need to enforce land reform measures that protect smallholders' access to their land and that redistributes land where inequality is extreme. The development benefits that derive from investment in agriculture depend on relatively equitable landholdings to materialize.

Markets cannot work without regulation. Agricultural markets are marred by oligopolies and oligopsonies—both buyers and sellers at key points along the value chain can manage prices to their advantage, at the expense of both producers and consumers. The past 20 years of trade and investment deregulation has allowed private companies to expand their control over global food and agriculture at the expense of public policy goals such as ensuring the universal human right to food. There is an important role for the public sector in oversight and regulation, and in some cases, in supplying services the private sector is disinclined or unable to provide.

Governments and intergovernmental organizations must support the establishment of a political and economic voice for small and peasant farmers. This voice needs spaces, including support to set up voluntary associations and cooperatives and transparent policy formulation processes (for global trade negotiating positions as much as for decisions on how and where to set up local irrigation infrastructure). Governments must also pay much greater attention to the needs of women farmers,

who are overwhelmingly responsible for food production worldwide (upwards of 70 percent), yet own nearly none of the land, receive nearly none of the extension services, and who are systematically discriminated against by many official agricultural policies.

The EcoFair Trade Dialogue outlined seven principles on which a vision of agricultural trade should be based. They are multifunctionality (respect for agriculture's contribution beyond the material world, to political, social and cultural life), human rights, environmental integrity, democratic sovereignty, extra-territorial responsibility, economic subsidiarity, and trade justice. The principles make good sense. A low price, high dependence on fossil-fuel agriculture, deregulated trade and investment environment did nothing to advance that vision. Farmers around the world have alternative ideas that promise much better results. Governments can make something of this wake-up call if they choose to. We hope that they do.

# 1 The Food Crisis: What is Going On?

In 2008, agricultural commodity prices on world markets reached their highest levels in 30 years. In some cases, the nominal prices set new records. In the year from March 2007 to March 2008, the price of rice rose 74 percent on world markets. Most of that happened in a six-week period early in 2008. The price of wheat, another food staple, rose 130 percent during the same period.

From 2005, agricultural commodity prices started to climb, defying decades of an established trend: namely, that commodity prices were volatile but steadily falling, interrupted by short-lived, supply-related, price spikes. Initially, most developing country governments were not too alarmed. Many of them had pursued policies of trade liberalization and were party to trade agreements that locked other countries into open trade as well. They believed that global supply would be adequate to meet demand, so that if they were to face a domestic shortfall they could get the food they needed on world markets. Officials expected that an adequate global supply would also correct climbing prices, ensuring that any price spike would taper off before causing undue harm.

This sanguine attitude was misplaced. By late 2007, grain prices were reaching record levels and a number of governments were starting to panic. Food riots broke out, ultimately affecting close to 40 countries. A debate on causes began. Media coverage of food prices became commonplace, in rich and poor countries alike. Suddenly every international agency and most heads of state were talking about the food crisis.

The crisis was an accident waiting to happen. The confluence of factors that led to dramatic price rises starting in 2007 highlights long-standing failures of public policies in relation to agricultural production and food security around the world. Rather than some overwhelming act of nature—described by too many commentators as a “silent tsunami”—the food price crisis is largely human made. Supply shortfalls are cyclical, and have been happening since agriculture began: the weather is not reliable, nor was it in the days before climate change started to make itself felt. But much of the food price crisis is the result of poor policy choices. These included the abolition of public stockholding, the failure to invest in appropriate agriculture and infrastructure that supports local food production, and the failure to protect ecosystems and natural resources. It has also included policy choices that have encouraged a gradual global trend towards a more homogenous diet, modelled on the eating patterns established in rich countries.. These choices have led governments to ignore biological diversity and the human knowledge associated with cultivating and collecting a broad range of crops and foods. The pursuit of



government deregulation, a campaign that has dictated trade agreements, foreign investment regulation, and changes to the operation of commodity exchanges for over two decades, has also been fundamental to the crisis, affecting agricultural production patterns directly, as well as affecting how farmers, agri-businesses and public authorities can respond.

This paper explores the crisis. Building on the work of the EcoFair Trade Dialogue (Sachs and Santarius, 2007, and related background papers), the paper examines the short and long-term causes of the crisis, and why it matters. The paper goes on to look at the policy options available to governments, international organizations and donors to ensure their response to the crisis strengthens the long-term health and resilience of agriculture worldwide. The authors believe that if governments aim to resolve the crisis by focusing on reducing prices back to pre-2005 levels, not only will they have missed a vital opportunity to strengthen food security and agriculture but they will also quickly find themselves back in crisis, as the underlying problems with global food and agriculture make themselves increasingly apparent. These problems were explored in the report of the EcoFair Trade Dialogue, *Slow Trade—Sound Farming*, in the related background papers, and again in the EcoFair Trade Dialogue's response to the World Bank's *World Development Report 2008* (Murphy & Santarius, 2007).

Rather than cheap food, governments need to focus on human and environmental health, on ecological resilience, on increasing the development returns from agriculture, and on a fair distribution of those returns for farmers and farm workers. The normative basis for the EcoFair Trade Dialogue is rooted in economic, social and cultural human rights, ecological sustainability and gender equity. Such a policy will need to pay immediate attention to the needs of the more than two billion people who live in poverty, unable or barely able to afford the food they need. But these people are poorly served by a policy that allows commodity prices to hit rock bottom, as they have in recent years. Governments should instead allow higher prices to reach producers while providing targeted consumption subsidies for poor consumers. Policies that pursue the establishment of minimum liveable wage offer a better path to equitable and sustained development than relying on extractive policies that undervalue food and agriculture. People living in poverty are poorly served by policies that allow willful neglect and outright abuse of the natural resources on which many of them depend for their livelihoods, and which all of us ultimately depend on for our survival.

## 2 Why Did Prices Rise?

The food price crisis is linked to both short and long-term problems, on both the supply and the demand side. The crisis is also in part about the relationship between supply and demand, which is mediated both by markets and by government policies and interventions. Grain inventories, trade and investment regulations, and speculation on commodities markets all affect this relationship. All have played an important role in shaping the crisis.

The principal immediate cause of food price inflation on world markets from 2004/2005 was the rapid increase in the production and use of biofuels (often called agrofuels).<sup>1</sup> The expansion of biofuels production created significant new demand for a number of agricultural commodities, which in turn had important knock-on effects on the prices of other commodities. On the supply side, persistent drought and other weather-related problems in some of the major producers for world markets, especially Australia (the world's third largest supplier of wheat), shrank supplies just as demand was taking off. But neither of these factors alone was enough to trigger the crisis. What else is going on?

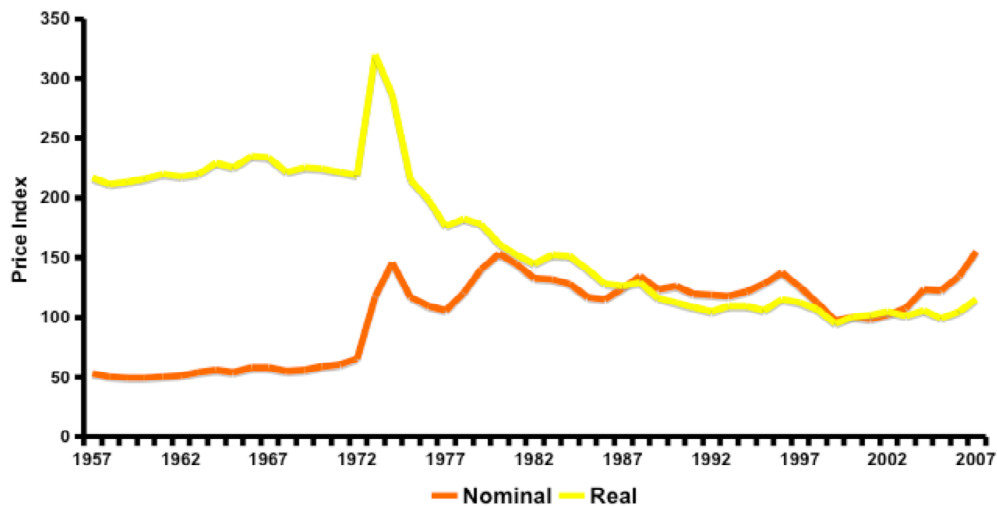
### 2.1 Long Term Trends

Prices are a critical factor affecting the long-term performance of agriculture. Agricultural commodity prices have remained flat and at a fraction of the real prices that prevailed before the price increases of the early 1970s. Low real prices for agricultural commodities, illustrated in Figure 1, have been possible because of the continued expansion in the agricultural productive capacity of a small number of countries that have the major share of the planet's agricultural resource base—Argentina, Australia, Brazil, Canada, the European Union, the United States, together with China and India. The expansion in productive capacity in these countries, driven by public investment in agriculture and agricultural research, has outpaced growth in demand for the last 30 years. This in turn has kept agricultural prices at historically low levels.

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<sup>1</sup> The terms biofuels and agrofuels are used interchangeably in this paper. Both refer to the conversion of agricultural feedstocks into liquid fuels.

Figure 1 Trend of agricultural real and nominal price indices



Source: International Financial Statistics Online, IMF February 10, 2008. Except for real price in 2007, which is an estimate by the author.

Agriculture's productive capacity is largely determined by four elements: natural endowment of resources; public and private investment in infrastructure, research and technology; and; public policy towards agricultural producers. (De La Torre Ugarte, 2007; De La Torre Ugarte and Dellachiesa, 2007). Since natural resources—land, climate, topography, water—are largely fixed, the level of public investment in infrastructure, research and development, and support to farmers are all indicators of how the productive capacity of the sector is likely to evolve.

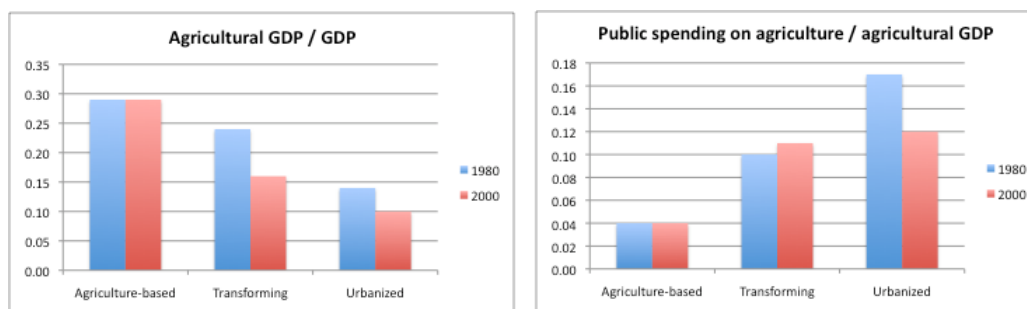
Decades of low prices have discouraged investment, both public and private, in developing country agriculture. Low prices have also limited the ability of the sector to generate adequate income and economic activity for the 2.5 billion people that depend on agriculture to survive worldwide. Depressed global prices have undermined production and markets at every level, local through global. For example, cheap rice exports from Japan and Thailand into West Africa have depressed not just local rice production, but also production of more traditional staple foods, such as millet. Governments in pursuit of cheap food for largely urban markets have encouraged this trend, to the detriment of local food production and rural development.

The structural adjustment programmes (SAPs) brought to most developing countries by the World Bank and IMF over the 1980s and into the 1990s to deal with the debt crisis encouraged this dis-investment of the state from agriculture. The SAPs pushed for the elimination of public engagement in agricultural services, including in the provision of extension services, marketing and distribution systems, credit and other inputs. The theory was that the private sector could take over. In many countries, the government had done a poor job of providing extension and distribution services,

keeping prices low for farmers to keep food prices down for urban consumers. Too often, corruption and a lack of accountability also undermined the services provided. And in some places, for instance in some Asian countries, the private sector was ready and able to step in and farmers' income improved (FAO, undated). But in most developing countries, particularly in sub-Saharan Africa, there was not enough profit to be made, or adequate capital in the first place, to establish a viable private alternative for the public services that had been provided by the state. It would have made more sense to overhaul the public services because the alternative has been to leave the farmers without access to support services at all.

The work of Fan (2008) indicates that public investment in agriculture has remained flat in relation to Gross Domestic Product (GDP) for the last 20 years. As Figure 2 shows, for most Sub-Saharan countries, and agricultural based countries more widely, it has remained at about 4 percent; on the other hand for so-called “transforming” countries (most of South and East Asia, the Middle East and North Africa) public investment in agriculture is more than twice that level but has also remained flat, moving slightly from 10 to 11 percent of GDP over the same period. In urbanized countries (most of Latin America, Europe and Central Asia) the level of investment dropped significantly from 17 to 12 percent of GDP in the period between 1980 and 2000.

Figure 2 Public spending on agriculture



Source: Shenggen Fan from World Development Report 2008, World Bank 2007.

Official Development Assistance (ODA) for agriculture in developing countries also fell dramatically in this period. Not only has the total volume of assistance provided to agriculture decreased in real terms, but also its share of total ODA has fallen even more, from a peak of 17 percent in 1982 to 3.7 percent of total ODA in 2002. Between 1980 and 2002, multilateral development agencies cut ODA spending on agriculture from \$US 3.4 billion to US\$ 0.5 billion—a decrease of 85 percent. Individual country donors (the bilaterals) reduced spending by 39 percent, from US\$ 2.8 billion to US\$ 1.7 billion (DFID, 2004).

The level of public expenditure in agricultural research and development for the period 1981 to 2000 remained at dismal levels in most developing countries. The

information in Table 1a indicates that only in the Asia Pacific region and in Latin America and the Caribbean has there been a significant increase in spending. Much of that increase can be accounted for by increased expenditures in India and Brazil alone. In terms of their share of GDP, public research and development expenditures in developing countries lag considerably behind levels in industrialized countries. Moreover, the gap between spending in developing and industrialized countries continues to increase as evidenced by the data in Table 1b.

Table 1a Total public agricultural research expenditures by group of countries 1981, 1991, and 2000

	1981	1991	2000
High Income Countries	8,293	10,534	10,191
Brazil, China, India	2,272	3,737	6,028
Developing Countries	4,632	5,721	6,791
TOTAL	15,197	19,992	23,010

Year 2000 international dollars. Source: Pardey, Beintema, Dehmer, and Wood (2006)

Table 1b Selected public agricultural research intensities, 1981, 1991, and 2000

	Expenditures per capita			Expenditures per economically active agricultural population		
	1981	1991	2001	1981	1991	2000
	(2000 International dollars)					
Asia-Pacific	1.31	1.73	2.35	3.84	5.23	7.57
L.America-Caribbean	5.43	4.94	4.96	45.10	50.54	60.11
Sub-Saharan Africa	3.14	2.69	2.28	9.79	9.04	8.22
Middle East-N.Africa	3.24	3.63	3.66	19.15	27.30	30.24
Developing Country	2.09	2.34	2.72	6.91	8.14	10.19
High Income country	10.91	13.04	11.92	316.52	528.30	691.63
TOTAL	3.75	4.12	4.13	14.83	16.92	18.08

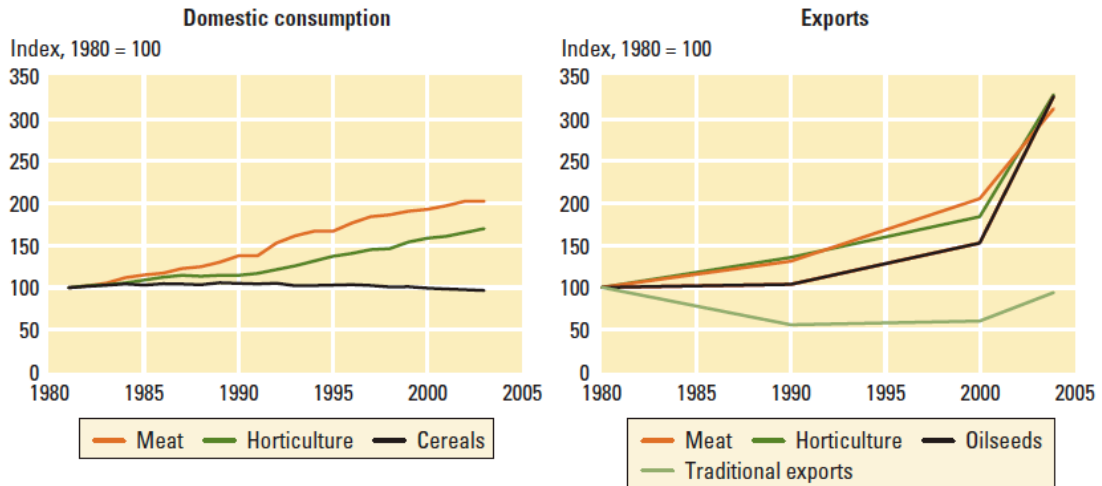
Source: Pardey, Beintema, Dehmer, and Wood (2006)

The productive capacity of agriculture, especially in grains, oilseeds and livestock, has grown significantly in countries where public investment remained large: industrialized countries, and in a handful of developing countries such as Brazil and India. A good number of other developing countries also improved their productive capacity through investment but this has not been the dominant pattern overall.

Where there has been public investment in agriculture in developing countries, much of the emphasis has been on export-oriented agriculture as means to generate foreign exchange. The advice given by multilateral and bilateral donors as well as countless policy experts has pushed this policy direction. The result is that most of any increase in productive capacity has been achieved in high value products, including horticulture and shellfish. These high value products are primarily intended for consumers in high-income countries. This trend can be captured indirectly by

looking at the growth in the role of high value agricultural exports from developing countries, as indicated in Figure 3.

Figure 3 Changes in high value agricultural products in developing countries



Source: <http://faostat.fao.org>, accessed June 2007, and <http://comtrade.un.org>.

Obviously these aggregate figures hide the fact that most grains, oilseed and livestock exports are coming from a small number of countries (especially Brazil, Argentina, and Malaysia). And the exports are destined primarily for the markets of developed countries or China. In fact more than 70 percent of the global increase in soybean exports went to China (World Bank, 2007). During times of scarcity in the global food supply, it is unlikely that this production and productive capacity will play any significant role in alleviating food security concerns or price pressures in developing countries.

The evolution of the agricultural sector during the twentieth century emphasized monoculture production systems based on increasing the use of fossil-based inputs to maximize yields. The inability to introduce environmental costs into farmers' and/or the sector's balance sheets has often resulted in the degradation of environmental and natural resources. In the last 50 years, the natural resource base on which agriculture depends has declined faster than at any other time in history due to increased global demand and degradation; 75 percent of the crop genetic base of agricultural crops has been lost. The deterioration of ecosystems' functions may limit agriculture's ability to respond to climate change. (IAASTD, 2007).

Another significant long-term trend prevailing in the agricultural sector is the increase in demand for livestock products and the consequent increase in demand for feed. The growth is particularly evident in developing countries. The globalization of the food distribution and delivery system is driving a convergence in the diets of middle and upper income households in developing countries, especially the richer countries but even in the poorest, towards the diet of high-income countries (Regmi, et. al, 2008). The convergence in consumption patterns seems to be highest in

cereals, meats, seafood, dairy, sugar and confectionery, caffeinated beverages, and soft drinks. The convergence reflects the rapid transformation of food delivery systems, as well as global income growth.

The shift to increased consumption of meats is an area of special concern, as it is directly linked to the use of land for the production of animal feed. The increased pressure to produce meat increases the share of agricultural land allocated to the production of feed crops (especially corn, sorghum, wheat, and soybeans) and the demand for grazing land. In both cases, there are trade-offs with food production. This change in diets is likely more significant than continuing population growth in increasing pressure on the food system, as raising meat requires significantly more agricultural resources, kilo per kilo, than vegetable protein (cereal, fruit, vegetables). Without pasture, beef requires eight kilograms of grain to produce one kilo of meat, pork requires about four kilos of grain per kilo of meat, and poultry about two kilos of grain. North Americans eat about 100 kg of meat a year.

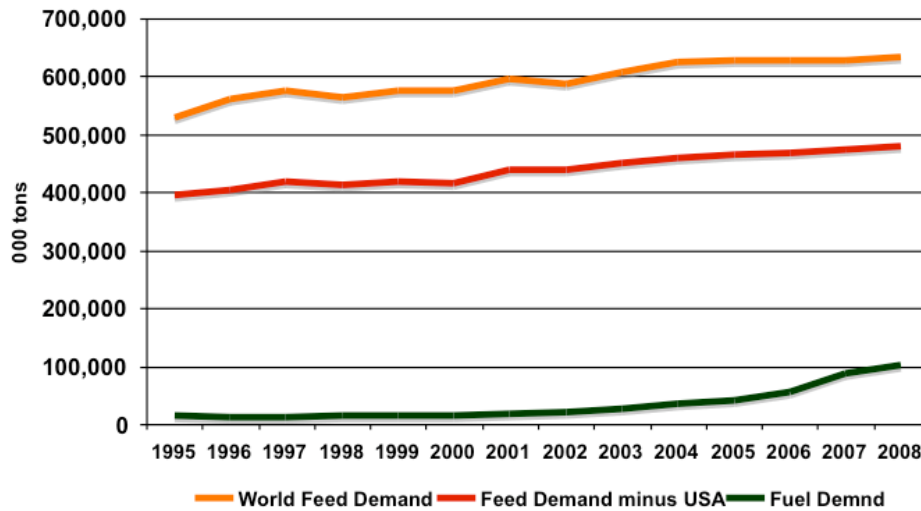
## 2.2 Short-Term Factors

The rapid increase in the use of grains and oilseeds for biofuels started between the years 2003 and 2004, and accelerated thereafter as shown in Figure 4. In the 2002/2003 marketing year, year ending stocks of grain fell below 25 percent for the first time since the early 1980s. The FAO considers an ending stock of around 17 percent to be the lowest safest threshold—it is equivalent to about two months food at current demand levels (a 25 percent year end stock means there is enough grain for three months, or one quarter of the year's demand). The trend is shown in Figure 5. The decline was in large part the result of the U.S. government's decision in 1996 to eliminate the U.S. inventory management policy that had prevailed since the 1930s. The new policy was to leave it up to the private sector in agriculture to define the appropriate level of inventories. The U.S. is a big enough producer and exporter of a number of grains and oilseeds for its policies to have a significant impact on world inventory levels and world prices. The EU as well abandoned stockholding as a tool of its agricultural policy. At the same time, the World Bank and IMF conditions attached to structural adjustment programmes pushed developing countries abandon local and regional reserves of grain as expensive and unnecessary.

Advocates of this policy change insisted that globalization had reduced the need for local inventories because there would always be a supply somewhere in the world. In practice, agriculture started to operate with a "just in time" inventory policy, common to manufacturing sectors. This shift in thinking was reflected in the fact that while the stock to use ratio decreased significantly, the resulting increase in prices was not significant, nor was it in line with previous price responses to drops in

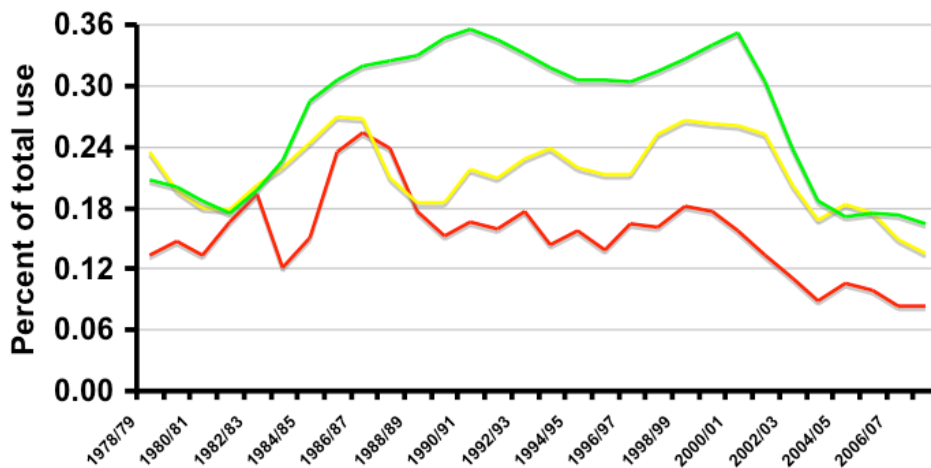
stocks. Even when the stock to use ratios dropped to their lowest level in 25 years, prices stayed low (for a time).

Figure 4 Grain demand for feed and biofuels



Source: OECD-FAO Agricultural Outlook 2007-2016 - OECD © 2007 - ISBN 9789264025097

Figure 5 Stock to use ratio trends



Source: PSD Online Database, Foreign Agricultural Service, USDA.

When demand for biofuels started to climb sharply in 2004/2005, significant new pressure was put on the already low levels of stocks. The result was the significant price increases that started to affect world food prices from 2005/2006. Biofuel demand increased global commodity prices, particularly for vegetable oils (palm oil, soybeans, rapeseed) and maize (used to make ethanol). Estimates of how big this



impact has been range from a few percent to more than 70 percent; it is impossible to say with any certainty what the right number is.

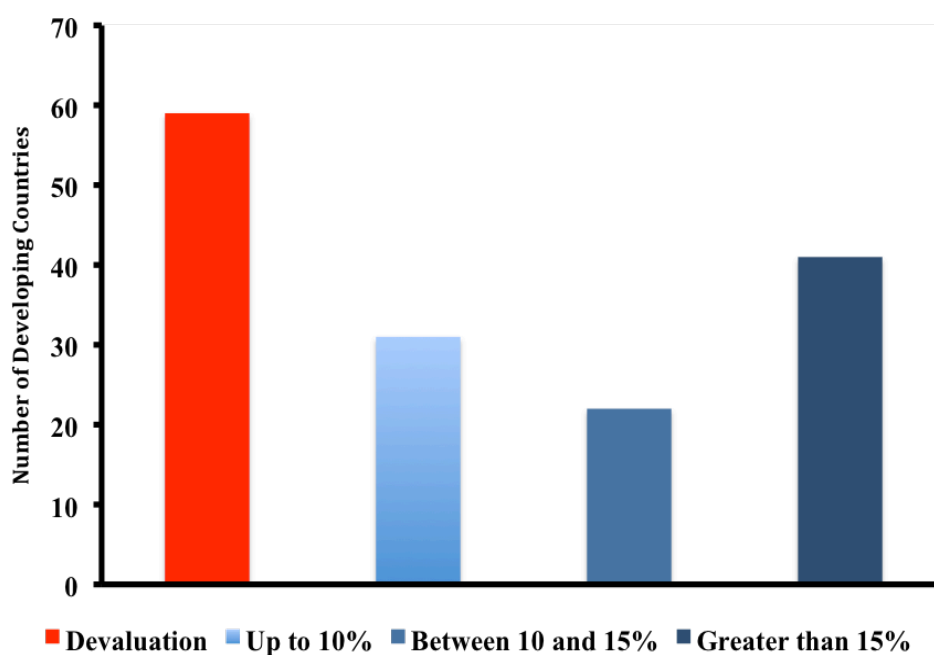
Speculative demand had a major effect on the run-up in prices. In a series of decisions that date back to the late 1980s, the US Commodity Futures Trading Commission effectively eliminated long-standing limits on how much commodity investors could own through their contracts (since 1936, that limit had been 11 million bushels). Consequently, in an attempt to balance their commodity portfolios among energy, minerals, agriculture and others elements, index commodity funds took unrestricted positions in grains. This has resulted in the two biggest index funds holding a combined position in grains of 1.5 billion bushels, while the total long position of all the index funds is over 2.2 billion bushels. This is to say that speculative demand has added the equivalent of eighty percent of all the corn used for ethanol in the United States (Brock, 2008). The simultaneous rapid increase in the price of crude oil further fuelled the price increases in agricultural commodities beyond what the supply and demand indicators alone would have predicted. While the speculative investment in commodity markets is largely confined to U.S. futures and financial markets, the repercussions are global. These commodity markets—in Chicago, Minneapolis, Kansas City, and New York—are the reference markets for traders worldwide.

During the last decade, the economies of China and India enjoyed a period of unprecedented expansion. While they were experiencing an extraordinary period of income growth, they were simultaneously investing in the productive capacity of their agricultural sector. This meant that much of their increased demand for food and feed was met with increases in local production rather than with increased imports. Their demand added little immediate demand pressure to global commodity markets (Abbott et al, 2008; Ray, 2008a and 2008b). The contribution of rising demand in these two countries in the run up of food prices has been overplayed in much of the analysis of the crisis.

The impact of short-term weather problems, such as droughts and floods, has also been overstated in the global analysis of the food price crisis. Perhaps the most important event of global implications in this area is the on-going drought in Australia. Yet this is no longer a short-run problem, as the drought has now occurred at least five years in a row. The underlying water shortage problems affecting Australian agriculture are anything but short-term in nature. This is not to underplay the importance of droughts, floods and other weather disasters on local and national markets: many countries in sub-Saharan Africa had significant domestic food shortfalls in 2007, while Bangladesh lost food production to cyclone Sidr. But few of these developing countries have sufficient supply or demand in global terms to affect world prices.

On the other hand, the depreciation of the U.S. dollar against most currencies may have partially offset the worst of the effects of the price increases for many countries. For example, in countries whose currency has appreciated by thirty percent or so against the U.S. dollar, the bill for imported agricultural commodities dropped by thirty percent. Global agricultural commodity prices are priced in U.S. dollars. According to IMF data presented in Figure 6, a majority of developing countries — 94 countries represented by the three shades of blue—experienced an appreciation of their currency in respect to the U.S. dollar. For these countries, the price spikes were not as high as the dollar price suggested because their currencies were worth more against the dollar. However, the appreciation was not uniform and ranged from 1 to 33 percent. At the same time, 59 countries—represented by the red bar in the graph—had currencies that did not appreciate against the dollar. And some countries use the U.S. dollar as their local currency. These countries felt the full effect of the price increases in dollar terms.

Figure 6 Developing currencies revaluation range between 2005 and 2007



Source: Elaborated from data at the International Financial Statistics Online Service, Statistics Department, and the International Monetary Fund.

While the acceleration in the production and use of biofuels that started in 2004/2005 triggered the sudden jump in agricultural prices, there were already factors in place that exacerbated the magnitude of the price increases. Lack of investment in most developing countries' agricultural sectors may hamper their ability to respond to the current crisis, just as it has exacerbated its consequences. It is worth noting that food riots have mostly occurred in response to the price or lack of availability of rice in particular. Rice is the commodity least affected by biofuels: it

is neither a feedstock, nor have acres given to rice production changed significantly in recent years. The price increases for rice were particularly steep and fast, and rice is a staple food for billions of people around the world, making it a particularly sensitive crop. The world market is thin (only seven percent of production enters the international market) and, particularly in Asia, rice is critically important socially, culturally and therefore politically. This makes governments jumpy, and more likely to impose export bans, or to seek to buy large amounts to build up reserves, if it looks as if a shortage is probable.

The crisis also showed how current policies do not include correctives to price spikes—in fact, quite the opposite. The particularly dramatic increases in rice prices were in good part about how governments reacted to rising prices initially: panic buying, hoarding by some traders, and sudden shifts in trade policies all contributed to the problem.<sup>2</sup> For instance, India banned all rice exports except of basmati varieties, on which export duties were raised sharply, raised prices sharply for a number of poor neighbouring importers, including Bangladesh, whose own harvest had been severely curtailed by a devastating cyclone. A number of importing countries lowered import tariffs on cereals, but to little avail.

The spike in agricultural prices has been further exacerbated by the simultaneous dramatic increase in oil prices. Some researchers would argue that this is not a coincidence, as higher oil prices are also contributing to higher biofuels use. However, increased biofuels use is also a response to policy incentives such as tax rebates, mandates for minimum use, and subsidies. More expensive corn, wheat, soybeans and other crops will also reduce the economic returns of producing biofuels, creating a self-limiting function. The higher oil prices go, however, the more expensive feedstocks can be while still making biofuel producers a profit. The increase in the price of oil has affected all food and non-food prices across the board. In areas with high transportation costs, all goods have become more costly. The higher cost of fertilizer and pesticide derived from fossil fuels has also slowed the supply response from farmers locked into industrial production systems.

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<sup>2</sup> *International Herald Tribune*, 30 April, 2008, “India announces steep duties on Basmati rice, other measures to curb food prices.” <http://www.iht.com/articles/ap/2008/04/30/business/AS-FIN-ECO-India-Inflation.php>

### 3 The Food Crisis: Who Is Affected and How?

Global prices matter, but they are not the whole story, particularly in an assessment of how the food crisis is affecting people living in poverty in developing countries. Smallholders sell in local, not global, markets, and consumers shop in local markets, too. There are a number of factors that create a filter between world and national or local prices: transportation costs, market segmentation (both natural—a river or mountain range; and created—transport networks, storage facilities, the size of local markets, etc.), domestic policies (for instance, price floors or rationing systems for food staples), and market structure, including the presence of monopolies and/or oligopolies (or monopsonies and oligopsonies) (von Braun, 2008). Trade policy is important, too: the extent to which the market is open to imports (and exports) of food has a direct bearing on how national and world prices correspond.

To illustrate how these factors combine to create very different national price scenarios, consider some examples of how the food crisis has affected national prices: in Tanzania, 81 percent of the change in international maize prices between 2003 and 2008 was captured by local price changes. Indonesia saw important regional differences within the country: maize prices actually fell 5 percent in Jakarta and rose in Surabaya, but only by a third of the total global price increase (von Braun et al, 2008). Rice prices in Ghana, Bangladesh and the Philippines rose by about 50 percent. In Guyana and Vietnam, rice prices doubled. In Ethiopia, rice prices nearly tripled. In each case, different factors at the domestic level filtered the effect of the dramatic price increases on global commodity exchanges.

A survey of how the food crisis has affected different developing countries by the International Fund for International Development (IFAD) draws a clear conclusion: In all regions, and in most countries, prices paid to food producers have increased over the past year. The extent to which they have increased varies considerably country by country and crop by crop. Thus in China, producer prices for staples have increased only by 10 per cent or so, in Kenya 10-50 per cent; in Cameroon and Mali 15-20 per cent, in Jordan 30 per cent. At the other extreme, in Nigeria producer prices for staples (e.g. millet, maize, sorghum) have increased by about 100 to 200 per cent over the past year; in the Andean region and in Nicaragua the price of maize has increased by over 100 per cent; in Egypt wheat prices have more than doubled; while in Angola maize prices have increased by five times in the last year. (IFAD, 2008).

The IFAD survey found in most countries surveyed consumer prices had increased more than the prices paid to producers. Poor consumers are eating less often, eating

less food, and substituting less expensive foods for their normal staples. Clear evidence of increased malnutrition and under-nutrition was found in Mali and Pakistan and is expected to be common in other countries, too. Higher food prices were pushing households to take children out of school, a short-term stopgap with very damaging long-term implications, not only for the individuals involved but for the development potential of the country as a whole as well.

Within countries and even regions, households do not all experience the same hardship when prices rise. The hardest hit live on a fixed income, whether a salary or a daily wage. Some sectors, such as government service, may be able to push for a wage increase to afford food price inflation. But wage labourers are seldom in a position to demand higher pay. In rural areas, on the other hand, higher prices for crops can encourage additional planting. For instance, some Thai farmers went for an unusual third rice crop this year, hoping to recoup astonishingly high rice prices that prevailed in April and May 2008.<sup>3</sup> Increased plantings means more work for rural labourers, more purchases of inputs (which could help local suppliers) and, if the money comes in when the crop is sold, more capital circulating for the next harvest as well. A study by the Asian Development Bank suggests that in some countries, for instance China, the higher commodity prices are facilitating a shift in income back from urban to rural areas, redressing some of the inequity that industrial development has generated in recent years (ADB, 2008). On the other hand, where market power is uneven (as it often is), farmers lose the greater part of any price increase to more powerful traders and intermediaries in the market.

The IFAD survey also reported a shift back to traditional food crops in some areas, and to lower-input agriculture. For instance, Senegalese farmers are rediscovering millet, a traditional staple food that had mostly been abandoned. In the Philippines, farmers are using fewer inputs because they cannot afford markedly higher input prices. This may hurt output in the short-run, but opens a real opportunity for governments and agricultural agencies to provide proper investment and support to farmers to move production out of ecologically damaging practices. The same review of a number of field surveys reported that other areas saw farmers, especially somewhat more prosperous farmers, increase their cultivation of commercial crops or livestock rearing, attracted by the potential profits. This behaviour was reported from China, the Philippines, but also from very small land-holders in both Kenya and Uganda.

In addition to the differences among and within countries that are due to market power, domestic policies, trade policies and so on, there are differences depending on the composition of the household diet. For foods that are hardly processed, such as rice and white maize, the price shock is more likely to be transferred to consumers in its entirety. If the price of rice goes up 50 percent in the local wholesale market,

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<sup>3</sup> Reuters. April 26, 2008. "Thai rice farmers hope to reap rare profits," <http://www.gulfnews.com/business/Commodities/10208590.html>

then the consumer is likely to pay more or less 50 percent more at the retail store. On the other hand, an increase in the price of yellow maize or soybeans will not have a direct affect, as these are foods that are consumed either in trace amounts, in processed foods, or indirectly, as an input cost in the price of meat. Yellow maize and soy are primarily used as feed crops. Among meat products, the rising cost of chicken is likely to have the biggest effect on the urban poor, especially where chicken is the cheapest meat in the market (which it is in many countries). Relative to the other meats, chickens are the most likely to be reared on corn and soybean meal.

There a few factors that could help analyze the extent in which the urban and rural poor are affected by higher food prices. First, given the increase in transportation fuels, the origin of the food supply is critical. If the food is imported, then the rural poor may face the highest prices as they are further from the source and the increased transportation and distribution costs will have to be added to the retail price of food they buy. If the food is sourced domestically, then rural consumers should be less affected, but urban consumers may face a higher price as the transportation and distribution cost from the rural production areas to the urban markets has to be incorporated.

Among the rural poor there are small landholders, landless workers, and wild food gatherers. The degree to which the rural poor are affected by the food crisis depends on their ability to meet their own household food needs. For most countries and regions, it is not an absolute scarcity of food that is the problem (there is food to be had in the shops) but rather the price of that food. In this respect farmers that are net buyers of food and landless workers are the most vulnerable groups. The increase in agricultural prices has not been uniform, so the effect on farmers that are net sellers of food has to be assessed by looking at the price changes on the products that they sell and the ones they buy.

To the extent that the rural poor have access to land and are able to generate some of their own food production, they are in a better position than the urban poor. However, to the extent that government and public relief services may have a larger presence in urban areas, the urban poor may be in a better position to access social safety nets.

A recent study by Aksoy and Isik-Dikmelik (2008) illustrates the extent in which higher food prices affect urban and rural poor consumers, by classifying them into net buyers and sellers of food. The study concludes that even though there are more poor net buyers of food than net sellers, half of these net buyers are only marginal buyers of food; consequently the increase in food prices has—in the short term—only a small impact on their welfare. The same study also found that in eight of the nine countries examined, the income of net buyers was higher than net sellers of food. This means higher food prices had a positive redistributive effect, lowering poverty. In any case, if the income of the net sellers and net buyers are

interdependent, higher food prices should also create a medium-term benefit in generating higher farm and non-farm demand for labour. That will tend to raise the income of even the poorest of net food sellers.

In another study Polaski (2008) reports that rural labour markets played a key role in transferring the effects of high agricultural prices. For the case of India, the study documents that higher world prices for rice and wheat have a positive impact in the rural economy of India. Similarly, in the case of China, the reduction in rural poverty can be attributed to the increase in agricultural prices.

Nonetheless, Polaski (2008) warns against generalizing these results. Studies by Hertel et al (2006) and by Ivanic and Martin (2007) provide less conclusive evidence about higher agricultural prices and poverty reduction<sup>4</sup>. Differences in poverty, income and expenditure patterns among developing countries are just some of the reasons we shouldn't assume specific results can be generalized and applied to other countries.

A number of the countries that have experienced the biggest price rises have also faced recurrent supply issues. Back-to-back droughts in Ethiopia, for example, have made food price inflation more dramatic there than in some other countries. The harvest failures have had a severe impact on the population because so many farmers there are subsistence farmers. If drought destroys their crop, they cannot afford the increasingly expensive food imported from outside. On the other hand, in rural economies that are more productive (and more resilient in the face of bad weather) food imports play a smaller role and farmers have done better with higher commodity prices. They have managed to increase their income through higher prices for their crops, and are less dependent on purchased food to make up household food needs. The effect on their net income, despite higher input prices, has been positive. (IFAD, 2008)

Environmentally, the run-up in agricultural prices could have a significant negative impact. The quickest response to high crop prices in an industrial agriculture system is to increase applications of nitrogen, pesticides, and to increase mechanization, all of which are intensive in fossil fuels and bad for climate change. In addition, increased monocultural production will reduce soil fertility and biodiversity and worsen water quality. These effects of modern agriculture are well documented (Santarius & Sachs, 2007). High prices have also pushed the transformation of environmentally sensitive land and/or land put aside for conservation back into production. In Europe and the U.S., sensitive land has already been put back under the plough. The EU suspended the obligation on farmers to set land aside from the autumn 2007 planting, in the name of the global food crisis. The result has been a 5

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<sup>4</sup> It is important to note that the study by Aksoy and Isik-Dikmelik analyzed survey data, while the Hertel et al. , Ivanic and Martin, and the ones referenced by Polaski about India and China, are simulations results from a Computable General Equilibrium model.

percent increase in the land under cultivation.<sup>5</sup> The United States, similarly, has seen several million acres go back into production, when farmers chose not to re-enter acres into the conservation reserve program when existing contracts expired in late 2007.<sup>6</sup>

On the other hand, the higher cost of producing meat could reduce consumption, and ultimately the production of livestock. The largest industrial meat firms, based in the U.S. but global in scope—firms such as Tyson and Smithfield—have based their business model on cheap feed. They are struggling now that feed prices are higher. Less demand for meat would have beneficial outcomes if it triggered a reduction in demand for feed grains and reduced the grain-fed ruminant population. The first could lead to a reduction in nitrogen use, and the second to a reduction of enteric methane. Both would be positive from the perspective of climate change emissions. A reduction in intensive livestock operations would also be good for local water quality, air quality, human health, biological diversity and animal welfare. High oil prices could also trigger a reduction in the use of nitrogen and the expansion of no-till practices, both of which would reduce the use of fossil fuels in agriculture.

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<sup>5</sup> BBC News, 2 August 2008, “Conservation no longer a farming priority”, story by Paul Henley.  
<http://news.bbc.co.uk/2/hi/europe/7538102.stm>

<sup>6</sup> *New York Times*, 9 April, 2008, “As Prices Rise, Farmers Spurn Conservation Program”, story by David Streitfeld.  
[http://www.nytimes.com/2008/04/09/business/09conserve.html?pagewanted=1&\\_r=1&fta=y](http://www.nytimes.com/2008/04/09/business/09conserve.html?pagewanted=1&_r=1&fta=y)



## **4 How to overcome the food crisis and set the foundations for the transformation of agriculture**

Governments' immediate focus is understandably on addressing the negative effects of the food crisis, including sharply higher prices, uncomfortably short supplies, and a big increase in the number of people who cannot access sufficient food. Yet the ultimate goal has to be the transformation of the agricultural sector to better take advantage of its potential to reduce poverty, increase food security, and improve its relationship with the environment. Consequently, the best course of action will temper the increase in agricultural prices but not seek to bring commodity prices back to the lows they experienced over the past two decades. A higher return to farmers for their production is an essential component of ensuring the long-term transformation of the sector.

Higher agricultural prices would provide the economic and social environment to invest in the transformation of agriculture. Higher prices attract investment as they indicate an unmet need, and demand is growing faster than supply. Both public and private investment would rush into the sector, if prices remain higher than the historical trend for the foreseeable future. The challenge is to direct the new investment towards the transformation of agriculture: reduce poverty, increase food security, and improve environmental performance.

Higher prices for agricultural commodities should be good news. It should be good for countries where agriculture still provides half or more jobs—countries that include some of the more industrialized emerging economies, such as Thailand, as well as almost every LDC. It should be good for countries whose agriculture sector has been neglected and where potential productivity gains are considerable, which includes many countries in sub-Saharan Africa. It could be good for redressing some of the inequity between urban and rural areas that has emerged with globalization, by redistributing some wealth into rural economies (Asian Development Bank, 2008).

To respond effectively, governments have to sort out who is affected by the price rise, and how. For instance, will the problem be transient or long-term for a given population? Rural populations could hope to benefit from higher prices, even as net food consumers, but only in the medium to longer-term. As long as wages rise, even net food consumers will benefit from the stimulus to rural economies that higher prices for agricultural commodities can provide. But they may have to be supported during the transition, until wages catch up with higher food prices. Poor urban

consumers are less likely to benefit, although in the long run, a vibrant rural economy can generate national benefits that should raise the standard of living nation-wide. Governments might need policies to help poor consumers make the transition to more expensive food, including where appropriate higher minimum wages and reduced consumption taxes on staple foods. These outcomes depend on government action; they are not outcomes guaranteed by the market alone.

The path towards overcoming the food crisis and transforming the agricultural sector includes a diverse set of actions. Some will have an immediate impact, while others will take longer to show results. These actions, which involve a wide range of private, public, and multilateral stakeholders, range across agriculture, energy, finance, trade, education, the environment, and research and development sectors.

The actions that will produce quick results include regulating the pressure generated by the demand for biofuels, increased and better designed humanitarian aid that makes an investment in local and regional productive capacity, regulating speculative demand in agricultural commodities futures markets, reviewing domestic restrictions on agricultural trade, and increasing agricultural production.

Together with these actions that can have almost immediate effect, there are another set of actions that will take longer to take effect but that could lead the way towards the transformation of the dominant agricultural structure to a fairer, more sustainable model. Among these measures that will take more time to come to fruition are: investment in infrastructure and productive capacity, investment in research and extension, value local food stuff and consumption patterns, domestic institutional development, agricultural trade policy, regulation of market power, establishment of grain reserves, and energy policy. All these policy options, short and longer term, are discussed in more detail below.

#### **4.1 Smarter production and use of biofuels**

Biofuels demand was the primary trigger for the run-up in agricultural commodity prices. It is therefore imperative to curb this impact. The U.S. and the E.U. should reduce the speed at which their domestic production of biofuels based on grains and oilseeds is expanding. This could be done by reducing the production of biofuels and/or expanding the set of feedstocks available for biofuels. The U.S. and E.U. should also reduce their targets for increasing the use of biofuels in the mix of transportation fuels. In addition, the U.S. and E.U. should review their domestic incentives for the production of biofuels, and ensure that there is enough flexibility built in to allow market signals to influence production levels and technologies (Tyner and Taheripour, 2008). Incentives for biofuels production should be linked to agricultural prices such that any increase beyond a specific benchmark will

automatically decrease incentives to biofuel production as a way to reduce overall pressure on agricultural resources. It is important to understand that what triggered the crisis was the speed at which the production of biofuels grew, rather than the production of biofuels in itself.

At the same time the EU and the U.S.—even China and India—could consider an increase in imports of ethanol derived from sugar cane. Despite sugar cane being the second most important feedstock for ethanol (after maize), the price of sugar has not followed the pattern of maize, wheat, soybeans, rice, or even cotton prices. This implies that there is some productive capacity in sugar that could be tapped, which would ease some of the pressures generated by the use of biofuels derived from maize and wheat. Moreover, most of the production of sugar occurs in tropical developing countries. In some, such as Guatemala, the production is controlled by a very few families and higher world sugar prices would likely not contribute much to improved rural incomes for the poor. In other countries, however, such as neighbouring El Salvador and a number of island state sugar growers, sugar production is a smaller-scale enterprise and higher sugar prices could have important benefits for the national economy, as well as the livelihoods of the smallholders directly involved. Sugar is hard on the environment and in some countries is associated with slave or bonded labour. Higher prices for sugar, however, will not *per se* worsen this situation, and they could, with the right public policies in place, create the necessary space to improve the sector's overall performance, including the social and the environmental performance. Certainly low prices have not been good for either environmental or social outcomes in the sugar sector.

Regardless of any potentially positive developments for local biofuel use in developing countries, the rapidly growing demand for biofuel feedstock in developed countries has to be regulated with proper standards and controls. Demand for livestock feed has already created tremendous destructive pressure on fragile ecosystems, including the Amazon Basin and the carbon-rich peat bogs of Indonesia. Biofuels policy driven by uncontrolled demand for energy in rich countries coupled by targets and subsidies that reduce the risks for private investors and producers risks creating a wholly unsustainable new demand for agricultural land and resources that will further marginalize food production, food security and the livelihoods of small and peasant farmers.

## 4.2 More and better humanitarian aid

A number of countries, including Ethiopia, Chad, and Tanzania lost crops in 2007 to drought. Mozambique suffered from floods. Ghana and Angola suffered both drought and floods in the same year. The Middle East suffered from both drought and frost. These supply failures are devastating for countries with large populations

of people living in poverty and virtually no public relief system to help families living in poverty to afford food. Distress sales of livestock and other productive assets were reported through 2007 and 2008 across West Africa, including in Mali and Ghana. Most countries continued to have enough food available on the market, but at prices that were too high for people to afford.

An immediate response to people facing starvation or malnutrition is humanitarian aid. Despite its importance, especially as a life saving yet stop-gap measure, the record of such interventions is mixed at best. Humanitarian agencies feed about 100 million people a year—less than one in eight of the more than 852 million who it is estimated were living with hunger in 1996. WFP's program for 2008 aims to feed 90 million people, at a cost that has risen from an estimated \$3.1 billion in January 2008 to almost \$6 billion by August 2008 because the prices of staple foods have increased so dramatically. So far, the public response by donor countries has been generous. Early in 2008, WFP called for an additional US\$ 1 billion for its emergency program response. Saudi Arabia alone provided \$500 million.

More importantly, at a high-level meeting on 25<sup>th</sup> September, UN Secretary-General Ban Ki-Moon presented a new initiative supported by the Gates Foundation, the Howard Buffett Foundation and the Government of Belgium to collaborate with the World Food Programme (WFP) and small farmers in Africa. The initiative will fund a pilot programme for WFP to purchase crops from local farmers under long-term contracts. Farmers will be provided with credit to invest in fertilizers, seeds and new technology, with a guaranteed buyer for their crop. The investment should help increase agricultural production in food insecure regions.<sup>7</sup>

The future of food aid has to be increasingly about financial support from donors to invest in better production, storage and transportation infrastructure in developing countries. The money is needed for poor net importing countries whose food import bills have risen sharply; for poor consumers within developing countries, who can be reached by funding either government or NGO-operated welfare programs; and, to support the establishment and maintenance of regional food reserves, which are relatively expensive to run, but cheaper than coping with a crisis without reserves in hand. Support for small and peasant farmers through the establishment of public stocks and social safety nets will also generate important investment in small-scale producers who, together with higher farm gate prices, need some price stability and low-risk markets to develop their potential.

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<sup>7</sup> <http://www.un.org/News/Press/docs//2008/sgsm11827.doc.htm>

### 4.3 Regulated commodity exchanges

In a series of decisions that originated back to the late 1980s, the U.S. Commodity Futures Trading Commission (CFTC) has gradually deregulated commodity exchanges, allowing commodity index funds to take unlimited positions in the grain markets. Previously, the regulations made a distinction between commerce and speculation. Farmers and agribusinesses with something to buy and sell were less regulated than speculators, who had no interest in taking possession of any actual commodity. Speculators were limited to 11 million bushels of grains. Today, however, the two largest index funds have a combined position of more than 1.5 billion bushels (Brock, 2008). As regulations were relaxed, investment from speculators exploded, reaching \$13 billion in 2003 and a staggering \$260 billion in March 2008. A survey by Greenwich Associates found that 40 percent of current investors have only been active in commodity markets for three years or less.<sup>8</sup>

In April 2008, the CFTC called an emergency meeting. The people who depend on the commodities exchanges for their livelihoods were up in arms at the volatility and price rises evidenced. The price spikes were forcing a lot of real traders out of the market. Moreover, spot prices had stopped converging with futures prices, suggesting that the market was somehow breaking down. The exchanges' primary functions (to even out price fluctuations and spread risk) were being undermined. Many of the index funds were taking a long view, and holding on to their contracts. This meant the market was not clearing, creating a kind of hoarding effect that kept prices higher than supply and demand would dictate. Most developing countries that have to import food must pay prices set on these same commodity exchanges. Both the sudden jump in prices and the continued volatility are making these purchases more expensive, ultimately increasing hunger and malnutrition worldwide. Not just high but also volatile prices make it much harder for poor countries to plan their budget allocations appropriately, and to make the necessary investments in their own agricultural sectors.

Responsibility to address the negative effects of speculative demand on world food prices lies principally with the U.S. Congress because most grains and cereals are traded on U.S. exchanges (in Chicago, New York, Kansas City and Minneapolis). If the U.S. government were to impose tighter rules, there is a danger that investment fund managers might dump their positions precipitously, which would push commodity prices into a rapid downward spiral. Yet this is a risk even without government intervention: nothing will stop the funds dumping commodities if oil prices continue to fall and agricultural commodities futures start to look less rosy. This danger cannot be used as an excuse for inaction. If tighter regulations are not reintroduced, speculative demand will continue to play a significant role in driving agricultural prices. Whether the prices rise or fall, the volatility is itself a problem,

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<sup>8</sup>*The Globe and Mail*, 31 May 2008, "Feeding Frenzy," story by Sinclair Stewart & Paul Waldie, Toronto. <http://www.theglobeandmail.com>

especially for the nearly two billion people (close to one third of the world's population) who depend on commodities for their livelihoods (IISD, 2008). It is also a problem for the governments of poor countries, who need their scarce budgetary resources for more productive investments.

#### **4.4 Domestic policy space in trade policy**

Two common trade related responses to the crisis reflect the conflicting interests exhibited in the market: on the one hand many net-food importing countries have lowered tariffs, in a bid to lower prices on their domestic markets; on the other hand some exporting countries—many of them rice exporters—fearful that their exporters might reduce domestic supply too much, have imposed export bans or restrictions, again in a bid to keep domestic prices stable.

Argentina imposed export taxes on wheat, claiming the exports were contributing to double-digit percentage increases on food in domestic markets. The government pointed out half of Argentina's farmland grows soybeans, a crop used for feed and, more recently, in biodiesel production. Were that land used for other foods, the price pressure on domestic markets could be eased. The farmers had enough political and economic clout to force the government to back down some months later.

Reducing tariffs can be risky for a government. For many poorer countries, import tariffs are a significant share of government revenues. Reducing tariffs may jeopardize public finances. In any case, 20 years of trade and finance liberalization has left many net-food importing countries with all-time low applied tariffs on commodities such as corn, wheat, rice, and soybeans. This means that lower import tariffs will not make much difference to the price of food on domestic markets. Policy makers in developing countries have to assess this trade-off between lost revenues and the possibility to lower prices on local markets when reducing import tariffs.

High food prices have also cruelly thrown into relief the gap between theory and practice. Free trade is theory. Yet governments have an obligation to meet people's human right to food. Higher food prices have increased the number of people who cannot secure enough food to ensure a minimum level of health. At the same time, allowing the price of bread (or rice) to rise, especially in countries where a significant number of people were already spending 30 to 60 percent of their income on food is politically unpopular and possibly politically suicidal: food riots toppled the government in Haiti and threatened a few others. Where governments have any possibility to intervene, they will, regardless of what free trade theory might dictate.

In the case of net-food exporting countries limiting the foreign sales of agricultural commodities is often a measure aimed at increasing domestic supplies and therefore reducing food prices. The intervention can have short-term benefits. In the longer-run, however, it is likely to depress the next season's plantings and turn a short-term gain into a long-term loss. Given the low level of stocks to use ratios in most grains, governments should be aiming to stimulate production (in a sustainable manner), rather than to keep consumption prices low at any cost. Moreover, the sudden switch from a policy of stimulating production for export markets to an opposite policy in reaction to short-term events creates instability that is transmitted to local and global markets. Markets depend on intangibles, like confidence, to function correctly. The short-term and nationalist responses to the food price crisis evident in a number of the world's leading food exporters has undermined confidence in world food markets.

Whatever the short-term policy response, governments need to enunciate clear long-term objectives, so market participants are aware of the new direction and able to respond accordingly. This suggests a fundamental rethinking of the foundations of the trade liberalization process, something elaborated in some detail in the EcoFair Trade Dialogue's report, *Slow Trade—Sound Farming*. Food, which is vital for human existence, requires a different framework than textiles, automobiles, intellectual property, airplanes, or electronics. It is not just any other sector of the economy. A number of developing countries may want to gradually increase tariffs on agricultural imports, as their own productive capacity improves. This could nurture that growth and stimulate still more—not a policy that would be appropriate in every country, but certainly for many, particularly in sub-Saharan Africa.

#### **4.5 More and more sustainable agricultural production**

Quick and bold actions can have a short-term and important effect on the next season's production. Understanding this, both FAO and the World Bank launched specific initiatives to support governments to increase next season's production levels. In December 2007, FAO launched a program called the Initiative on Soaring Food Prices. The initiative aims to increase agricultural output through the distribution of seeds, fertilizer, animal feed and other farming tools and supplies to smallholder farmers. The FAO estimates that US\$ 65 will buy the average smallholder farmer the seeds, fertilizers and other inputs he or she needs for a year. The program is designed to provide immediate interventions that can boost supplies before the next harvest. More than 60 countries have asked for help, and programs are already underway in 54 countries.

The World Bank also moved into gear with the Global Food Crisis Response Program, which was approved by the Bank's Board of Directors in May 2008. The

program offers a rapid response financing facility together with technical advice, with \$1.2 billion of financial support for countries affected by the food crisis.

It is critical that policy makers in developing countries use a long-term perspective to guide the above mentioned programs actions and investments in their agricultural sectors. The short-term support instruments must be in concert with longer-term objectives for increasing food production in a sustainable way. A big push, from the World Bank among others, has been to liberalize markets in fertilizer, and to subsidize (though national and donor resources) access to fertilizer and pesticides. These initiatives push agriculture back to a model that damages the environment and undermines small producers' market power by making them dependent on purchased (and often imported) inputs. An alternative approach is to support local production systems based on the dynamics of the particular ecosystem in which the farmers are living. This approach is often called agro-ecology. A range of well-established alternatives, such as Nayakrishi Andolon in Bangladesh, the Deccan Development Society in India, or Masipag in the Philippines offer another way of not just practicing agriculture, but of thinking about it as a socially, culturally and biologically rooted knowledge system that is always learning and evolving.

For long-term investment in agriculture and higher productivity, higher prices must reach producers. Small and medium-scale farmers also need support to respond to higher prices (credit, seeds, tools); they also need infrastructure for storage and distribution. Otherwise, they remain net food consumers with low incomes at a time when prices are rising. In most countries, smallholders also need land reform to secure their access to adequate land. Equitable landholding is central to agriculture's contribution to poverty reduction. Local opportunities for agricultural services, including processing, storage, marketing, seed development and livestock breeding, veterinary and plant health, should all also be encouraged. There is little point in growing more millet if the road to town is impassable in the rainy season, or the storage is so inadequate that half the crop rots uneaten.

A further dimension of supporting increased productivity is to help consumers afford higher prices—the opposite of what many governments have done historically, which has been to suppress food prices. Governments can manage consumer prices and allow higher prices to reach producers by providing targeted consumption subsidies. Many development experts recommend this course of action in any case: decades of punishing farmers through maintaining low food prices for largely urban consumers was one of the main reasons for the gross lack of investment in agriculture and the poor state of rural economies in many of the world's poorest countries. Net-food consumers in rural areas would be better off paying more for their food if they were at the same time receiving higher prices for their production, whether as farmers or farm workers. Doubling wages allows households to double their expenditures on food while still doubling their potential to save.



## 4.6 A reformed multilateral trade system

Establishing transparent and predictable trade flows makes sense. It also makes sense for governments to establish mechanisms that allow supply shortfalls in one country to be met by imports from other regions. However, the design of an international trade system for agricultural commodities has to recognize the essential role of food for healthy life. Access to adequate and appropriate food is a human right. Agriculture is also widely recognized as a hugely important engine of development: the right investments in agriculture will go a long way to reducing hunger, improving livelihoods, and generating locally rooted economic growth that can be sustained over the long-term. (Mellor, 2001; FAO, 2006b). Such considerations should begin a move away from a trade system such as is now in place, which uses increased trade flows as a proxy for development.

The focus at the WTO on reducing domestic support in rich countries is relevant for the domestic agriculture of the United States and Europe. It has less bearing on the well-being of developing countries, particularly those that are not competing with the U.S. or EU for export markets. The system of support that now dominates agriculture policy in OECD countries is one of income support rather than price support. In many of the domestic support programmes now used by the United States and the E.U., prevailing high world prices for commodities automatically reduce the outlay from public funds. The programmes are only triggered when domestic prices fall below a set threshold. If the Doha Agenda is ever completed, the spending limits finally agreed on trade-distorting domestic support will have little bearing on the food price crisis (FAO, 2008).

## 4.7 Investment in infrastructure

For higher agricultural world prices to translate into higher returns to production agriculture, improvements need to be made in the way prices are transmitted to farmers. If there are bottlenecks in the marketing system, i.e. disorganized sellers, few buyers, poor roads, no storage facilities, poor or inaccessible market information, then a large share of the retail price and of any price increase will be appropriated in the marketing chain downstream from the farm gate. Fixed government procurement prices will not necessarily reflect prevailing market prices, unless the programs are voluntary (giving farmers the choice to sell elsewhere). To increase the profitability of production agriculture, governments need to invest in—and encourage local ownership of—infrastructure that will reduce marketing costs and allow farmers to capture a greater share of the retail price. The bottlenecks that form in agricultural markets between producers and consumers will need to be managed by careful public oversight to ensure that the firms who control the transformation and distribution of agricultural commodities do not keep all the benefits (Murphy, 2006). Investment in roads, communications, storage, and alternative distribution channels would increase

the efficiency of the marketing system, and reduce its cost. Farmer organizing can play a vital role in ensuring farmers capture a fair share of the value of their production.

Water is also a vital concern. Irrigation raises productivity and has a direct, measurable and significant role in reducing poverty. Poverty rates can be as much as 30 percent lower in areas where a higher proportion of land is irrigated. According to the FAO, less than four percent of arable land in sub-Saharan Africa is irrigated (by way of comparison, 40 percent of arable land in South Asia is irrigated). Clearly irrigation can also be abused, leading to excessive water use and water wastage, from poor design and/or poor maintenance. But well designed drip irrigation systems can be hugely important in securing a reliable harvest.

#### **4.8 Investment in production capacity**

While growing more food is an obvious and desirable policy, key questions remain: what to produce, how to produce it and who is to produce it? The Green Revolution turned a number of net-food importing countries into net exporters by expanding the role of fossil fuels in agriculture: mechanization, use of fossil-fuel based chemicals and fertilizers, and the breeding of seeds that responded well to applications of these inputs and technologies. The Green Revolution is also associated with increased landlessness, increased inequity and more recently has started to show slowing levels of productivity growth. The prospect of higher cost fossil fuel-based inputs may limit the ability to sustain productivity. The model also has performed poorly in worsening soil degradation, water quality, and increasing greenhouse emissions.

The EcoFair Trade Dialogue's vision for agriculture gives small and peasant farmers the central role and proposes to replace fossil fuel-based agriculture. There is mounting evidence that smallholders are more productive, per hectare, than larger farms (Altieri, 2008; Pretty, 2005). It shows reduced reliance on external inputs (such as inorganic fertilizer) is better for the soil, better for net farm income, and ultimately better for total productivity, if not the yields of specific plants. The inputs of industrial agriculture are a major cost for farmers, and that cost has risen significantly in the last two years, as energy prices have exploded. While oil prices have come down from the \$140 peak of earlier in 2008, they are still hovering at five times or more the \$20 a barrel in real dollars that was the price of oil for most of the 20th century. Fertilizer prices have also risen dramatically. Basing a productivity boom on inputs that must be imported simply adds to the cost of the production and the demands on already scarce foreign exchange. Looking for productivity gains that are based on increased self-reliance and raising smallholder net income is a much better strategy if governments want to both reduce poverty and improve food security.

State of the art knowledge about improved seeds and management practices that enhance soil productivity need to be made available to agricultural producers, especially small farmers. But science and technology should also learn from the knowledge embedded in the cultural practices of the local farmers. Extension activities could significantly and rapidly increase agricultural productivity using knowledge already available. Publically sponsored extension and research should be re-focused, to deal with the reality of expensive—in both economic and environmental terms—fossil fuels. They should not compete with private efforts but should complement them. Especially in the poorest countries, there are important limits on what the private sector is interested and able to do.

Higher agricultural commodity prices are increasing the profitability of agriculture. This is generating new interest in investment, an interest that looks set to continue. Governments then need to determine what type of investment they want to encourage and what kinds of investor behaviour should be regulated. In the absence of any guiding policies, new investment is likely to reinforce the current agro-industrial model, based on extending land cultivated under monocultures, and the intensive use of fossil fuel inputs in the production and distribution of agricultural commodities. The reduction of land set-asides in both the EU and the United States is a move exactly in the wrong direction from the perspective of long-term sustainability goals.

As a recent inter-governmental report, adopted by 58 countries to date, called the International Assessment of Agricultural Knowledge, Science and Technology for Development (IAASTD) says, “AKST (agricultural knowledge, science and technology) must address the needs of small-scale farms in diverse ecosystems and to create realistic opportunities for their development where the potential for improved area productivity is low and where climate change may have its most adverse consequences.” (p. 5, IAASTD. 2008)

#### **4.9 Investment in institutions**

The most important institutional change that governments must put in place is to design an agricultural development strategy that is a carefully balanced tripod, resting on three equally important legs: poverty reduction, food security, and environmental sustainability. Governments must also re-evaluate their role in agricultural development (World Bank, 2007). There may well be a role for agricultural exports in the overall approach. Trade is likely to play a significant role. But trade expansion cannot be the driving goal for a sector based in the use of natural resources without running a real risk of converting agricultural production into a mining activity. In other words, turning a renewable activity into resource extraction that ultimately depletes resources to zero.

To transform their agricultural sectors, developing country governments need to revamp their institutional support mechanisms. Important reforms include: stronger property rights for smallholders and land reform, more generally, to improve equity; protected access for small farmers and agricultural communities to land, water, and credit; and a policy framework that would direct and support the transformation of agriculture to a fairer and more sustainable model. Without institutional reform, the pressure of higher prices will encourage large landowners and commercial investors to continue their encroachment onto land that traditionally, and even legally, has been held by small farmers. This has and will continue to generate serious social conflict (witness the armed struggles in parts of Latin America and the Philippines over access to land). A new institutional framework should tackle head on the power imbalances that currently dominate agricultural sectors in most parts of the world.

The trade and finance thinking often referred to as the Washington Consensus, which dominated international aid and lending during the 1990s, pressured governments to pay their foreign debt as a first priority. Governments were pushed to reduce deficits and to privatize their economies. Under these policies, many countries eliminated or significantly reduced public support for agricultural education, research, and extension. Private efforts have filled some of these spaces, for example the investment by European and American supermarkets in horticultural production in developing countries. But such investments are oriented exclusively on the most dynamic and already profitable areas of the sector. They are attracted to the areas that already have good infrastructure. Small farmers, and food crops more generally, have been largely underserved by the private sector. Moreover, the investment that has come has encouraged industrial agriculture practices and production for export, often worsening inequality within communities, reducing food production for local consumption, and significantly increasing stresses on natural resources and local ecosystems.

#### **4.10 Regulated market power**

Over the past few months, corporate financial reports have started to come in, giving us a picture of how the big agri-food firms have fared in this year of record high prices for agricultural commodities and for the energy that makes food processing and transportation possible.

Here is a sample:

- Cargill: In the fiscal year 2007-2008, Cargill made profits of \$3.64 billion, a 55 percent increase from the \$2.34 billion a year ago. Revenues for the full year

rose 36 percent to \$120.4 billion. Cash flow from operations increased 77 percent to \$7 billion.<sup>9</sup>

- Bunge: Net income rose 471 percent in the first half of 2008, compared to the same period in 2007.<sup>10</sup>
- Nestlé: Net profits were of \$4.8 billion (CHF 5.2 billion in the first half of 2008), an increase of 6.1 percent over the previous year.<sup>11</sup>
- Parmalat: Profits in U.S. dollars for first half of 2008 were up 5.1 percent compared to the first half 2007 (profits were up 9.1 percent in deflated Euros)<sup>12</sup>
- Monsanto: Net income was up 83 percent in the first 9 months of fiscal 2008, compared to the same period in 2007.<sup>13</sup>

The financial reports of the different companies make it clear that although most are talking about the effects of higher input prices (and many have been lobbying governments for policy changes—such as an end to biofuels targets—so as to reduce their operating costs), the companies have been able to pass on the costs to their consumers. If the businesses sell seed or fertilizer, as Bunge does, then the profits have been extraordinary. The less diversified firms have done less well, particularly those that concentrate on meat production, relying on concentrated animal feedlot operations that depend on cheap feed. Tyson Foods, for example, managed to increase profits on pork and beef, but lost a lot of money in their poultry division because of the increase in feed costs. But for many of the largest global agribusiness players, the food price crisis was a windfall.

Fortunately, the crisis has also generated greater public scrutiny of the food sector. The EcoFair Trade Dialogue's paper on market power made a number of proposals that remain directly relevant to this crisis. (Murphy, 2006). Public authorities need to subject mergers, acquisitions and inter-firm contracts in agriculture to tighter review. Governments need more information about market size and market share. There is a dearth of information about the size and scope of large agribusinesses, the market share they control, and the terms of their contracts. To implement anti-trust law, governments must shut the revolving door between corporations and government agencies. This could be done by requiring full disclosure of money received from agribusiness or corporate lobbies by potential staff members, or by performing more rigorous checks for conflicts of interest before appointments are made. Stronger laws may be needed to ensure longer mandatory gaps between holding public office and working for corporate interests.

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<sup>9</sup> [http://www.cargill.com/news/news\\_releases/080819\\_earnings.htm](http://www.cargill.com/news/news_releases/080819_earnings.htm)

<sup>10</sup> <http://www.bunge.com/public/pdfs/FINAL.MERGED.2Q08EPR.pdf>

<sup>11</sup> <http://www.nestle.com/MediaCenter/PressReleases/AllPressReleases/HY2008-PublicationResults.htm?Tab=2008>

<sup>12</sup> [http://www.parmalat.net/attach/content/2177/2008\\_08\\_28\\_ENG.pdf](http://www.parmalat.net/attach/content/2177/2008_08_28_ENG.pdf)

<sup>13</sup> <http://www.unilever.com/ourcompany/investorcentre/results/quarterlyresults/default.asp>

To establish more transparency on which firms are dominant in any given market, a multilateral institution (e.g. FAO or UNCTAD) could be charged to maintain a databank with comprehensive information on mergers, acquisitions and joint ventures in agri-food markets. Unless there is a concerted attempt to control the extent of vertical and horizontal concentration in global commodity markets, open markets cannot deliver the benefits their proponents promise. State trading enterprises in developing countries should be re-visited. Where there is adequate accountability and local oversight (especially by organizations of small farmers), the state can play an invaluable role in facilitating markets in regions where the private sector has not the capital, capacity and/or interest to act. If they are properly managed, state-trading enterprises can help to counteract the market power of transnational agribusiness. They can also provide services in countries where the private sector is too little developed to support strong markets on their own.

#### **4.11 Re-establish food grain reserves**

Another action that should be put in place immediately but that will yield long-term benefits is the creation of an international food grain reserve. One of the most profound agricultural policy reforms introduced in the last ten to fifteen years was the elimination of government-held grain inventories in the U.S. and EU. WTO rules encouraged this change by penalizing such reserves for their trade-distorting effects.

The withdrawal of the state from managing food inventories is one of the most important factors in causing the current crisis. By eliminating public reserves, the reforms first allowed world prices to fall and then, as supplies ran low, led to sharp price spikes. The elimination of grain reserves and the run-down of global stocks have increased market volatility in the face of cyclical supply shortfalls. Redefining subsidies to distinguish the cost of maintaining a publicly funded and managed reserve is a necessary policy change. It will require changes to global trade rules that are not (yet) on the WTO's agenda. The issue of a global food reserve, however, did get a mention in the 2008 G8 Communiqué: The leaders said (in paragraph 6), "We will explore options on a coordinated approach on stock management, including the pros and cons of building a 'virtual' internationally coordinated reserve system for humanitarian purposes." The proposal is limited, the idea of a study when there is already such broad agreement that reserves are a useful and important tool is disappointing, but twelve short years after the 1996 farm legislation in the U.S. eliminated the on-farm reserve program, the idea has resurfaced. It makes too much sense to stay on the list of unachievable changes.

Grains reserves can overcome the counter-cyclical nature of food aid donations: surplus production and low prices increase the volume of food aid available, but the greatest need arises in the opposite situation, when supplies are short and world

prices are high. Just when poor net-food importing countries most need to procure food on concessional terms they find themselves having to buy more food in higher priced commercial markets. Grain reserves offer a safety valve to keep prices from rising too high, too fast.

Although filling a reserve during a time of high prices would be costly, it is vital that governments put in place the necessary mechanisms as soon as possible. As prices start to fall (they are already some way below the peaks set earlier in 2008), governments and even local communities could start to fill the reserve for use in situations of extreme need. In the medium and long run, once new investments are increasing agricultural productivity, the reserve could be used as mechanism to keep agricultural prices at reasonable levels. Their role in keeping prices from falling too low will be as important in the long run as their role in avoiding painful price increases.

#### **4.12 Agriculture and energy policy**

Agriculture has traditionally played a dual role in relation to energy: it is both a producer and a user. However, in the past fifty years industrial agricultural technologies, including those introduced as part of the Green Revolution, have depended on fossil fuel derived inputs. As journalist and author, Michael Pollan, has put it: a solar-powered sector (traditional agriculture) was turned into an oil-based sector with the use of mechanized farm equipment, inorganic fertilizers and pesticides, and the use of feed such as corn meal or soy cake to fatten livestock, as opposed to relying on traditional forage and grazing (Pollan, 2002). As the era of cheap fossil energy seems to be over, the need to transform agriculture is now more urgent.

On the role of agriculture as a producer of energy, there is still much to do. While for different reasons the largest emphasis has been put in the production of transportation fuels from biomass, the production of electricity and heat are also significant areas to consider when looking at agriculture as a source of energy. A number of developing countries have well-established bio-powered energy generation plants, for instance as a bi-product of a sugar industry, which creates energy-rich waste material (UNCTAD, 2006).

There is a clear link between access to energy services and poverty alleviation and development. The first set of critical energy needs are those that satisfy basic human needs: fuel for cooking and heating, energy for pumping water, and electricity for health and education services. The second set of critical energy needs are those that provide energy for income generating activities that help break the cycle of poverty.

The poor heavily rely on biomass as a source of energy. In this context, traditional bioenergy is mainly derived from the combustion of wood and agricultural residues. The negative impacts of burning such substances are severe. Especially when they are burned in confined spaces, they produce significant indoor pollution to which women and children are primarily exposed (Kartha and Leach, 2001). Deforestation is also a devastating environmental problem, closely linked to desertification. It increases communities' vulnerability to weather-related disasters such as hurricanes and cyclones by destroying the natural resilience of eco-systems. It also exacerbates soil loss, and contributes to global warming (Kaya and Yokobori, 1997).

The benefits of moving from the use of traditional biofuels—direct burning of wood for cooking and heat—to modern biofuels, including electricity from bagasse, bio-diesel from used cooking oil, and methane cooking gas from anaerobic digesters, cannot be overlooked. It has the potential to directly impact the quality of life of two billion people by improving indoor air quality, removing a significant health hazard, providing additional energy services for development activities, and allowing for sustainable management of natural resources. In many instances, the energy contribution of biomass feedstock is highest when producing heat or electricity through direct burning. This is reinforced by the environmental gains when the feedstock replaced is coal.

In summary the relationship between energy and agriculture should integrate production and consumption roles; and should also consider the possibilities of using biomass feedstock for the production of transportation fuels, power, and heat. Moving away from the exclusive focus on transportation fuels would enhance the contribution of bioenergy to poverty reduction and enhanced environmental performance.

A long term strategy for bioenergy production should consider:

- The expansion of bioenergy production should be consistent with the evolution of the productive capacity of the agricultural sector. The potential size of the global energy demand could easily overwhelm –economically, environmentally, and socially – the ability of agricultural resources to produce food, feed, fibre, and fuel.
- Local and domestic use should be the priority. The environmental cost of bioenergy occurs mostly in production (poor agricultural practices and land conversion), while the benefits are gathered in the use of the bioenergy. By emphasizing local use, local benefits are maximized. That said, however, bioenergy exports need not be excluded; they can provide much needed economies of scale to the conversion processes, especially on a regional basis.
- Mandates should be used with caution. They should play the role of securing a healthy bottom for the industry, rather than pushing demand beyond



reasonable levels and the state of the productive capacity of the agricultural sector.

- Any incentives that policy makers decide to implement should put a premium in environmental performance. Soil productivity, water, biodiversity, tropical forests all of these are resources in a very short supply and tight balance. Consequently, energy production should be try to ensure their best use.
- Contribution to rural development should also be high in the list of goals that drive any bioenergy policy. There is where most of the poor population resides, and in many cases there where the biggest difference can be made in terms of increasing the availability of energy services.
- Careful consideration to appropriate feedstock is essential. The expansion of soy production throughout Latin America has been devastating on many levels, for the environment, for small farmers, for local development. But other feedstocks, both crops and cellulosic materials, offer a better basis to make a positive contribution. Sweet sorghum, for example, is already grown as a feed crop in many developing countries. We now have the technology to generate ethanol from the stalks (which contain sugar), a product that formerly went to waste.<sup>14</sup>

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<sup>14</sup> William D Dar (May 2007), "Sweet Sorghum Bioethanol Technology," presentation, ICRISAT. India. <http://www.icrisat.org/Biopower/philippines-event/DarSweetSorghumMay07.pdf>

## 5 Conclusion

Industry analysts assume that global agriculture can continue on its current path. More people will eat more meat and dairy products, more processed food and more food cooked out of the home. Production will become more industrialized and globalized. Climate change, threats to biodiversity, growing freshwater scarcity and other environmental constraints as real challenges, but challenges that can be met by continuing along existing policy paths (Rabobank 2008, World Bank 2007).

Many others, however, including the experts who met under the auspices of the EcoFair Trade Dialogue, disagree. Whether they actively want a different future, or are simply persuaded that more of what we have is not possible, those who are sceptical that “more of the same” can work believe that fundamental change is needed if agriculture is to remain productive and if the world is to grow enough food to secure a healthy diet for all.

It is time for governments to make the adjustment from policies that support cheap food to policies that protect food security, rooted in the eradication of poverty and proper care for our finite planet. These are inter-related objectives; we cannot have one without the others. Higher agricultural prices create an opportunity to see what is wrong with agriculture, and provide an opportunity for much needed change.

The opportunity lies in using higher agricultural prices to start incorporating environmental costs into farm businesses, using taxes, caps, and other instruments to encourage new investments that will improve environmental performance. Potentially higher running costs or the higher establishment costs of alternative practices could be covered with the additional revenue generated by higher prices.

State of the art knowledge related to improved seeds and management practices should be made available to agricultural producers. Efforts to capture and build on local knowledge are essential. Extension activities could significantly and rapidly increase agricultural productivity using knowledge already available. Emerging successes in low-input high-yielding ecologically modelled agricultural systems should be shared. Public sponsored extension and research should be re-focused. They should not compete with private efforts but should instead complement them. Especially in the poorest countries, there are important limits on what the private sector is interested and able to do.

A vital element of change, emphasised in places as varied as the World Bank’s report on agriculture (World Bank 2007) and the website of La Via Campesina, an

international movement of peasant associations, is the importance of establishing a political and economic voice for small and peasant farmers. This voice needs spaces, including support to set up voluntary associations and cooperatives and transparent policy formulation processes (for global trade negotiating positions as much as for decisions on how and where to set up local irrigation infrastructure). Governments must also pay much greater attention to the needs of women farmers, who are overwhelmingly responsible for food production worldwide (upwards of 70 percent), yet own nearly none of the land, receive nearly none of the extension services, and who are systematically discriminated against by most official agricultural policies.

The EcoFair Trade Dialogue outlined seven principles on which a vision of agricultural trade should be based. They are multifunctionality (respect for agriculture's contribution beyond the material world, to political, social and cultural life), human rights, environmental integrity, democratic sovereignty, extra-territorial responsibility, economic subsidiarity, and trade justice. The principles make good sense. A low price, high dependence on fossil-fuel agriculture, deregulated trade and investment environment did nothing to advance that vision. Governments can make something of this wake-up call if they choose to.

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