



High Level Panel of Experts on Food Security and Nutrition

Extract from the report¹ “Price volatility and food security”

Summary and Recommendations for Policymakers

1. Food price volatility over the last four years has hurt millions of people, undermining nutritional status and food security. The level of price volatility in commodity markets has also undermined the prospects of developing countries for economic growth and poverty reduction. After staying at historic lows for decades, food prices have become significantly higher and more volatile since 2007. A first price spike occurred across almost all commodities in 2007/2008. After a drop in 2009/10, prices are now climbing again and volatility remains high. Periods of high or low prices are not new. In fact, price variability is at the core of the very existence of markets. Since 2007, however, the degree of price volatility and the number of countries affected have been very high. This is why food price volatility in the context of higher food prices has generated considerable anxiety and caused real problems in many countries.
2. Global and national responses to this unprecedented food price trend have been remarkable. There have been numerous governmental and intergovernmental initiatives to protect vulnerable populations from the negative consequences of higher food prices. In October 2010, the recently reformed Committee on Food Security (CFS) asked the High Level Panel of Experts on Food Security and Nutrition (HLPE) to prepare a report on price volatility that covers *“all of its causes and consequences, including market distorting practices and links to financial markets, and appropriate and coherent policies, actions, tools and institutions to manage the risks linked to excessive price volatility in agriculture. This should include prevention and mitigation for vulnerable producers and consumers, particularly the poor, women, and children, that are appropriate to different levels (local, national, regional and international) and are based on a review of existing studies. The study should consider how vulnerable nations and populations can ensure access to food when volatility causes market disruptions”*.

Principal observations

1. Price volatility has a strong impact on food security because it affects household incomes and purchasing power. Simply put, it can transform vulnerable people into poor and hungry people. Price volatility also interacts with price levels to affect welfare and food security. The higher the price, the stronger the welfare consequences of volatility for consumers, while the opposite is true for producers. This interaction implies that focusing only on price spikes will not address overall welfare consequences. Thus, this report addresses both dimensions of price behaviour.

¹ HLPE, 2011. Price volatility and food security. A report by the High Level Panel of Experts on Food Security and Nutrition of the Committee on World Food Security, Rome 2011. *Full report available at www.fao.org/cfs/cfs-hlpe*

2. To better understand the underlying causes of recent food price behaviour, three interlinked explanations – relating to short, medium, and long-term factors – are discussed. The first explanation defines food price increases as a problem of ‘agricultural price volatility’ (implicitly suggesting that high prices will not last) and as a quasi-natural and constant problem in agricultural markets. To understand if this explanation is consistent with recent trends, one needs to assess if the price volatility seen since 2007 has been out of the ordinary. There appears to be a consensus that price volatility in the last five years has been higher than in the previous two decades, but lower than it was in the 1970s. Because of the liberalization of markets over the past 20 years, however, domestic prices in many countries are more connected to international prices than they were in the 1970s. For some developing countries, liberalization has also meant a significant increase in the level of imports in the total food supply, making international food price volatility even more a concern than it would have been in the 1970s.
 - a. Based on the view that volatility is the normal state of agricultural markets, three possible causes of international food price volatility are discussed in the report: demand elasticity, trade policies and speculation. Of these three, the role of speculation in the futures market is clearly the most controversial. Nobody contests the dramatic increase in the volume of non-commercial transactions on the futures market. However, conclusions diverge widely as to whether increased non-commercial transactions led to the formation of price bubbles. By contrast, the effects of both the demand from the biofuel industry and the use of restrictive trade measures (mostly export bans) on prices are far less controversial. But both issues are very sensitive politically. Biofuel support policies in the United States and the European Union have created a demand shock that is widely considered to be one of the major causes of the international food price rise of 2007/08. Similarly, the restrictive trade measures adopted by many countries to protect consumers during that time are widely seen as having accelerated price increases. Both biofuel support policies and export restraints have led many governments to question whether they can rely on international markets as part of their food security strategies.
 - b. Increasing volatility may also be related to a decrease in price elasticity of demand as a result of increased income. The richer a consumer is, the less likely it is that s/he would reduce food consumption because of a price increase. This is because the share of staple food in the total expenditure of relatively rich people is smaller relative to their income. As a result, an increase in prices does not necessarily lead to a decrease in demand. Given the overall growth in world incomes, food demand is now less price sensitive, which, as price theory shows, can lead to more volatility. This observation raises an international equity issue. In the international markets, consumers with very different income levels compete for access to food. Consumers in poor countries are much more sensitive to price changes than consumers in rich countries. This is true of richer and poorer consumers within countries as well. It also means that, when supplies are short, the poorest consumers must absorb the largest part of the quantitative adjustment necessary to restore equilibrium to the market. While a spike in food prices forces the poorest consumers to reduce their consumption, richer consumers can maintain more or less the same level of consumption, increasing inequity in the overall distribution of food. Biofuel support policies tend to reinforce this uneven division of the quantitative adjustment because they make the biofuel industry less sensitive to higher commodity input prices.
3. The second explanation of the current behaviour of international food prices points to the fact that there have been periodic food crises (1950s, 1970s, and present) that can be explained by the dynamics of agricultural investment. High prices trigger a rush of investment and technological development that succeeds in raising production and lowering prices. In contrast, persistence of low prices leads to a reduction of public interest and waning investment. This situation persists until supply is so low that prices begin to spike, which again triggers a new round of investment. From the end of the 1970s to the mid-1990s, the growth of world Agricultural Capital Stocks (ACS) slowed, ultimately stabilizing at a low growth level. Several developed regions even experienced a process of decapitalization in agriculture. In developing regions, the growth of ACS

stayed positive, but slowed and is still slowing in Latin America, sub-Saharan Africa, and south Asian countries. The slowing of agricultural investment growth occurred during a period of restricted public support for agriculture in developing countries. Calculated as a percentage of agricultural Gross Domestic Product (GDP), public spending decreased from 11 percent in 1980 to 8 percent in 1990 before returning to 10 percent in 2002. This is much lower than in developed countries, where the share of public support to agriculture is often more than 20 percent of agricultural GDP. This general slowing of government expenditure adversely affected agricultural research. Nor did financial aid to developing countries from OECD countries and multilateral agencies counter this trend. Indeed, ODA certainly contributed to the trend away from public investment in agriculture in the poorest countries.

4. The third explanation sees the current price increases as an early signal of a long-lasting scarcity in agricultural markets. According to this explanation, the world could be facing the end of a long period of structural overproduction in international agricultural markets, made possible by the extensive use of cheap natural resources (e.g. oil, water, biodiversity, phosphate, land) backed by farm subsidies in OECD countries. In other words, we might be at the end of a period of historically unprecedented growth in agricultural production that relied on a strategy akin to mining. At the same time, new demands for biomass are emerging. Biofuels are just the most visible part of increasing demand for biomass to provide not only food but also building materials, heat, and transportation. This explanation of rising food prices in terms of scarcity is not new; it was much discussed in the 1970s. But our understanding of the environment has deepened. Today, we see more clearly the costs of industrial agriculture, including the associated pollution, depletion of freshwater aquifers and loss of biological diversity. We also see the costs of long-term under-investment in agriculture and agricultural research. We are asking new questions about what to expect from climate change and how the introduction of potentially unlimited demand on agricultural resources from the energy sector will play out. We can be optimistic that human ingenuity will find solutions, but only if we are prepared to learn from our past mistakes. The long-term challenges confronting agriculture today on both the supply and the demand side are very real.
5. Although rising international food prices represent a serious threat to vulnerable people in developing countries, it is *domestic* food price inflation and volatility that determine the poverty and food security impacts of international food crises. In most developing countries, the 2007/08 international food price rise was transmitted to domestic prices, although not evenly and in some cases with significant delays. Moreover, the subsequent drop in international prices was only partially transmitted – average consumer prices in developing countries remained up to 50 percent higher than they were before 2007/08. The international price rise that started in 2010 and continues today was transmitted to domestic markets even more quickly than the 2007/08 price spike. However, the uneven transmission of international price spikes to domestic prices across countries, commodities, and time periods means that each case will require careful characterization of the transmission in order to appropriately formulate price stabilization and food security policies.
6. In many poor countries, price volatility on domestic markets for locally grown products is the result of both the transmission of international price volatility and of purely domestic (sometimes called endogenous) sources. Even when international prices are stable (as they were between 2000 and 2007) many poor countries exhibited very high price volatility across space and time. Again, there is a large heterogeneity with respect to the mix of imported and domestic sources of volatility. Each country should therefore accurately identify the sources of its own price volatility. Appropriate policies to stabilize, manage, and cope with domestic price volatility can be quite different depending on the sources of price volatility.
7. The Food and Agriculture Organization (FAO) has estimated that the 2007/08 price spike increased the number of undernourished people from about 850 million in 2007 to about 1023 million in 2009. These estimates are contested on several grounds however, including the failure to account for the specific conditions of countries with protected domestic markets, such as India and China, where there was little transmission of higher global prices and have had strong income growth. Furthermore, FAO estimates do not account for the gains from the higher prices commodities (non-cereal) on which millions of people in developing countries rely for their

livelihood. To date, there is no institutional mechanism that systematically collects and analyzes data with a view to informing a global and dynamic vision of the actual impact of food price crises on vulnerable populations.

8. There is considerable heterogeneity across countries in terms of how increased price volatility could affect a given country. Key sources of heterogeneity include: agro-ecological conditions and connectivity (e.g. landlocked countries may be affected differently from those with coastal access), preferences of staple food (e.g. diversified versus single staple focus), institutional capacity to implement policies, and macroeconomic health. There is consequently no 'one policy response fits all' approach. This finding has the following implications:
 - a. The feasibility and effectiveness of some of the most commonly recommended policy prescriptions for poor countries – such as scaling up social safety nets and introducing weather insurance programmes for risk management – will vary from country to country. Therefore, information regarding cross-country heterogeneities needs to be assessed in order to make these policies work.
 - b. It will be necessary to work with a typology of countries that helps to identify country-specific contexts with respect to impacts and policy responses. One category of particular focus in the typology should be poor, highly food-insecure countries. For each country within this category, it will be important to develop a typology of households to characterize differential channels of the impact of price volatility on welfare. This will involve assessing the net seller–net buyer position of the household in term of staple food markets.
 - c. Every country will need to design its own comprehensive food security strategy. This will involve objective assessment of the existing food security policies and programmes, identification of gaps, and working towards building the internal institutional capacity to address them.

Recommendations

1. **Trade rules:** Building a rules-based multilateral trading system able to guarantee food access for every country is now a major challenge for the international community. Since the Uruguay Round, negotiations regarding agriculture have been conceived and conducted in the context of a structural overproduction. This means that the focus has been on how to limit trade conflicts amongst exporting countries and how to open up protected economies to more imports. The objective of the rules was to guarantee fairness of competition between suppliers and to protect market access for exporters. Access to world markets was *not* negotiated for importers and export restrictions were hardly disciplined. The increase in international food prices and the breakdown of the Doha negotiations opens the possibility of a new project in which confidence in international markets would not be based on unrestricted free trade. The food price crisis showed that sovereign states are not prepared to serve international markets at the expense of domestic priorities. This political 'reality check' suggests that trade policies, and the multilateral rules that frame them, need to be reconsidered. Multilateral rules are more essential than ever.
 - a. ***Governments should continue to focus on building a transparent, accountable and rules-based multilateral trading system. However, these rules need to give a larger place to public policy concerns regarding food security, better account for the heterogeneity of World Trade Organization (WTO) member states and taking into account special needs of poor and vulnerable countries or social groups.***
 - b. ***Measures to consider include disciplines on export restrictions, safeguarding measures to protect against import surges, measures to better ensure that commercial actors respect contractual obligations, and exemptions for genuine responses to food emergencies (food aid practices continue to require further reforms as well).***
 - c. ***Distinct rules for low-income food-deficit countries (LIFDCs) should be explored.***

2. **Stocks:** The relationship between stock levels and price volatility is well established: low stocks are strongly associated with price spikes and volatility. It is likely that some international coordination of stocks would also make an important contribution to restoring confidence in international markets.. Empirically, a minimum level of world stocks seems to be a sufficient condition to avoid price spikes. Experience also shows that, in a crisis, access to financing mechanisms may not secure stocks during supply shortages. Past experience shows that managing world stocks for price stability is difficult as this requires inter-government cooperation and information. This needs international agreement regarding complex issues - among other issues - when to stock, governance of the systems, location, coordination and ensuring that the stocks reach those who need it most.
 - a. ***The current context is different from the past, therefore, it is recommended that the CFS continues to explore forms of international cooperation regarding world food stocks and food security including the establishment of guidelines for the efficient management of such stocks.***
 - b. ***Better and transparent information systems are essential for policy decisions and management of stocks. The [AMIS] system proposed by the Inter-agency Report for the G20 is welcomed***

3. **Speculation on the futures market:** Even though the evidence on the impacts of increased speculative activities on prices is inconclusive, the risks of the formation of price bubbles and the exclusion of commercial actors, because of higher costs of participation in a deregulated commodity futures market, are well documented. This implies that tighter regulation is warranted, at least as a precautionary measure. Increasing transparency, by requiring exchange trading and clearing of most agricultural commodity contracts, and setting lower limits for non-commercial actors could be the first set of measures taken by the countries that house major commodity exchanges.
 - a. ***Action regarding transparency in futures markets and tighter regulation of speculation is necessary.***

4. **Demand for food products:** It appears increasingly clear that the unlimited demand of rich consumers for food products generates negative pecuniary externalities for the poorest consumers. Demand tends to be presented as an exogenous variable (like the weather) that cannot be negotiated. This is not true. Indeed, we know that the consumption levels of the world's richest countries cannot be extended to everyone in a world that looks set to grow to include nine billion people. Demand is significantly affected by public policy choices and can be reduced. . The significant expansion in the production of animal products also raises questions as a number of associated costs are not internalized in prices, and because industrial meat production places significant demands on cereal stocks and freshwater reserves. Moreover, the livestock industry makes a significant contribution to greenhouse gas emissions. By generating a new demand for food commodities that can outbid poor countries and food-insecure populations, industrial biofuels highlight the tension between a potentially unlimited demand (in this case for energy) and the constraints of a world with finite resources. Several proposals linked to changes in existing mandates could reduce the likelihood of biofuel production contributing to price spikes..
 - a. ***Given the major roles played by biofuels in diverting food to energy use, the CFS should demand of governments the abolition of targets on biofuels and the removal of subsidies and tariffs on biofuel production and processing.***
 - b. ***Governments should explore incentives for the reduction of waste in the food system including addressing post harvest losses.***

5. **Investing in agriculture:** Investing in agriculture with a long-term view is necessary to prevent a repetition of the food crisis. It is also necessary to guarantee a transition from food and agricultural systems that deplete natural resources to sustainable food and agricultural systems that reduce the use of fossil energy and pollution. New public and private investments are necessary in both research and development. Preservation of agro-biodiversity and the creation

of new varieties should be promoted by international and national agronomic research centres, as should research aimed at maximizing biomass on diversified agricultural production systems. Agro-ecology offers an important and complementary base of experience and perspectives for such a transition that is particularly suited for producers with limited access to chemical inputs. Collaboration between international agronomic research centres and agro-ecology supporting organizations should be encouraged. Public support is also necessary to help farmers to engage in more ecologically sustainable systems. With these investments, national governments should reinforce local capacity and resilience of food production systems. Investment at all levels should respect the plurality of knowledge systems, including women's knowledge and the knowledge of indigenous peoples.

- a. Stable and sustainable long-term investment in agriculture is a necessary condition for addressing the challenges in food security.**
- b. A significant global expansion in funding for agricultural research and development is recommended. Strengthening the current reform process of the CGIAR and support for national research systems will contribute to long-term solutions to food insecurity, especially in the context of land degradation, water scarcity and climate change.**

6. **Incorporating externalities in the cost of food production:** High food prices are an opportunity to promote internalisation of externalities to create incentives for improving the efficiencies of production systems. In addition to new public investments, institutional devices aimed at increasing the cost of using non-renewable natural resources are essential to effect a transition to more sustainable production models. Such incentives should be selected on the basis of a comparative evaluation of their implementation, monitoring and information costs. Better cost accounting for industrial agriculture will go a long way in ensuring that agribusiness pays its share of the cost for agriculture, while allowing the economic and ecological efficiencies of small-scale producers to ensure a fairer return.

- a. It is recommended that this issue should be considered in food security debates. Further research is needed to identify and test such incentives.**

7. **Promoting food security strategy programmes:** Food security is a complex and multidimensional issue and a national responsibility. Therefore countries need a national comprehensive food security strategy in line with the specificities and special characteristics of each country. Such strategies should include policies to reduce, manage and cope with price volatility. These strategies should be developed and managed in an inclusive manner with civil society, Farmers' Organisations and in partnership with the private sector. The elaboration of a food security strategy should be based on robust data collection and analysis. Regular policy review is necessary. Policies should be coherent. Governments need information systems to be able to assess hunger and malnutrition, provide early warnings and target appropriate assistance effectively. Elaboration of food security strategies is consistent with the Rome Principles

Two categories of policies and programmes can be contemplated at the national level to solve the volatility problem in relation to food security. The first aims at stabilizing prices. The second aims at reducing the impact of price volatility on incomes and purchasing power. This can be divided into two further categories: steps taken in anticipation of price shocks (*ex ante*) to reduce their impact, and steps taken after the shocks occur (*ex post*) to help people and businesses cope with price volatility. The policy and programme instruments can be divided into three groups corresponding to the roles of the market, state, and civil society in development: market-based instruments, direct state interventions in markets, and interventions through civil society organizations. Combining the three policy objectives (stabilization, management, and coping) with the three categories of instruments (market, state, and civil society) gives nine classes of instruments. The proposed typology constitutes a convenient way of organizing the multitude of policy instruments used by developing countries and advocated by different analysts during the recent world food price swings.

- a. *The CFS should encourage and support the establishment or review of existing national food security strategies in each member country. This should include human and institutional capacity to develop, implement and monitor food security.*
 - b. *There should be an inter-sectoral national coordination structure, including civil society representatives and farmers' organisations representatives, to coordinate implementation of the national strategies.*
 - c. *The vast array of instruments (such as those identified in this paper including social protection) should be combined to achieve the maximum impact and to fit the food security strategy of each particular country.*
 - d. *It is recommended that a typology of countries and vulnerable groups may help policy makers in selecting the most appropriate policy instruments. This should include consideration for the various stages of the human life-cycle.*
8. **The role of the CFS:** The recent food crisis shows that there is a need and an opportunity to reduce the occurrence and severity of food crises by better management of information, learning, and coordination of policy interventions at a world level. The CFS could play a major role in these three domains.
- a. *The CFS should ensure that the information on food security is appropriately managed as well as the coordination of policy interventions at the global level.*
 - b. *The CFS could play a role in the establishment of the Agriculture Market Information System (AMIS) and the Rapid Response Forum (RRF) proposed by the G20. It is recommended that the AMIS market information be extended to include food crops other than the usual global cereals, including livestock and fish. AMIS should also include reliable, disaggregated and accurate information on hunger to support the achievement of food security. The AMIS could play a role in early warning.*
 - c. *The CFS should coordinate short and long term policy measures taken in relation to price spikes (considering trade barriers, food aid, input subsidies, stocks, etc...).*
 - d. *The CFS should also serve as a body where donors and governments make long term commitments to public investments in food security and a body where those commitments are monitored and enforced.*
 - e. *The CFS should contribute to better inter-governmental coordination, including emergency policy measures taken in relation to price volatility.*
 - f. *The CFS, as the highest governance body on world food security should stimulate and facilitate debate and learning on food security issues, including as a forum for more open debate on how agricultural trade rules could support food security.*
 - g. *The CFS should establish codes of conduct on food security issues for better international cooperation.*
 - h. *More studies are required on global governance on agriculture and food security, to inform the Global Strategic Framework on Food Security and Nutrition.*