



UNITED NATIONS
DEPARTMENT OF ECONOMIC AND SOCIAL AFFAIRS



Commission on Sustainable Development
Seventeenth Session
4-15 May 2009
New York

**Smallholder Agriculture and Food Security
in the 21st Century**

***Food price volatility – how to help smallholder farmers
manage risk and uncertainty***

**Discussion Paper and Proceedings Report
of the Governing Council Round Table
held in conjunction with the Thirty-second Session of
IFAD's Governing Council, February 2009**

**Submitted by
International Fund for Agricultural Development**

Background Paper No. 4

The number of poor and hungry people has been increasing, and the world now faces a major economic downturn. Climate change, growing competition for land, and the volatility of prices for food and inputs are having a negative impact on rural women and men in developing countries, and particularly on the poorer and most vulnerable households. At the same time, all over the world, family farmers, local communities, private enterprises, governments and development partners are bringing new responses to these challenges and new reasons to believe in a future without hunger and poverty.

IFAD, in preparation for the publication of its Rural Poverty Report later in 2009, held three round-table discussions on the challenges and opportunities for smallholder agriculture during the thirty-second session of its Governing Council in February 2009.

Round Table 1 – *Food price volatility – how to help smallholder farmers manage risk and uncertainty.*

Round Table 2 – *The growing demand for land – risks and opportunities for smallholder farmers.*

Round Table 3 – *Research and innovation for smallholder farmers in the context of climate change.*

The discussions focused on identifying policies and strategies that can be applied at the national level to ensure that the needs of smallholder agriculture are met, and on the research and technology needed to advance smallholder agriculture.

The section that follows describes the proceedings of Round Table 1 “*Food price volatility – how to help smallholder farmers manage risk and uncertainty*” and includes a discussion paper on the topic.

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I. Food price volatility – how to help smallholder farmers manage risk and uncertainty

Questions to guide the round-table discussion:

- ✓ How have volatile international food prices been transmitted to domestic markets and to smallholder farmers over the past two years?
- ✓ How is price volatility affecting the investment decisions of rural producers, and what is the impact on household food security?
- ✓ What successful measures have been taken by governments, farmers' organizations and the private sector to reduce price volatility on domestic markets or to reduce its negative effects on producers and trigger investments by smallholder farmers?

Chairperson: Matthew Wyatt, Assistant President, IFAD

Panellists:

- **Mustafa Abubakar**, President, Bureau of Logistics (BULOG), Indonesia
- **Ajay Vashee**, President, International Federation of Agricultural Producers (IFAP)
- **Gonzalo Fanjul Suárez**, Head of Research, Intermón Oxfam
- **David Stevenson**, Director, Policy, Planning and Strategy Division, World Food Programme (WFP)

1. Opening remarks

The round table was opened by **Matthew Wyatt**, Assistant President, IFAD, who highlighted the topicality of the subject in the wake of the volatile food prices of 2008 and of its major impact on all consumers and producers. He listed three aims of the round table: (i) to try to understand the mechanisms underlying the transmission of volatile commodity prices on the global markets to smallholder producers and to consumers; (ii) to share ideas about the ways that price volatility is affecting decisions that smallholders make to attain livelihoods and to feed themselves and their families; and (iii) to consider actions taken by policymakers and farmers themselves to address the issues. Mr Wyatt underscored the primary role of women in food production and the need to keep a focus on gender aspects and on how women and men are coping with food price volatility.

2. Panellist presentations

The first presentation was given by **Gonzalo Fanjul Suárez**, Head of Research, Intermón Oxfam. Mr Suárez opened his presentation with two premises. The first was that the issue is not so much whether prices are higher or lower than the producers' production costs but rather the actual vulnerability of farmers due to volatile food prices. Producers in poor countries have lost out with both high and low prices because of the lack of equitable access to markets and safeguard mechanisms to shelter them from market shocks. The second premise was that the problem needs to be addressed on two fronts: reducing the causes of price volatility, and protecting poorer consumers and farmers from the impact of volatility.

Mr Fanjul Suárez then spoke about appropriate measures, highlighting the fact that they are extremely complex and touch upon all levels of decision-making – from local markets up to negotiations at the World Trade Organization level. He described two areas that Oxfam is concentrating on. The first is guaranteeing the public investments necessary to counterbalance producer vulnerability and setting up traditional mechanisms to counterbalance volatility alongside new systems, such as creating physical and virtual reserves to allow countries and producers to intervene when there is an unexpected variation in food stocks. One major concern is that industrial countries are not coming through on the commitments they make, which is very serious when the other costs are factored in.

The second area Oxfam focuses on is creating a legal and political environment that is favourable to the political measures needed to face the crisis. Mr Fanjul Suárez expressed great concern over the trade negotiations taking place, particularly the World Trade Organization talks, Economic Partnership Agreements and other regional agreements. Ongoing trade negotiations should allow for: (i) the creation of some policy space for developing countries so that measures in favour of small-scale producers can be introduced; (ii) the reintroduction of subsidies when needed; and (iii) the inclusion of a list of special products and negotiation of special safeguard measures for developing countries. He also mentioned that during recent weeks, some European Union politicians have requested that the small reforms that had taken place in the Consolidated Appeals Process be reversed, thereby reinstating the old system that created market distortions. He stated that any measures that imply going back to policies that distort markets and do not consider radical reform will only contribute to increasing food price volatility.

The second presentation was given by **Dr Mustafa Abubakar**, President, Bureau of Logistics (BULOG), Indonesia, who explained how Indonesia's policy responses helped prevent the effects of food price volatility over the past two years. He first described BULOG, a logistics agency that was established almost 42 years ago and whose main objectives are to support domestic rice producers and stabilize rice prices for consumers and producers.

Mr Abubakar explained that rice is consumed by 97 per cent of households, and that poor households spend 25 per cent of their income on rice. Therefore increases in

rice prices have a significant impact on overall food price inflation, poverty and food security. When the global price of foodstuffs rose early in 2008, the Government responded quickly and succeeded in dampening the inflation. He added that, in the case of rice, four important measures were taken to respond to the increase in its price: (i) expanding procurement of domestic rice (by almost twice the volume of the previous year) and avoiding imports; (ii) expanding BULOG's rice stock as the market stabilized and speculation lessened; (iii) enlarging the distribution of rice for the rice subsidy programme (in terms of number of beneficiaries, amount of rice per household and length of distribution period); and (iv) accelerating the production of domestic rice by using superior and hybrid seeds and subsidized fertilizer. As a result of these measures, combined with good rainfall, Indonesia was one of the few developing countries able to increase rice production significantly during the last two years – by almost 5 per cent in 2007 and 5.5 per cent in 2008. This also meant that procurement and stockpile levels could be increased, which protects Indonesia from being affected by the instability of rice prices on the international market. Given the role of BULOG in the procurement of rice for domestic consumption, the volatility of wholesale rice prices in Indonesia was limited to 6 per cent between January 2007 and December 2008. This is much lower when compared with the volatility on international markets, which peaked at 41 per cent.

Mr Akubakar concluded by stating that the stability of rice prices in Indonesia also contributes to the stability of the prices of other foodstuffs.

The third presentation was given by **David Stevenson**, Director, Policy, Planning and Strategy Division, World Food Programme (WFP), who described a strategic shift in WFP that aims to break the cycle of hunger at its root and not merely to provide food aid. He opened his presentation by stating that in Africa 300 million farmers – 70 per cent of whom are women – live and work on marginal lands at risk of droughts, floods, storms and pests. Their production is vulnerable to shocks and failures and most have perilously thin coping mechanisms. Hence they are susceptible to hunger. Reducing risks and uncertainty for them involves challenges to increase food production and sales in good years and to ensure access to food in bad years.

Mr Stevenson went on to describe WFP's strategic shift, which involves working with partners, primarily farmers, in analysing the root causes of hunger and overcoming risk and vulnerability. This means a new and wider variety of tools is required. The starting point is the observation that farmers often do not invest in production because of the risks associated with agriculture in developing countries. As a result, their returns are low. One way to reduce risk is to secure a return on production through the provision of seeds, fertilizers, roads and cash. He then introduced the Purchase for Progress (P4P) programme, which includes a range of innovative procurement and programme practices that will reduce the risks faced by small-scale farmers – such as forward contracting and warehouse receipt programmes that can serve as collateral for loans, and supporting value added production and local food processing, in addition to adjustments in WFP's tendering system, so that small-scale farmers are in a better position to compete for the contracts that are issued locally. He emphasized the need to make more payments directly to women

farmers, since they conduct 70 per cent of the work, and to ensure that women are represented in farmers' groups and associations. He also highlighted P4P's focus on sharing lessons with partners from the public and the private sector to find market-friendly solutions to the food security situation today.

Mr Stevenson described a number of other ways to create win-win situations, including cash transfers, voucher programmes, weather-based risk insurance and contingency financing mechanisms at the global level. He added that other alternatives for sourcing food assistance internationally - such as forward contracts, swaps, and options on international market exchanges - were being explored. He concluded his presentation by underscoring the importance of practical partnerships on the ground. He described how in Mozambique WFP works in partnership with FAO and IFAD to address risks faced by small-scale farmers, with IFAD providing support for agricultural infrastructure and exploring credit instruments for poor rural producers, FAO providing technical assistance and WFP supporting markets through P4P.

The fourth speaker was **Ajay Vashee**, President, International Federation of Agricultural Producers (IFAP). Mr Vashee began by stating that there will always be food price volatility because of crop failure, natural disasters, conflict and logistic issues of supply and demand. He added that the issues and solutions have been known to farmers for a long time, but perhaps they have not been articulated well enough to be heard by those who make decisions. He described the outcomes of a workshop organized by IFAP on the determinants of domestic food price volatility. The determinants that emerged were: (i) low productivity of smallholder agriculture and the difficulties the farmers face in marketing their products; (ii) limited capacity to appreciate and exploit the multiple forms of income generation available to small-scale farmers beyond cereal production; (iii) low membership of farmers' groups; (iv) poor market information; (v) post-harvest losses due to inadequate storage facilities and assembling points; and (v) weak consultative mechanisms for government policy formulation among various stakeholders. Combined with climate change and the financial crisis, a new agricultural model is necessary. There are no longer global stocks of surpluses to be moved around. Moreover, the cost of transportation will be critical in the very near future, as will the need for more domestic food production closer to consumption centres. The key to addressing these challenges is investment in smallholder business by donors and other institutions. In addition, political goodwill at all levels needs to be matched by concrete commitment, such as in Malawi and Viet Nam.

Mr Vashee explained that helping smallholder farmers deal with risk and uncertainty encompasses three broad cross-cutting areas: (i) minimizing risks (national policies to minimize risks and mitigate their consequences); (ii) coping with risks (risk management strategies and tools used by farmers); and (iii) support after a crisis (humanitarian assistance, compensation for the impact of a crisis, and recovery measures). Measures to minimize risks include developing irrigation schemes, granting secure land tenure, providing affordable and accessible finance, and promoting research, technology transfer and strengthened extension services through existing and new farmers' groups. He added that there is a need to secure

public and private support for producers' organizations in accessing market information systems, and to address the problem of speculation in commodity markets through stricter regulations. He emphasized that smallholder farmers need to form organizations to improve their position in the value chains that produce food. He also observed that there is a need for regulations to govern quality standards. Among the strategies to cope with risk, Mr Vashee mentioned public-private partnerships for delivering insurance and risk management schemes to farmers; life insurance programmes for farmers; and social safety nets. With respect to support provided after a crisis, he stated that the usual response is humanitarian but a more holistic approach is needed. He suggested that developing countries could build a vulnerability fund.

Mr Vashee concluded his presentation by highlighting the importance of a coordinated public policy response at the national and regional levels, and the call for constructive engagement to bring smallholder farmers into the mainstream – in short, a balance between public and private sectors, with farmers at the centre.

3. Round-table discussions

There were approximately 75 participants in the round table. The main issues that emerged during the discussions are summarized below.

Political commitment at the local level. Food has always been a political issue. Nevertheless, political authorities often do not believe they have any responsibility for it. The fact that many governments do not make food security a high priority is unjustifiable. While international organizations can make a contribution, the commitment of local politicians, and corresponding budgetary support, is key to attaining food security. Without this commitment, more and more people will be discouraged from practising agriculture.

An integrated approach to value-chain development. Price volatility is normal. When prices go up it is not necessarily bad for business. It could be what farmers need to encourage investment in production. What is important is an integrated approach to value chain development – addressing agroprocessing, storage and market development – and not just looking at ways to reduce the effects of volatile food prices. Such an approach, combined with establishing a guaranteed minimum price, can be extremely effective in terms of market self-regulation and stability.

Multi-stakeholder coordination led by good local governance. An important issue is the interchange between public investment, good governance and the balance between private and public investment. Good governance also implies ensuring coordination within a country to bring together different stakeholders – for example millers, agents, traders, international agencies – to talk through price volatility and create a win-win situation that can also mitigate civil strife. This needs to be led by solid local governance. Moreover, there are no templates or stock solutions. The needs of different producers vary according to their circumstances. It is up to governments to engage in dialogue with farmers' and producers'

organizations in order to determine the most appropriate solutions. What must be guaranteed is the economic and political opportunity and space to do that.

Global stability versus protectionism. Price stability is closely linked to world market performance. A search for stability invites protectionism. However, in such a process, policymakers must ensure that the cure is not worse than the disease.

Volatility versus stability from both producer and consumer perspectives. Price volatility damages the producer, who is left not knowing which direction to take or what investments to make, and it thus has a negative influence on growth. It is also damaging to consumers, who have to contend with markets where prices vary. There is a lot of experience in managing and stabilizing agriculture prices that needs to be tapped. For example, Indonesia used traditional ways of interacting on the market to stabilize prices – managing available stock and, in certain cases, limiting exports. Other approaches have recently been adopted to reduce the impact of soaring food prices on consumers and producers. For example, in Mexico price negotiations took place and agro-industries agreed not to pass increases in production costs on to the consumer. Similar measures were applied in Jordan.

Waning political interest in food price volatility. With the advent of the global financial crisis, the political importance of the food crisis has receded considerably, resulting in greater difficulty in mobilizing resources to address it. Measures should be adopted to elevate political interest in food price volatility.

Harmonizing local, national and regional needs and priorities. One of the major difficulties faced is the poor coordination of decision-making within and among governments. Issues pertaining to small-scale farmers are primarily local. Efforts to articulate at the national level what is happening locally can be extremely challenging. There is a similar tension among governments. For example, Niger cannot take decisions on its own without having a consultation process to consider what is happening in Nigeria because the two countries are intimately linked. Regional networks are intensifying, which is necessary for external trade and customs duties. Whether or not this process leads to protectionism, customs duties are an important element of control. Moreover, decision-making processes need to be quick – six months of discussions and negotiations should not be necessary. Often adjustments and adaptations must be made on a daily basis.

Nutrient management. The management of fertilizers must be given priority. The world has only a 20-year supply of phosphate left, and this is a non-renewable mineral. Moreover, the cost of producing most fertilizers is extremely high. Technologies must be developed that use fewer precious minerals but are able to increase yields, as is the case with technologies being used in Bangladesh.

Increasing knowledge of liberalization processes, especially among smallholder farmers. Many developing countries have insufficient knowledge of how liberalization works. Everyone has a different explanation for the various trends and anomalies that emerge. Smallholder farmers and those who are addressing issues of market prices and volatility often cannot see early on what is happening in

the world market. Smallholder farmers do not have knowledge of that world market – who is pulling the strings, who has the power. This is a serious problem. If smallholder farmers are to become effective players in the market, three fundamental conditions must be met: adequate storage capacity, access to up-to-date market information, and access to credit.

Access to food. 'Fixing' agriculture is very important but it does not necessarily fix access to food. Access to food is not simply an issue of availability. It is primarily an issue of poverty. In this sense, farmers must be looked upon as entrepreneurs and not as passive recipients of assistance.

Resilience of smallholder farmers. The most promising reality is that smallholder farmers are extremely resilient. They face enormous challenges when there are droughts, floods or other shocks. But as soon as the situation subsides, they are back out in their fields producing, day in and day out. We need to tap into that effort and resilience.

II. Summary of the round table discussion presented to the Governing Council

Based on the round table discussion, a summary statement and recommendations was prepared and presented to the Governing Council. The summary is provided below.

Round Table 1: Food price volatility - how to help smallholder farmers manage risk and uncertainty

- High volatility of food prices is a major risk factor for poor consumers and for food deficit countries. It is also a major obstacle to agricultural development and investment. Smallholder farmers with no access to storage facilities and financial services are particularly vulnerable.
- National and regional agricultural policies must be at the centre of rural development and poverty reduction strategies. These policies should aim to: (i) reduce the volatility of agricultural prices and (ii) mitigate the impact of price volatility (e.g. through security stocks, insurance schemes, food safety nets) on resource-poor rural people, particularly women.
- It is essential to develop and strengthen farmers' and producers' organizations so that they are able to participate effectively in policymaking.
- There is a need to establish constructive linkages among all stakeholders involved in the value chain (at the production, marketing, processing and export levels) in order to reduce uncertainty and improve market price information and predictability.
- International policy frameworks for agricultural markets and trade should be more conducive to the development and implementation of national agricultural policies that respond to the needs of food producers and smallholder farmers in particular.
- Modern policies must build upon the lessons learned from past successes and failures in government intervention in agricultural and food markets. Particular attention should be given to sustainability.
- Public policy aimed at market regulation must also bear in mind significant new developments such as the linkage between the food and energy markets, and the environmental consequences of climate change.
- Significantly, more investment is needed in agriculture – and especially smallholder agriculture.
- The world's 500,000 smallholder farmers can make an even bigger contribution to food security.

III. Discussion Paper for Round Table

Food price volatility – how to help smallholder farmers manage risk and uncertainty

Discussion paper prepared for the Round Table organized during the Thirty-second session of IFAD's Governing Council, 18 February 2009

Prepared by: R. Blein and R. Longo

The opinions expressed in this paper are those of the authors and do not necessarily reflect official views or policies of the International Fund for Agricultural Development, except as explicitly stated.

Following a period of soaring prices for virtually all agricultural commodities, prices for many of these commodities have fallen dramatically since August 2008, although they still remain relatively high compared with previous years. Rural producers are facing greater uncertainty, and food price volatility has become a major issue because of its impact on the investment decisions of agricultural producers and thus on long-term world food security.

Price volatility may increase in the future, since the effects of climate change are likely to compound the uncertainty and instability of food production, especially in lower-latitude, tropical regions.

This paper, prepared as background to the round-table discussions at IFAD's Thirty-second Governing Council in 2009, provides a framework for focusing the discussions around the challenges identified and the policy options available to address those challenges.

I. Food price volatility on international markets: trends and transmission to domestic markets

After a low and stable 25-year trend,¹ agricultural commodity prices showed a moderate rise between 2004 and 2005, followed by an accelerated increase between the end of 2007 and the summer of 2008. During the period from October 2006 to June 2008, commodity prices (expressed in constant dollars – base year 2000) were multiplied by 3.2 for rice, 2.1 for wheat and 2.5 for corn.

Following the dramatic rise, the prices for rice and wheat fell 55 per cent in the second semester of 2008, while corn prices fell 64 per cent, in spite of an appreciation of the dollar during the same period. In January 2009 prices increased slightly.

Table 1: Index prices of rice, wheat and corn (2000-2008)

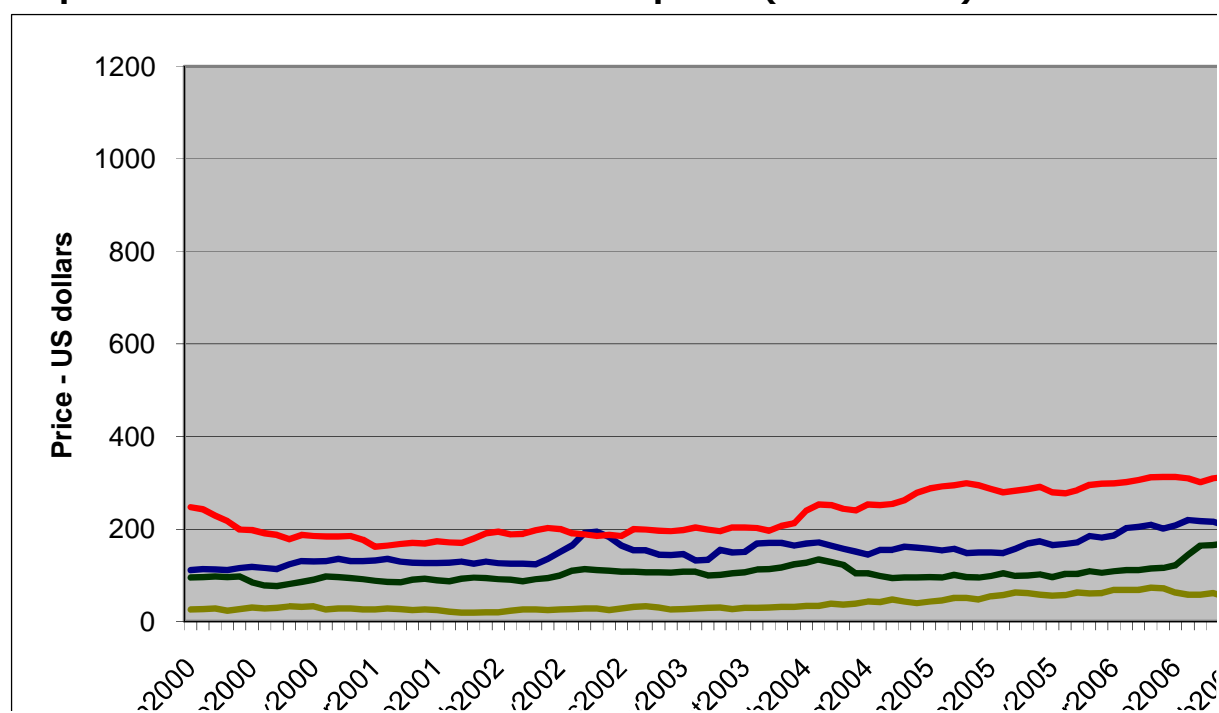
	Rice	Wheat	Corn
Average (Jan 2000 – Dec 2003)	100	100	100
February 2005	145	136	106
December 2006	151	183	183
September 2007	161	294	188
March-April 2008	498	380	278
November 2008	276	204	179
January 2009	297	215	196

Source: Elaboration Bureau Issala on UNCTAD and FAO data

¹ Following the spike in food prices during the food crisis of the 1970s, agricultural prices (expressed in constant dollars – base year 2000) dropped below US\$ 200 per ton for corn and wheat and below US\$ 300 per ton for rice during the period 1982-2006 (see Appendix 1).

It appears that a confluence of factors has led to the unique developments of the past two seasons: (i) the reforms in public policies for the agriculture sector over the last two decades; (ii) unexpected shortfalls in food production; and (iii) unforeseen rises in demand. Another factor that has had a significant impact on the volatility of markets is the gradual reduction in the level of stocks, which can no longer function as a means of adjustment. Markets are therefore more exposed to speculative operations. (Appendix 2 provides an analysis of the factors underlying recent trends on global commodity markets.)

Graph 1: The evolution of international prices (2000-2008)



Source: Elaboration Bureau Issala on UNCTAD and FAO data

I.1 Uncertainty dominates the medium- to longer-term outlook

FAPRI², IFPRI³ and OECD-FAO⁴ studies identify the recent trends on the international commodity markets as a structural break that will create further market tensions and is likely to increase the volatility of commodity prices for the next 10 to 15 years. The factors underlying the tensions on commodity markets can be summarized as follows:

- the impacts of climate change on agriculture, including land degradation, growing uncertainty about crop yields and the intensification of floods and droughts in tropical areas;

² Food and Agriculture Policy Research Institute.

³ International Food Policy Research Institute.

⁴ Organisation for Economic Co-operation-Food and Agriculture Organization of the United Nations, Agricultural Outlook 2008–2017.

- demographic dynamics: population growth and increasing urbanization;
- the state of natural resources and the conditions of their use, in particular: (i) the growing demand for land in developing countries from outside investors; (ii) the degradation of land due to unsustainable agricultural practices; and (iii) ineffective management of water resources for agricultural use;
- agricultural outputs increasingly being used for the twofold objective of providing food and providing feedstock for biofuels, thus linking the volatility of oil markets to the volatility of commodity markets;
- the potential negative long-term impacts of short-sighted agricultural public policies put in place hurriedly in response to food price increases and the associated risk of a return to agricultural protectionism;
- the slow rate of restocking at the household, state, regional and international levels; and
- the interests of financial investors (e.g. hedge funds, sovereign wealth funds) on commodity markets seeking to diversify their portfolios.

I.2 Transmission differentiated according to local contexts

It is still too early to fully assess the extent to which price movements on the international markets over the last two years have been transmitted to developing countries – and too early to define the different impacts on consumers and producers. Most of the studies (FAO,⁵ CIRAD,⁶ OXFAM,⁷ IFPRI,⁸ FEWSNET/MSU⁹) analysing the transmission to domestic markets were undertaken in 2008, and data gathered at micro and meso levels are just beginning to emerge.

Box 1: The impacts of the soaring food prices between 2006 and mid-2008

On rural producers. Price rises can benefit producers. However, a distinction needs to be made between net food buyers and net food sellers. For net buyers, soaring food prices mean that a higher share of the family income is devoted to buying food. A similar situation is faced by poor urban populations. The additional costs in purchasing food erode the financial reserves of the family and their production capacities. Net sellers are in a better position to benefit from the rise in food prices. However, the impact will vary depending on: (i) the evolution of the costs of production; (ii) the availability of cash to buy the inputs and tools for additional cropping; and (iii) the organization of cooperative efforts to store products until selling is opportune.

⁵ Dawe D. Have recent increases in international cereal prices been transmitted to domestic economies? The experience in seven large Asian countries. ESA working paper n° 08-03, April 2008, FAO, p. 12.

⁶ Daviron B. et al. La transmission de la hausse des prix internationaux des produits agricoles dans les pays africains, November 2008, FARM-CIRAD, p. 61.

⁷ Blein R. et al. The impact of price increases on the food situation in Sahelian countries. OXFAM GB-Save the Children, August 2008, p. 114.

⁸ IFPRI. An assessment of the likely impact on Ugandan households of rising global food prices, WFP-UNICEF, June 2008, p. 49.

⁹ Kelly V. et al. Potential food security impacts of rising commodity prices in the Sahel: 2000-2008, Fewsnet/MSU, May 2008, p. 36.

On the food security of vulnerable populations. The rise in food prices has been associated with similar trends in energy prices and transport costs, which together are increasing the cost of goods for family consumption. The impact varies according to: (i) the degree of transfer from international prices to domestic prices; (ii) the extent of consumption subsidies; and (iii) the level of dependence of families on imported food products. The most recent estimates from FAO indicate that 75 million more people were thrust below the hunger threshold as a result of the impact of high prices in 2007, and another 40 million in 2008, bringing the total number of undernourished people to 963 million. (FAO, 2008 - The State of Food Insecurity in the World.)

On public finances. This takes effect through the suspension of customs duties and value added tax on the principal food products imported. According to a report issued by FAO, 43 developing countries have applied these measures. For the eight countries in the West African Economic and Monetary Union (Benin, Burkina Faso, Cote d'Ivoire, Guinea-Bissau, Mali, Niger, Senegal and Togo), the loss of revenues is estimated at between US\$ 690 million and US\$ 1,380 million. (See Soulé B.G., Blein R. Hausse des prix alimentaires en Afrique de l'Ouest: revue et analyse des mesures engagées à court et moyen terme. Fondation FARM. 2008.)

On the imports bill. According to FAO, the cost of food imports for the developing countries increased by 85 per cent between 2006 and 2008, with the cost for the low-income food-deficit countries (LIFDCs) increasing by 35 per cent. These percentages show that the least developed countries (LDCs) and LIFDCs have reduced their volume of imports (contraction of demand, insufficiency of hard currency, lack of cash reserves for importers).

Table: Evolution of food import bills

	2006			2008			Evolution 2008/2006 (%)		
	Developing countries	LDCs	LIFDCs	Developing countries	LDCs	LIFDCs	Developing countries	LDCs	LIFDCs
Cereals	69,410	5,683	29,450	147,776	9,154	34,055	113	61	16
Vegetable oils	35,050	1,945	22,884	90,299	6,444	35,916	158	231	57
Milk products	12,930	801	4,924	25,947	1,450	6,857	101	81	39
Meat	16,806	810	6,013	24,093	831	4,210	43	3	-30
Sugar	13,871	1,753	7,587	13,712	1,710	5,819	-1	-2	-23
Food products	185,529	13,362	86,473	343,121	23,667	117,079	85	77	35

Source: Food Outlook - FAO

Nonetheless, two parameters appear determinant in explaining the transmission of food price trends to domestic markets:

- the relative shares of domestic demand satisfied either by domestic food production or by food imports; and
- the ability of public policy to regulate the domestic markets through trade policy at the borders and/or the instruments of domestic policy (consumer subsidies, social safety nets, price surveillance policies and competition policies).

Countries dependent on food imports and suffering poor harvests in 2006-2007 (e.g. Senegal) have experienced a more marked transmission of international commodity prices to their domestic markets. Countries with food imports representing a minor part of local consumption (most Asian countries, Madagascar, Mali, Uganda) have experienced a limited and slower transmission of food prices to their domestic markets, if compared with food-deficit countries.

Countries with domestic markets characterized by a high degree of protection (mostly Asian countries) have been able to soften the transmission of rising food prices by lowering customs duties for imported goods and/or banning exports (Indonesia, Viet Nam). Countries with active public food policies were able to dilute the impact of rising international food prices by subsidizing food consumption or providing targeted social transfers for the most vulnerable populations (Bangladesh, Brazil, Ethiopia, Mexico).

The transmission to domestic consumer prices for rice, wheat and corn has been sizeable for many food-importing countries. For example, in Senegal, where 83 per cent of annual needs of rice are imported, between 95 and 100 per cent of international rice prices were transmitted to consumer prices; the increase in the consumer price of locally produced rice was 69 per cent of the international increase.¹⁰

The pass-through to rural producers is variable and dependent upon the local contexts. Rice producers seem more exposed to price transmission; at the same time, they benefit from an increase in marketing margins, in spite of the rise in production costs. The transmission to producer prices for the other cereals is partial and conditioned by local factors (e.g. degree of substitution between products, market structure). An analysis of the dairy sector¹¹ in Senegal and Niger shows that the increase in the price of milk powder provided an opportunity for a more competitive domestic dairy sector.

The results of an analysis comparing price volatility on domestic markets (at both the consumer and producer levels) with the volatility on global markets for the period 1992-2008 are presented in Appendix 3. They show that the volatility of producer prices is generally greater than that of consumer prices. Similarly, the volatility of domestic prices is greater than that of international prices. The notable exception is the comparison of global price volatility with domestic price volatility for the period 2004-2008; during this period, global price volatility is greater. This attests to the incomplete transmission of the rise in prices and a partial disconnection of domestic price trends from those observed on international markets.

¹⁰ Daviron *et al.* op. cit.

¹¹ Iram-Gret. Etude de l'impact de la hausse des cours du lait et des produits laitiers sur les producteurs et les consommateurs. Etudes de cas au Niger et Sénégal, Alimenterre, 2008.

II. Determinants of domestic food price volatility

In Asia, domestic food prices are less volatile because supply is more stable and markets are more regulated (see Appendix 2). Conversely, in sub-Saharan Africa the volatility of domestic food markets is high – particularly for rural producers – and in most cases disconnected from the dynamics of global commodity markets. The main factors underlying the instability on domestic markets are the following:

- **Supply-side variability due to the impact of natural factors on harvests.** Agrarian systems in LIFDCs are generally extensive, use few inputs (fertilizers, seeds) and are very vulnerable to climatic shocks or weather variations.
- **The decrease in stock volumes.** At the family and local community levels, stocks have diminished markedly.
- **The lack of organization of producers in the value chain.** In many African contexts, for example, lack of storage facilities, absence of access to credit and unreliable linkages within the value chain often imply lower post-harvest prices and higher prices in the months preceding the harvests, with negative repercussions on smallholders' income.
- **The small share of marketed smallholder production.** The portion of smallholder production commercialized is generally quite limited compared with the totality of production. The size of the share of marketed crops is linked to: (i) family cash needs; (ii) the reimbursement of debts to retailers (in cash or goods); and (iii) the availability of surpluses of production once family requirements are met. Production can also vary significantly from one year to another.
- **Segmentation of regional and domestic markets.** In many African contexts, for example, weak infrastructure (such as poor roads) creates critical bottlenecks in the marketing of foodstuffs. Sizeable customs duties pose additional obstacles. As a result, market transactions are limited between areas that have surplus and those that are food-deficit, thus contributing to higher retail costs for goods to consumers and impacting negatively on the price paid to producers.¹²
- **Non-tradability of local foodstuffs.** In some cases, local food produce is unsuitable for trading, which excludes the possibility of exports being used as a policy tool to adjust supply to domestic demand.

The determinants of the food price volatility faced by smallholder farmers in developing countries are multiple. Nonetheless, predictable market interactions and stable input and output prices are not sufficient, if considered in isolation, to promote pro-poor agriculture-based development processes. It is also necessary to address the key constraints poor rural people must contend with in dealing with markets: high transaction costs (due to inadequate transport infrastructure and storage facilities); supply-side limitations (access to agricultural services and inputs, access to and control over natural resources) and the difficulty in complying with quality and safety standards requirements.

¹² See MSU, FEWSNET and Africa Trade Centre studies.

Food price volatility hampers the development of smallholder farmers. It contributes to keeping them in poverty and deters smallholders from investing in agriculture. Family agriculture has enormous potential for agricultural development. To encourage these families to reinvest in agricultural production, the full set of technical, economic, institutional, environmental and marketing risks that they face must be addressed simultaneously.

Box 2: The warehouse receipt system in the United Republic of Tanzania: generating additional income and investment

The warehouse receipt system allows small-scale farmers to store their produce (primarily maize and rice) collectively during harvest time, when prices are low; receive credit, using the product as collateral; and wait until prices are more favourable for selling. Through this system, some farmers have been able to double their income.

The warehouse receipt system is the result of the collaboration between two IFAD-funded programmes: the Agricultural Marketing Systems Development Programme (AMSDP), the aim of which is to empower smallholders to engage more actively in markets; and the Rural Financial Services Programme (RFSP), which is designed to strengthen grassroots microfinance institutions.

The AMSDP built the warehouses and managed them initially, with responsibility shifting fully to the districts from the third year of operation. The RFSP built up Savings And Credit Cooperative Organizations (SACCOs) so that farmers are able to use their warehouse receipt as collateral for credit. The warehouse receipt system has benefited from the linkages to markets established by the First Mile Project. Farmers have access to up-to-date market information, which allows them to negotiate better deals for their produce with buyers or at the marketplace. The Warehouse Receipt System Act, passed by the Government in 2005, provided a legal framework for the system.

The results of the warehouse receipt system have been very positive: the Government of The United Republic of Tanzania is promoting the system nationwide. The RFSP has generated a solid approach to increasing the access of the rural poor to financial services through the SACCOs. These membership cooperative societies have enabled poor farmers to pool their savings, extend credit to one another and use the group capital to access loans from financial institutions for on-lending to members. By September 2008, female membership in the SACCOs and the number of borrowers had both reached the 40 per cent mark. As the project is expected to end in 2010, the Government has requested the project management to prepare a roll-out plan for extending SACCOs nationwide.

Farmers now have sufficient experience of using the warehouse receipt system to be able to replicate it without government support.

III. The policy dimension of food price volatility and smallholder farmers

III.1 Policy options

Public policies dealing with food price volatility have the twofold objective of: (i) reducing short- and long-term volatility; and (ii) limiting the impact of volatility on the production and income strategies of rural families and, more broadly, on the income, food security and nutrition of poor rural and urban households.

Supply-side policies and investments are commonly being developed to respond to growth in demand. There are many areas of policy intervention that can have an impact on domestic, regional and global food supply, including: access to credit; management of and control over natural resources; access to research and extension services; and supply management in order to keep prices stable at the producer and consumer levels. Complementary to supply-side policies, policies being developed to reduce the risks associated with climatic shocks also address price volatility, in particular the issue of the variability of domestic supply and the related demand for imports.

Trade and market policies can also play a crucial role in reducing food price volatility. Countries with tariff structures and related policies are able to protect strategic products so as to shelter producers from price swings on the international markets. The regional free trade agreements¹³ between developed and developing regions often exclude agricultural products from full liberalization, at least in the short term, and allow some policy space for states to ensure the regulation of domestic markets, including through direct intervention on the markets to ensure minimum prices for producers (institutional procurements, public purchase, constitution of stocks).

Most Asian countries have maintained ambitious and comprehensive supply-side and trade and market policies over the last three decades. For example, Indonesia and Malaysia have articulated comprehensive policies ranging from subsidized inputs and setting floor and ceiling prices, to supply management of food stocks and investments for land management and irrigation programmes. These policies have been able to triple rice production over thirty years in Indonesia and double it over ten years in Malaysia, while promoting increases in productivity and markedly decreasing the incidence of poverty.¹⁴

Policy instruments for food security aim to: (i) reduce the cost of food; (ii) lower the impact of price volatility; and (iii) predict and manage food crises when they occur. Two important approaches have been developed. The first concerns the African countries (mainly Sahelian countries) and is based on information and warning systems to prevent crises and limit their impacts on the most vulnerable

¹³ For example, the Economic Partnership Agreements between the European Union and the African, Caribbean and Pacific countries.

¹⁴ Stockbridge M. Agricultural Trade Policy in Developing Countries During Take-Off, Oxfam GB Research Report, July 2006; Timmer, C.P. 'Food Security and Rice Price Policy in Indonesia: The Economics and Politics of the Food Price Dilemma,' Indonesian Food Policy Program, Working Paper No. 14, 2002.

Dawe D., 'How Far Down the Path to Free Trade? The Importance of Rice Price Stabilization in Developing Asia,' 2001, Food Policy 26(2), pp. 163–75.

populations. This approach is focused above all on the endogenous mechanisms of resistance to shocks (e.g. cereal banks, income-generating activities). In the event of a crisis, a number of instruments are mobilized, including public security stocks, food-for-work or cash-for-work programmes and food aid. The second approach is based on social transfers (safety nets) and consists of a form of redistribution of income in favour of poor people, through food vouchers or cash transfers.

Within this second approach, the Brazilian *Programa de Aquisição de Alimentos da Agricultura Familiar* (Programme for the Acquisition of Food from Family Agriculture) links the cash/food transfer programme with a public purchasing programme based on local procurement from family farming. The public purchasing programme has created a stable demand and supports over 100,000 small-scale farmers. It redistributes their agricultural output by providing food, through municipal programmes, to food-insecure households (accounting for 4.7 million people). Public procurement provides better and more stable prices for producers. Social transfers to vulnerable people linked with their economic or social inclusion (e.g. through schooling, access to health facilities) provide the opportunity to reduce vulnerability and thus limit the impact of high food prices on poor consumers.

During the 2006-2008 food crisis, many developing countries increasingly considered the adoption of policy measures to avoid negative impacts of international food price volatility on domestic markets. Several countries declared food self-sufficiency as their strategic objective. For example, the Government of the Philippines, the largest rice importer in the world, is seeking to achieve 98 per cent self-sufficiency in rice by 2010. Senegal, another major importer of rice, has unveiled an ambitious plan to make the country self-sufficient in food staples, especially rice. Many Latin American and Caribbean countries, which commonly rely on food imports, have pledged to give greater attention to domestic food production, rather than focusing their agriculture sector to export crops such as coffee and fruits. Additionally, policies to increase domestic food security and support vulnerable households have been oriented to the provision of productive safety nets. National programmes are being articulated to target input subsidies (e.g. distribution of seed and fertilizer), and to improve access to credit for resource-poor farmers (e.g. Bangladesh, Dominican Republic, Indonesia and Madagascar).¹⁵

III.2 From local to global markets

Food price volatility faced by smallholders is principally linked to the organization of local and domestic markets. Such volatility may be further exacerbated by “imported” volatility from external markets – regional and/or global commodity markets.

Local and national markets. Local and national agricultural and food security policies are critical in shaping the markets and, consequently, the investment

¹⁵ Demekle M., Pangrazio G. and Maetz M. Country responses to the food security crisis: Nature and preliminary implications of the policies pursued, FAO, Initiative on Soaring Food Prices, Rome, 2009.

decisions of smallholder farmers. There are six domains to be taken into account in reducing food price volatility:

- **Supply-side constraints and the source of instability.** Policies and investments supporting smallholder access and the capacity to take advantage of agricultural services, inputs and natural resources need to be combined with policies aimed at reducing the risks for family agriculture, such as climatic shocks (as detailed in section III.1).
- **Public purchase combined with safety net programmes.** Public purchase programmes promoting local procurement combined with the distribution of subsidized or free food to food-insecure households can be a win-win strategy for stabilizing prices and promoting food security for the most vulnerable (see Brazil programme in section III.1). Recently, WFP introduced a pilot programme (Purchase for Progress – P4P) in 21 countries that seeks to buy food from local farmers and then distribute it locally for emergency needs and food security.
- **Supply-management and price stabilization policies.** Both policies have the aim of reducing food price volatility and require import controls to prevent “imported” price fluctuations. Additionally, supply management is based on collective marketing and production planning adjusted to the needs of the domestic market.
- **Value-adding for agricultural products.** Commodity price volatility is often higher if compared with processed products. Therefore, investments and programmes for the processing of agricultural commodities – developing partnerships along the value chain – could both result in more stable prices and higher returns and profits for the stakeholders involved in the partnerships.
- **Price information for farmers and buyers.** Information gaps for both buyers and farmers result in asymmetric market relations and sub-optimal market outcomes. Redressing those gaps and asymmetries can be an important element in promoting market relations that enable farmers to make informed decisions based upon market incentives, thus lowering the unpredictability of market prices. At the same time, buyers can rely upon producers who are able to adapt and produce in compliance with market requirements (in terms of, for example, products and standards).
- **Storage facilities combined with access to credit for smallholder farmers.** Output prices for producers vary considerably during the cropping season. The provision of storage facilities for smallholder farmers combined with access to credit may be an effective means of enabling vulnerable households to meet their immediate cash needs while storing their outputs until prices are more favourable (see Box 2).

Regional markets. The regional level is key in developing the value chains and relevant sectoral policies. To support strategic regional value chains, trade policy measures at the borders (e.g. customs duties and safeguard mechanisms) can be created/enforced to regulate and control the prices of imported products. Regional security stocks can be constituted to complement global stocks (see below). In

addition, chain partnerships (*organisations interprofessionnelles*¹⁶) can be set up to facilitate dialogue and negotiations among all actors along the value chain and build long-term alliances centered on shared interests and mutual benefits.

International markets. There are two main dimensions to be taken into consideration to reduce food price volatility at this level:

- **International trade agreements.** Global and bilateral trade agreements need to take into account the possibility for developing countries to stabilize prices of agricultural products that are strategic for their food security and agriculture development processes.¹⁷
- **Negotiations on international stocks.**¹⁸ The gradual reduction of international stocks has eliminated the buffer that enables adjustments to be made on the basis of quantity rather than price. Negotiations at the global level should focus on: (i) minimum volume of stocks; (ii) governance for the management of stocks, including the role to be played by developing countries and the engagement of the large producers/exporters; (iii) international stock financing modalities; and (iv) possible innovations (e.g. virtual global food reserves¹⁹).

The articulation of policies and investment programmes, from the local to the global level, should always consider the following two general principles:

- **Policies and investments need to take into account the livelihoods of smallholder farmers and the complexity of farming systems.** Smallholder farmers' livelihood strategies are centred on a range of income sources – agricultural production, off-farm labour, remittances – with the aim of simultaneously maximizing their revenue and minimizing their risks. Farming systems, in particular African farming systems, are often based on a variety of products: cereals, roots and tubers, livestock and dairy products, forestry and artisanal fisheries. The almost exclusive recent focus of the international debate on cereals – a focus replicated in domestic and regional policies on cereals – is too narrow to tackle the livelihood problems of smallholder farmers and can be counterproductive as a measure to increase food security and promote agricultural development.
- **Public policies for reducing food price volatility need to be negotiated and articulated with the active involvement of organizations of farmers, consumers and market intermediaries.** Policies aimed at reducing food price volatility must reflect a social, economic and political “compromise” at the national and regional levels that accommodates the

¹⁶ Royal Tropical Institute (KIT) and International Institute of Rural Reconstruction (IIRR), Trading up: building cooperation between farmers and traders in Africa and *Inter-Reseaux* – Working Group on Organisations Interprofessionnelles - http://www.inter-reseaux.org/rubrique.php3?id_rubrique=328.

¹⁷ Negotiations are currently taking place at the World Trade Organization in the context of the definition of special and differential treatment for strategic agricultural products, special products and special safeguard mechanisms.

¹⁸ Von Braun J., Torero M. Physical and Virtual Global Food Reserves to Protect the Poor and Prevent Market Failure, IFPRI Policy Brief, June 2008.

¹⁹ A virtual reserve and intervention mechanism would be based on a coordinated commitment by the group of participating countries. Each country would commit to supplying funds, if needed, for intervention in grain markets (Von Braun J., Torero M. IFPRI. op. cit.).

needs of both producers and consumers. The leading role has to be played by public authorities, while the private-sector farmers' organizations, and market intermediaries, together with associations of consumers, must play an active and supportive role in the design and implementation of these policies.

Questions to guide the round-table discussion

- How have volatile international food prices been transmitted to domestic markets and to smallholder farmers over the past two years?
- How is price volatility affecting the investment decisions of rural producers, and what is the impact of price volatility on household livelihoods and food security?
- What successful measures have been taken by governments, farmers' organizations and the private sector to reduce price volatility on domestic markets or to reduce its negative effects on producers and trigger investments by smallholder farmers?
- What policies and investment programmes can be implemented at the global, regional, national and local levels to reduce food price volatility?
- What processes should be put in place to promote negotiated policies with the leadership of public authorities and the pro-active involvement of organizations of poor rural producers, market intermediaries, other private-sector stakeholders, and urban and rural consumers?

ANNEXES

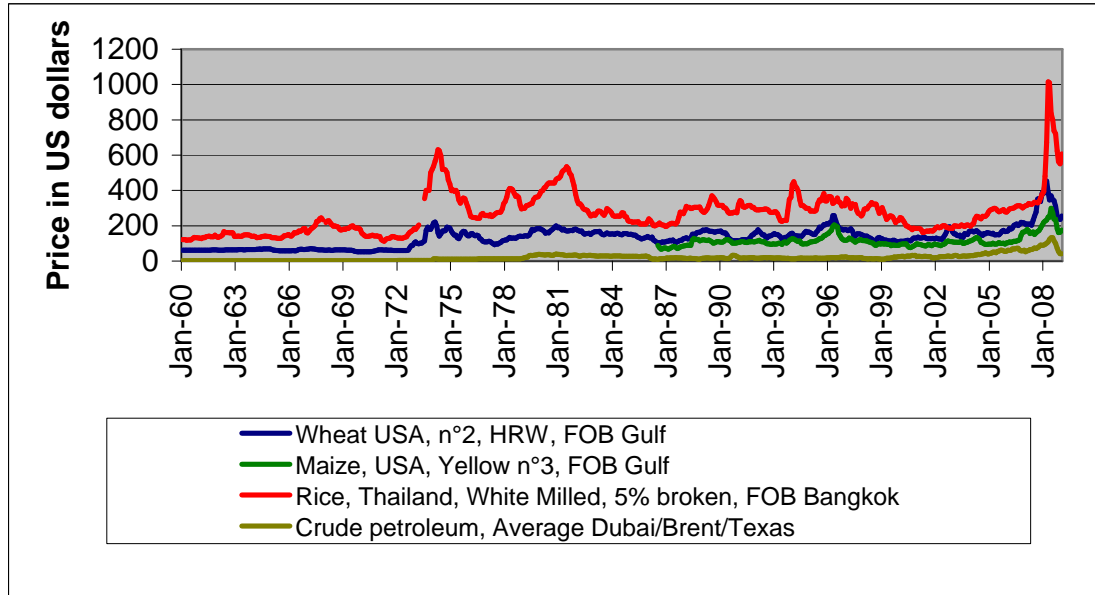
Appendix 1: Long-term trends of international food prices (1960-2008)

Appendix 2: Main factors underlying the rise and peak of world prices (2006-2008)

Appendix 3: Internal instability of Sahelian and Malagasy domestic markets

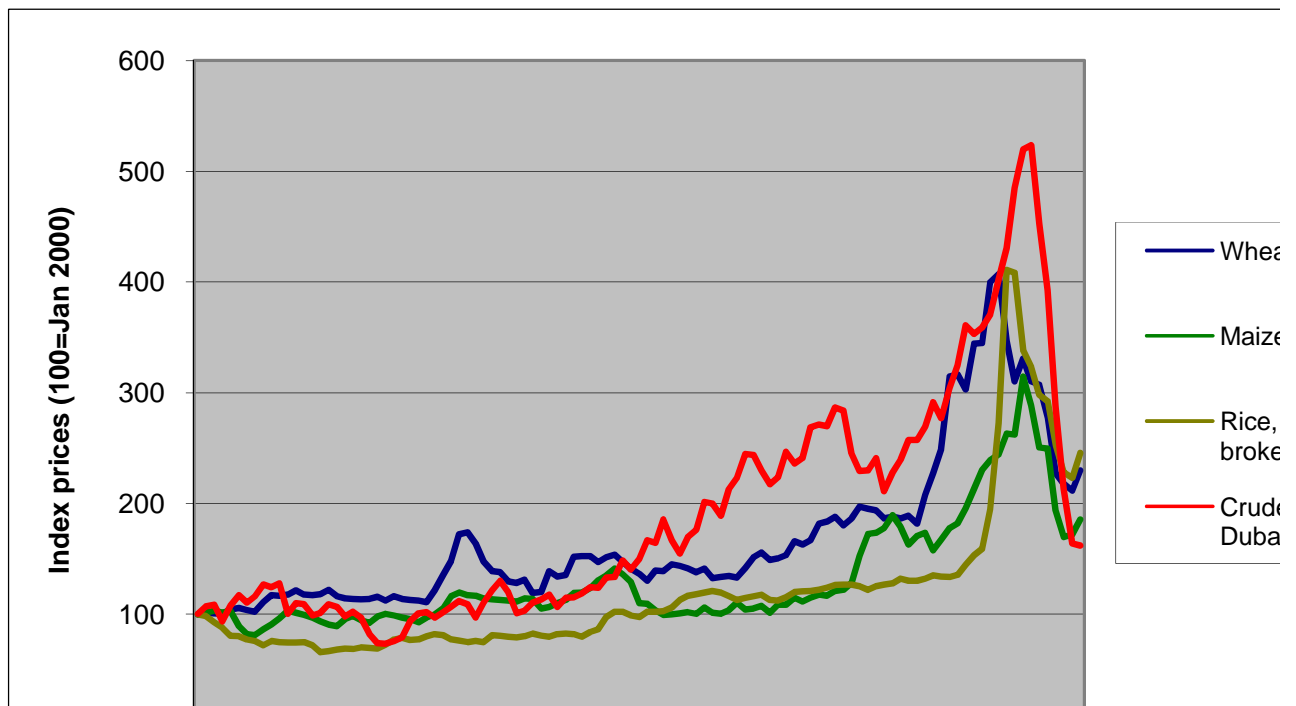
Appendix 1: Long-term trends of international food prices (1960-2008)

Graph 1: International commodity and oil prices (1960-2008)



Source: Elaboration Bureau Issala on UNCTAD and FAO data

Graph 2: Commodity and oil index prices (2000-2009)



Source: Elaboration Bureau Issala on UNCTAD and FAO data

Appendix 2: Main factors underlying the rise and peak of world prices (2006-2008)

The role of public policy reforms

Agricultural and trade reform policies of the large exporting countries. The 1980s were marked by major production surpluses exported to international markets by the principal producers/exporters. In part, these exports were boosted by agricultural support policies, especially in Europe and the United States, but also in Asia (rice) and the former Union of Soviet Socialist Republics (USSR). The United States and what was then the European Community used different support instruments to pursue a twofold objective: (i) to regulate their domestic markets, which were fairly well protected; and (ii) to conquer a market share in countries with deficits. Asian countries, whose food systems are based on rice, used the global market as a variable of adjustment on domestic markets (notably India and China). Others claimed to be structural exporters (Thailand and Viet Nam). Most major producing countries "exported" their instability onto international markets by dumping surplus production that could otherwise destabilize their domestic markets and depress prices.

The reforms introduced in the 1990s aimed for a return to agricultural market equilibrium by means of a cutback in public subsidies: reduction of institutional prices, supply regulation, fewer public interventions in the markets and an increase in direct payments. Such action was motivated by: (i) the cost to the consumer and taxpayers; and (ii) the mandatory engagements undertaken in the Marrakesh Agreement (World Trade Organization), notably the progressive reduction of subsidies having distortionary effects on trade. In the case of the former USSR, the upheaval caused by the dissolution of the Union severely affected the production and marketing structures.

Liberalization of agricultural and food economies in the developing countries. The economic and financial adjustments begun in the early 1980s resulted in a withdrawal of the state from the agricultural sector, notably in Latin America and Africa. This withdrawal was accompanied by full trade liberalization, conducted on a unilateral basis, in the context of negotiations with the international financial institutions, and in a global context marked by the persistence of protectionist policies in the markets for foodstuffs and agricultural products. The outcome was, on the one hand, significant liberalization, accelerated in the markets of many developing countries and, on the other, a slower and much less pronounced liberalization in the developed countries.

Preference for imported goods. In a situation of international prices depressed by the public policy support of developed countries with production surpluses, the liberalization of imports in developing countries resulted in a preference for imported goods. Rapid urbanization and the increase in urban poverty prompted a number of governments to prefer international suppliers. This facilitated food access for poor urban people.

Dismantling of instruments for public policy interventions. The dismantling of public policy instruments in numerous LDCs, particularly in Africa, focused on eliminating instruments supporting value chain developments. Public instruments for policy interventions were limited to warning systems, food destocking, and food aid to prevent and control food crises.

Regulated agricultural markets. In most Asian countries the aim of achieving food self-sufficiency, the struggle against rural poverty and the stability of prices for consumers have led to a continuing high level of state intervention. In India, the state has maintained minimum price supports, guaranteeing profitable prices for producers, and ensuring the regulation of consumer prices, a high level of control at the borders, storage facilities, and subsidized inputs. Indonesia also pursues an active intervention policy on rice (e.g. price supports for production, market interventions, control and restrictions of imports). In the same way, Bangladesh has conserved a strong tradition of public intervention in the food products market, in spite of the liberalization of access to raw materials. In these countries, state procurement is aimed simultaneously at regulating the markets, guaranteeing revenue for the producers, and developing food programmes for the poorest populations.

Food supply trends

The 1990s were characterized by a significant deceleration in the growth of world rice production (1.7 per cent per year compared with 2.5 per cent during the previous decade) and wheat (0.7 per cent compared with 1.8 per cent). However, corn saw a higher increase in growth (2.7 per cent in the 1990s compared with 0.9 per cent in the previous decade). These trends continued in the early 2000s. Over the last two years a succession of poor cereal harvests (due to climatic shocks) has negatively affected the overall production of world cereal exporters.

Another factor on the supply side that had a significant impact on the markets recently was the gradual reduction in the level of stocks, mainly of cereals, from the mid-1990s onwards. Indeed, since the previous high-price event in 1995, global stock levels have on average declined by 3.4 per cent per year. (See "Growing demand on agriculture and rising prices of commodities" – paper prepared for the round table organized during the IFAD Governing Council in 2008.)

Changing demand

Recent years have witnessed structural changes in the composition of demand for cereals. The emerging biofuels market was a new and significant source of demand for some agricultural commodities such as sugar, maize, cassava, oilseeds and palm oil. These commodities, predominantly used as food, have over the last two years been grown increasingly as feedstock for producing biofuels. Significant crude oil price rises allow them to become viable substitutes in certain important countries that have the capacity to use them. In a recent study (Alex Evans - The Feeding of the Nine Billion: Global Food Security for the 21st Century – a Chatham House Report, January 2009), it is claimed that the demand for biofuels has been

the single most significant driver of higher prices. According to Evans, data suggest that while global demand for cereals is increasing, this is only true as long as biofuels are included – and that once they are taken out, the growth in global demand is actually slowing down. For example, data from Goldman Sachs show that while historically the growth in global demand for food crops has been around 1.5 per cent a year, this now stands at 2.0 per cent (and is likely to rise to 2.6 per cent within a decade). Yet World Bank data show that with biofuels excluded, global grain demand increased by only 1.3 per cent a year between 2000 and 2007 – and in East Asia (including China) grain demand rose by just 0.3 per cent a year over the same period. The Goldman Sachs analysis also suggests that biofuels have been the principal driver of rising food prices in recent years.

Appendix 3: Internal instability of Sahelian and Malagasy domestic markets

This analysis compares domestic price volatility (consumer and producer prices) with the food price volatility on global markets over three time periods (1992-1999, 2000-2003 and 2004-2008). In order to measure price volatility, the coefficient of variation (the ratio of the standard deviation to the average value of a series) was calculated on the series of prices over the three periods. This coefficient is 20 per cent for imported rice in the first period (1992-1999), lower than that of consumer prices for locally produced cereals in Niger (where it reaches 48 per cent), Mali, and Senegal. In the early 2000s, at 6.7 per cent the coefficient of variation is much lower in the world market for rice, while it is still over 25 per cent in the market for local cereals at both the consumer and producer levels. Finally, from 2004 onwards, significant variability can be observed in international rice prices (51 per cent), while the variability for locally produced cereals fluctuated between 20 per cent and 26 per cent for consumers, and between 26 per cent and 39 per cent for producers (except for the case of Malian rice). This indicates that there has been an incomplete transmission of the rise in prices and a partial disconnection of domestic price trends from those observed on international markets.

Table 1. Comparison of monthly price instability on domestic and international markets

Zone	Consumer prices	1992-1999	2000-2003	2004-2008
Coefficient of variation (%)				
World market	Rice A1 Super	20.1	6.7	51.0
Madagascar	Local rice	36.3	10.3	20.7
Mali	Local rice	17.1	4.6	9.7
Senegal	Imported rice	30.2	5.9	24.2
Mali	Sorghum	28.1	25.8	23.8
Niger	Millet	48.5	28.5	25.0
Senegal	Millet	27.2	25.9	20.1

Source: Elaboration Bureau Issala on RESIMAO and UNCTAD data

Table 2. Comparison of instability of monthly producer prices and international market prices

Zone	Production prices	1992-1999	2000-2003	2004-2008
		Coefficient of variation (%)		
World market	Rice A1 Super	20.1	6.7	51.0
Burkina Faso	Maize	33.2	31.4	37.0
Burkina Faso	Sorghum	35.6	29.9	39.1
Mali	Maize	38.1	38.3	32.2
Mali	Rice	21.2	10.2	14.7
Senegal	Millet	35.0	26.3	25.9

Source: Elaboration Bureau Issala on RESIMAO and UNCTAD data