

Country responses to the food price crisis 2007/08

Case studies from Bangladesh, Nicaragua, and Sierra Leone

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* Disclaimer: The views presented in this paper are those of the authors and do not necessarily represent the views of the Department for International Development, ODI, IDS, PPRC, Nitlapan, CESPA or Concern Worldwide.

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Contents

Acknowledgements	ii
Summary	vii
1. Introduction.....	1
2. Analytical framework.....	3
2.1 Methods	3
2.2 Policy response framework.....	3
2.3 Country responses to the 2007/08 spike	4
2.4 Judging policy responses.....	10
2.5 Information gaps.....	12
2.5.1 Types of policy response	12
2.5.2 Coverage.....	13
2.5.3 Cost.....	13
2.5.4 Practicalities and results of implementation.....	14
2.6 Conclusion of literature review	15
3. Country cases.....	17
3.1 Bangladesh	19
3.1.1 Background	19
3.1.2 Food security and poverty.....	19
3.1.3 The 2007/08 price spike and Bangladesh	21
3.2 Nicaragua	23
3.2.1 Background	23
3.2.2 Food security and poverty.....	23
3.2.3 Nicaragua and the 2007/08 price spike	24
3.3 Sierra Leone.....	26
3.3.1 Background	26
3.3.2 Food security and poverty.....	26
3.3.3 Sierra Leone and the 2007/08 price spike.....	26
4. Responses.....	29
4.1 Border and market measures to dampen price pass-through.....	29
4.1.1 Border measures.....	33
4.1.2 Measures on domestic markets	37
4.1.3 Summary of border and market measures.....	43
4.2 Stimulating agricultural production and marketing	44
4.2.1 Prices, taxes and markets.....	44
4.2.2 Supplying and/or subsidising agricultural inputs	45
4.2.3 Supplying capital investment items to farmers	49

4.2.4	Organising farmers into groups.....	49
4.2.5	Results.....	50
4.2.6	Summary of agricultural production response measures.....	52
4.3	Safety nets and other measures to protect consumers.....	52
4.3.1	Compensating transfers to vulnerable consumers.....	56
4.3.2	Nutrition schemes	62
4.3.3	Assessing safety net and similar measures to protect vulnerable consumers	64
4.3.4	Summary and discussion of safety nets	67
4.4	Coping by individuals.....	67
5.	Conclusions	70
5.1	Summarising	70
5.2	Discussion and implications.....	70
6.	References	73
	ANNEX A: Additional technical detail about country responses.....	78
	A1 More detail related to border and market measures.....	78
	A2 More detail related to agricultural production response	82
	A3 More detail related to safety nets.....	83

List of Tables, Figures, & Boxes

Figure 1.1.	International cereal and oil prices	1
Figure 2.1	Framework for analysis of country policy responses (short term).....	4
Figure 2.2	Percent of countries reporting different policy responses (n=98)	5
Figure 2.3	Short-term policy responses to the food spike in 98 countries, by country income level	6
Box A	Speed and visibility of measures can be critical for conflict prevention and stabilisation: an example from Haiti	8
Box B	International evaluation criteria.....	11
Figure 2.4	Fiscal cost of food tax rate reductions to respond to high food prices as percent of GDP	14
Box C	Policy neglect of the small-scale and informal sector can have serious poverty and nutritional consequences: an example from southern Africa	15
Table 3.1:	The three countries at a glance.....	18
Figure 3.1:	Bangladesh rice production and yields per hectare, 1960/61 to 2007/08.....	20
Figure 3.2:	Timeline for Bangladesh.....	22
Figure 3.3.	Timeline for Nicaragua	25
Figure 3.4.	Timeline for Sierra Leone.....	28
Table 4.1.1	Border and market measures to dampen price pass-through.....	30
Figure 4.1.1.	Wheat and Maize imports to Bangladesh	34
Box D	What did key informants and focus groups in Sierra Leone say about prices?	36
Figure D.1	Rice prices in different communities over time	36
Table 4.1.2:	Cost of goods transport by truck Sierra Leone, late 2006.....	38

Figure 4.1.2 Rice price comparison between Sierra Leone, Guinea, and internationally	39
Figure 4.1.3. Public distribution of wheat and rice in Bangladesh over period of price spike	40
Figure 4.1.3. Monthly public grain stocks in Bangladesh; 1998 – 2009 & Dhaka prices	41
Box E: Input supply: other options.....	44
Table 4.2.1 National responses for increasing agricultural production in response to the price spike	46
Figure 4.2.1 Rice production and imports in Bangladesh, 2000-2009	50
Figure 4.2.2 Maize production and imports in Nicaragua, 2000-2009	51
Figure 4.2.3 Rice production and imports in Sierra Leone, 2003-2009.....	52
Table 4.3.1 Measures to protect the vulnerable from impacts of high food prices.....	54
Figure 4.3.1 Bangladesh government rice & wheat distribution & subsidised sales over 4 marketing years .	56
Figure 4.3.1. Rice and wheat prices in Bangladesh compared to world prices (US\$)	58
Figure 4.3.2 Annual food transfers by government and food aid channels in Bangladesh 2005-2008	59
Figure 4.3.3: Percentage of households consuming common non-cereal foods on at least three days of the previous week, by the type of home garden in rural Bangladesh in 2000.....	64
Table 4.4.1 Coping strategies reported by focus groups in the three countries.....	68
Figure A1.1 White maize prices in Nicaragua	78
Figure A1.2 International export & Sierra Leone import prices for rice, and their margins	78
Figure A1.3 Key export prices for rice across the globe.....	79
Figure A1.5 Maize, Rice, Beans, and Sorghum imports to Nicaragua in 2007 compared to 2008.....	80
Table A1.1 Exchange rates—Local currencies per US dollar	81
Figure A2.1 Rice and wheat harvests in Bangladesh over the last decade	82
Figure A2.2 Fertiliser use in Bangladesh since 1990	82
Figure A3.1 Global food aid recipients 1990 – 2008	83
Figure A3.2 Food aid to Bangladesh, Nicaragua, and Sierra Leone 1990 - 2008	84
Figure A3.3 Food aid expressed in capacity to meet nutritional requirements (total number of people), Bangladesh.....	85
Figure A3.4 Food aid expressed in capacity to meet nutritional requirements (total number of people), Nicaragua	85
Figure A3.5 Food aid expressed in capacity to meet nutritional requirements (total number of people), Sierra Leone	86
Table A3.1: Budget shares of households in different transfer programmes, Bangladesh.....	87

List of Acronyms

BDR	Bangladesh Rifles
CESPA	Centre for Economic and Social Policy Analysis
CFW	Cash for Work
CIF	Cost, Insurance, and Freight
CRS	Catholic Relief Services
DFID	Department for International Development
ENABAS	Empresa Nicaragüense de Alimentos Básicos
FAO	Food and Agriculture Organisation of the United Nations
FFW	Food for Work
GFD	General Food Distribution
GOB	Government of Bangladesh
IDS	Institute of Development Studies
MAFFS	Ministry of Agriculture and Food Security (Sierra Leone)
NGO	Non-Governmental Organisation
NITLAPAN	Institute of Applied Research and Local Development (Nicaragua)
ODI	Overseas Development Institute
OMS	Open Market Sales
PPRC	Power and Participation Research Centre
SADC	South African Development Community
SAFEX	South African Futures Exchange
STUR	Stock-to-use ratio
USAID	United States Agency for International Development
WFP	World Food Programme of the United Nations

Summary

In 2007/08, cereals prices spiked on world markets, the sharpest spikes in over 30 years. When prices of staple foods started to rise, governments, international organisations, and NGOs took action. This report looks at responses that were taken to:

- a) Prevent the high food prices from transmitting from international to domestic markets;
- b) Maintain food availability at the time of the crisis using domestic production programmes, and;
- c) Mitigate impacts of high prices on vulnerable citizens.

To look at these responses in detail, three country case studies from different regions of the world were used. These studies, commissioned with funding from DFID and in partnership with the UK Hunger Alliance, were undertaken in Bangladesh, Nicaragua, and Sierra Leone.

A *literature review* on responses to the international food prices spike, covering 98 countries, revealed the following key findings:

- Most countries enacted at least one policy in response to high food prices, and many took five or more, highlighting the wide impact and seriousness of the food price shock, and the **responsiveness of most governments**. Nearly two thirds of countries took measures in all three of areas **a**, **b**, and **c** outlined above.
- Regarding **type** of response, governments were constrained by existing institutional capacity; for instance, using social transfer systems is difficult unless such systems are already in place, and even where they were, scale-up proved difficult, the few exceptions tending to be middle income countries.
- On **timing**, responses of most international agencies were delayed by half a year or more, tended to support medium- to long-term policies, and left governments of poor countries with few resources for tackling immediate effects of the spike in prices.
- Governments tended not to target measures to vulnerable people, but rather to favour measures which could be rolled out more rapidly and with broad coverage. Coverage of safety-net interventions was particularly low. Even measures such as price subsidisation tended to favour urban areas and was in many cases insufficient in terms of breadth of people covered and length of time over which they were covered. Donors, on the other hand, tended to focus on targeted assistance to the vulnerable, given the attractiveness of the former and the costs and difficulties of the latter.
- In some countries, **government policy discouraged private sector** production and trade, exacerbating the problem of high prices. Four out of five countries which invested in measures to stimulate agricultural production also implemented at least one policy that might be expected to have the opposite effect, by reducing farmers' incentives to produce a marketable surplus.
- In spite of government and other interventions, most households had to rely on their own resources, along with help from family, friends and local social institutions. This highlights the importance of understanding households' own coping mechanisms to design effective policies. A key principle should be 'do no harm': don't stop people from helping themselves; then find ways to support them in their responses.

The review also showed gaps in policy including nutrition, healthcare, and finance for the poor. Not much information exists on coverage and cost of policies; nor on details of practical challenges; and, most important of all, on results.

The synthesis of country studies revealed the following key points:

Border and market measures

- The influence of export bans and import tariff reductions appear to have been relatively marginal. Government import facilitation for the private sector, particularly in Bangladesh and Sierra Leone may have been more useful.
- Overall, the three countries appear to have dampened price pass-through for staple foods from international to domestic markets — with varying degrees of success. Despite this dampening, price rises were still alarmingly high: especially in the case of rice.

Rapid food production response measures

- Bangladesh was particularly successful in increasing short term rice production. This reflected not only the short term measures taken by the government—including setting a floor price for rice, and subsidies for fertiliser and electricity—but also earlier long-term investments in irrigation and Green Revolution varieties, that means there are three harvests a year, allowing rapid supply increases to help bring prices down quickly.
- Nicaragua and Sierra Leone were less successful in stimulating a quick national production response, partly because their infrastructure and institutions were not fully developed, or had been run down during earlier conflicts; and partly because both countries are largely dependent on rain-fed agriculture.

Measures to mitigate impacts on the vulnerable

- In keeping with findings of the literature review, the general sense from the case study countries was one of interventions well-conceived, imperfectly — but not badly— implemented, but provided on too small a scale. Coverage — in length of time programmes were offered as well as number of people they benefited — was limited.
- Middle income countries often had safety nets in place and the capacity in funds, staff and procedures to expand these to meet the effects of higher food prices. Low income countries, on the other hand, never had the safety nets desirable in the first place, and thus found it difficult to do more.
- Thus, most people vulnerable to higher food prices had to rely on their own coping strategies. This presents a dilemma for public policy: the state must decide how much to help people through difficult times, and how much it can expect household, families and communities to bear the brunt of the shock.

Discussion

Three points stand out from this study, namely:

1. Low income countries cannot do much to prevent higher world prices raising domestic prices and creating hardship. They lack the finance, and administrative capacity to do so; the latter in part a result of the economic liberalisation that took place in the 1980s and 1990s. The situation may not be quite so difficult in middle income countries, but their populations are less vulnerable to higher food prices than those in low income countries;
2. Effective safety nets cannot be put into place in response to shocks: they have to be there before the shock if they are to be expanded to meet increased temporary needs;
3. Most of the reaction to higher food prices was a matter of family, household and individual response as vulnerable people sought to cope. Only a minority of informants had been aided by either the state or NGOs.

These prompt two reflections:

A. Even if there were limits to what low income countries were able to do, which measures were more or less effective in protecting the vulnerable?

A prime consideration concerns coverage: some measures, above all those designed to ameliorate rising prices, cover everyone in the same market; while others offer support only to particular groups. The former convey benefits to people who perhaps do not need state support to cope with higher food prices: but they do more or less ensure that almost all the vulnerable benefit as well. The latter clearly can be more efficient in reaching those who need help, but administratively they are demanding and risk covering only a fraction of those vulnerable to higher food prices.

The greater the share of the population who are poor or otherwise vulnerable to higher food prices, the less broad spectrum measures include those who do not assistance. This suggests that low income countries should look first and foremost to measures of broad coverage. These are, however, interventions to mitigate price rises on domestic markets. For low income countries with limited administrative capacity, most of these are neither simple nor cheap. Reducing import tariffs, restricting food exports, controlling prices by fiat, releasing public stocks, subsidising the price of staples — all have high costs, either directly or indirectly.¹

The calculus is then one of the political importance of holding down food prices versus the costs of intervention. It is middle income developing countries where such costs are bearable; and hence it is no surprise to see that there was virtually no increase in food prices in China during the price spike, and limited increases in India. Both countries, however, pay a heavy price for their public stores that provided this protection.

Programmes to stimulate production response may be a degree less costly, have less danger of distorting markets and incentives. Their problem, however, is that they may not be that easy to mount in countries with low levels of agricultural development.

Of the measures targeted to the vulnerable, the principal issue seen is that having safety nets in place that can be widened and deepened to accommodate additional needs. The rationale for having such safety nets in normal times, to deal with chronic poverty, is an issue beyond the scope of this paper. The implication here, however, is that when such measures are considered, their potential ability to offer relief when temporary shocks arise, is another reason for having them in place.

B. With so much coping down to individuals and families, what is the role of public assistance?

One implication is that of ensuring that public policies do not get in the way of private responses; another is to facilitate such responses where possible; and a third is to complement private efforts when possible.

Quite what these would be specifically will clearly vary by context, so that the overall implication is that planning need to be aware of coping measures and take them into account. Examples of potential responses that do this include:

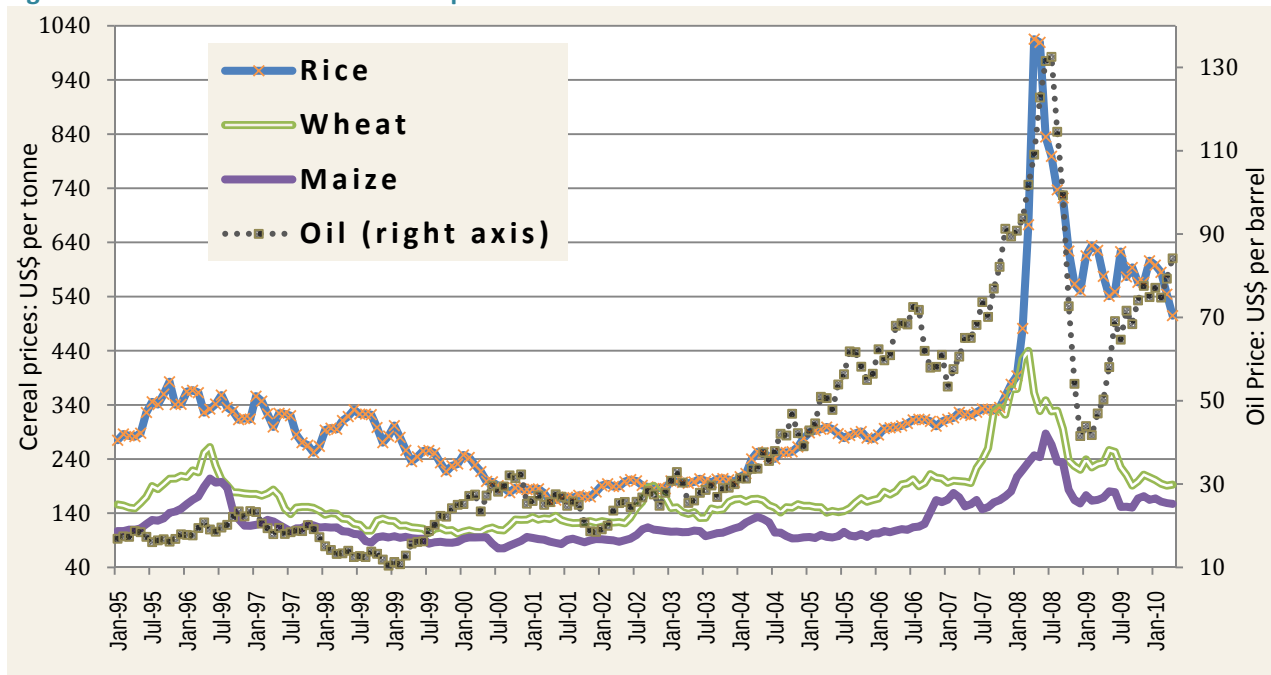
- Suspending regulations controlling petty trade or migration;
- Temporary programmes of vitamin and mineral supplementation to infants and young mothers in vulnerable households; and,
- Making additional second-tier funding available to micro-finance agencies responding to additional requests for emergency loans.

¹ Banning food exports may apparently have little or no cost to government, but the costs to domestic farmers from loss of export earnings may be considerable, if indirect.

1. Introduction

In 2007/08, cereals prices spiked significantly on world markets. Between January 2007 and the peak of the spikes in the first half of 2008, maize prices rose by 74%, rice prices by 224% and wheat prices by 124% — See Figure 1.1. These were the largest increases in cereals prices seen since 1973/74, 34 years before: they also happened over a short period.

Figure 1.1. International cereal and oil prices



Source: IMF Primary Commodity Price data. Rice: 5% broken, fob Bangkok. Wheat: U.S. #1 Hard Red Winter, fob Gulf of Mexico. Maize: U.S. #2 yellow, fob Gulf of Mexico. Oil: Average of U.K. Brent, Dubai, and West Texas Intermediate.

When international staple food prices started to rise, governments, international organisations, and NGOs took action. What did they do, and how effective were their responses?

The report first briefly reviews the literature on responses of governments and the international community to staple food price spikes across the world, before focusing on three countries — Bangladesh, Nicaragua, and Sierra Leone.

The primary sources for this paper were three studies commissioned in partnership with the Hunger Alliance UK² and funded by the UK Department for International Development (DFID). Each study was conducted by a local research centre: Power and Participation Research Centre (PPRC), Bangladesh; Institute of Applied Research and Local Development (Nitlapan), Nicaragua; and Centre for Economic and Social Policy Analysis (CESPA), Sierra Leone:

² A group of UK NGOs and Humanitarian Organisations working together to promote food security and end hunger. To complement this study, the UK Hunger Alliance and the Oakland Institute published a study on international responses to the food price crisis, http://www.oaklandinstitute.org/pdfs/high_food_prices_web_final.pdf

- Rahman, Hossain Zillur. 2009. Food Price Inflation: Impact and Response. Lessons from Recent Experiences. Dhaka, Bangladesh: PPRC
- Pérez, Francisco J.; Barrios, Juan J. & Pavón, Karen. 2010. Responses to High World Food Prices: Country Study: Nicaragua. Managua, Nicaragua: Nitlapan
- Kamara, Sullay. 2009. Responses to High World Food Prices. Sierra Leone's Country Study. Freetown, Sierra Leone: CESP

This paper provides a general background for the three countries, followed by a summary of responses undertaken in each country to:

- a) Prevent the high food prices from transmitting from international to domestic markets;
- b) Maintain food availability at the time of the crisis using domestic production programmes, and;
- c) Mitigate impacts of high prices on vulnerable citizens.

Drawing heavily on qualitative data from interviews with key informants and focus groups in the three countries, this paper looks at what can be said about relevance, planning, implementation, and effectiveness of responsive measures taken. It also outlines key policy implications for donors and other international organisations in responding to international food price shocks.

2. Analytical framework

2.1 Methods

We reviewed the literature on policy responses to the 2007/08 food price spike. A database was compiled on country policy responses, synthesising the work of FAO, the IMF, World Bank, regional banks, OECD and research institutions: 12 main sources in all³. The final sample included 98 countries: 38 from Sub-Saharan Africa, 24 from Latin America & Caribbean, 19 from Asia (East and South) and Pacific, 13 from Middle East and North Africa, and four from Europe and Central Asia.

The figures presented below should be treated with some caution, since the different secondary sources used different definitions and groupings of interventions, and there may be some errors of interpretation.

2.2 Policy response framework

Figure 2.1 shows the policy framework developed from the literature review. It is organised by three overarching policy objectives:

- Border and market measures to prevent or dampen food price rises,
- increasing short-term food availability (via local production), and
- protecting vulnerable groups (via targeted social transfers),⁴

This structure is intended to clarify the choices and trade-offs between policy instruments which have similar objectives — such as an import tariff reduction versus a general food subsidy.⁵ The framework contains 27 broad policy measures, with terminology adapted from the sources used.

Since this report is about how countries responded to a short term shock, this framework does not include medium to long-term policy measures⁶. These medium to long-term policy measures included support to increasing agricultural production, including investments in irrigation, market information systems, rural roads and the like; national campaigns for agricultural self-sufficiency; building up national grain reserves; starting up/expanding national safety net programmes; and starting or scaling up nutrition programmes. However, such longer-term responses are clearly very important to help bring domestic prices down over time — and to prevent or mitigate future international price spikes. Moreover, medium to long term responses were - in practice, anyway (because of the lead time needed for approval, financing and implementation⁷) - the main focus of **international support to country policy responses**.

³ The main sources were FAO (Demeke et al 2009, FAO 2009a,b, Rapsomanikis et al 2009); IMF 2008, World Bank (WB 2008, Ahmed 2008, WB Human Dev Group), ADB (2008), IADB (Cuesta and Jaramillo 2008), OECD 2009 and other researchers (Staatz et al 2008, Meierink et al 2009). Different international institutions - and sometimes different parts of the same institution - used differing definitions for classifying policy responses; moreover reporting of responses was not always consistent, so wherever possible the information was cross-checked with other secondary sources.

⁴ This is similar to the classification by Demeke et al (2009) and others.

⁵ Of course, some policy measures have unintended effects — for example, food price control may reduce farmers' incentives to plant — while a few, such as exchange rates and fuel subsidies, have multiple policy objectives. Agricultural input or voucher distribution targeted specifically to the poor clearly constitute a social transfer as well as being aimed at increasing food production. However, in this framework, these interventions are included under agricultural production as (except for small-scale operations) the degree of poverty targeting in such programmes is often weak and it can also change over time, e.g. the targeted Malawi starter packs scheme evolved into a national fertiliser subsidy.

⁶ . In addition, many of the references consulted did not report on these policies, so they are likely to be underestimated (for example, only 14 countries in the database were reported as building up grain reserves).

⁷ For example only 6 of 39 country projects listed in the World Bank Global Food Crisis Response Programme⁷ - by no means the slowest aid response - were signed off before August 2008, and none before the end of May 2008.

Figure 2.1 Framework for analysis of country policy responses (short term)

Protecting vulnerable groups (via targeted social transfers)		Preventing or mitigating food price rises		Increasing short-term food availability (via local production)	
Food	Cash	Internal	Border	Inputs/ Production costs	Output terms
'Emergency and targeted food aid'	Direct targeted cash transfer	Untargeted food price subsidies	Food exports banned / restricted / export quotas	Providing free inputs (fertiliser, seeds etc.) Also see productive safety nets below	Raising Producer support price
Food for Work	Cash for Work	Release stock (public or imported) at low price	Food export taxes raised or minimum export prices	Subsidized fuel / electricity for farmers	Reduction in producer taxes
School/hospital feeding	Civil service (lower paid) wage increases	Administrative food price control, often with restrictions on private trade / action against 'hoarders'	Reduction or elimination of import tariffs, quotas and customs fees	Untargeted production & input subsidies (usually fertilisers) / improved access to credit.	
Food ration/stamp	Other payments/ subsidies to poor groups (e.g. tax relief, fuel subsidy)	Price agreements with key traders	[Monetary and (exchange rate policies) – not consistently reported	Targeted free inputs or input subsidies for own food production - see footnote 3	
Direct sales to targeted groups at low price		Reduction of consumer taxes on food, including VAT	[Using risk hedging deals (options/ futures/ barter)] – not reported, see text	Short-term area-based emergency production projects (often including some of the above inputs, plus technical assistance)	
'Food assistance' (unspecified)/other feeding programme		[Untargeted fuel subsidies] - not consistently reported		[Untargeted fuel subsidies] - not consistently reported	
[Nutrition programmes] – under-reported, although probably included in some feeding programs					

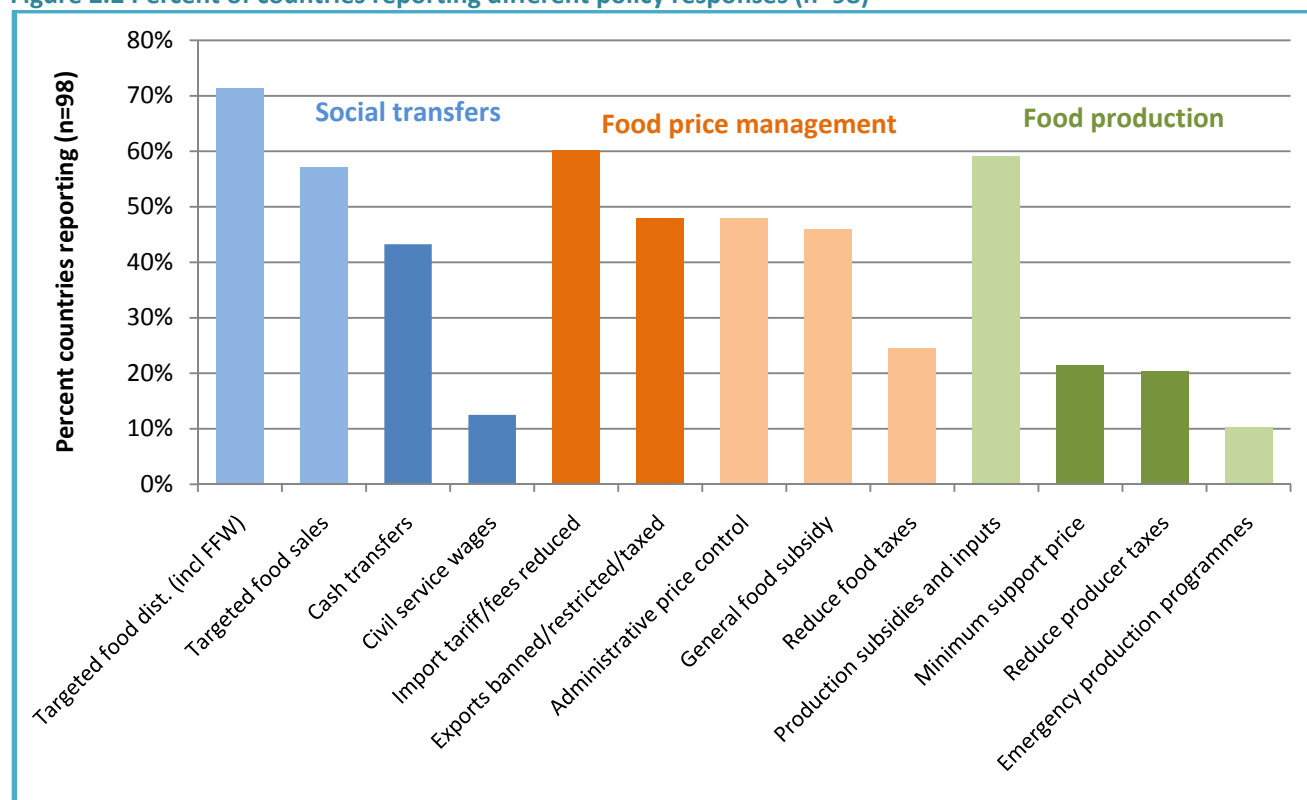
2.3 Country responses to the 2007/08 spike

The most striking finding was the *widespread and wide-ranging nature of country responses*. All the 98 countries in the sample responded to the international food price spike with at least one reported policy change⁸. Nearly two thirds of countries (61) were reported as taking 5 or more of the policy measures listed in

⁸ This contrasts with the findings of a May 08 survey by FAO of 77 countries, which found that 16% had 'no policy responses whatsoever' (FAO 2009). Although it is possible that we have erroneously categorised some countries as 'insufficient data'

Figure 2.1. A minority (7) implemented 10 or more measures: these were Bangladesh, Burkina Faso, China, Ethiopia, Guyana, Kenya and Pakistan. Sixty-three countries (64%) reported taking policy measures under all three sets of objectives in Figure 1. The most frequently reported policy responses are shown in Figure 2.2.

Figure 2.2 Percent of countries reporting different policy responses (n=98)



Source: compiled from 14 secondary sources including FAO, World Bank, regional development banks, IMF and other researchers, which were mainly based on reporting of policy responses by governments or by their local offices. Dist. = distribution FFW = Food for Work. See Figure 1 for colours and more details of policy measures. **Note:** For reasons of space, the graph excludes infrequent responses like 'other payments to poor groups' (6%) and 'increased export taxes' has been amalgamated with 'export bans and restrictions'

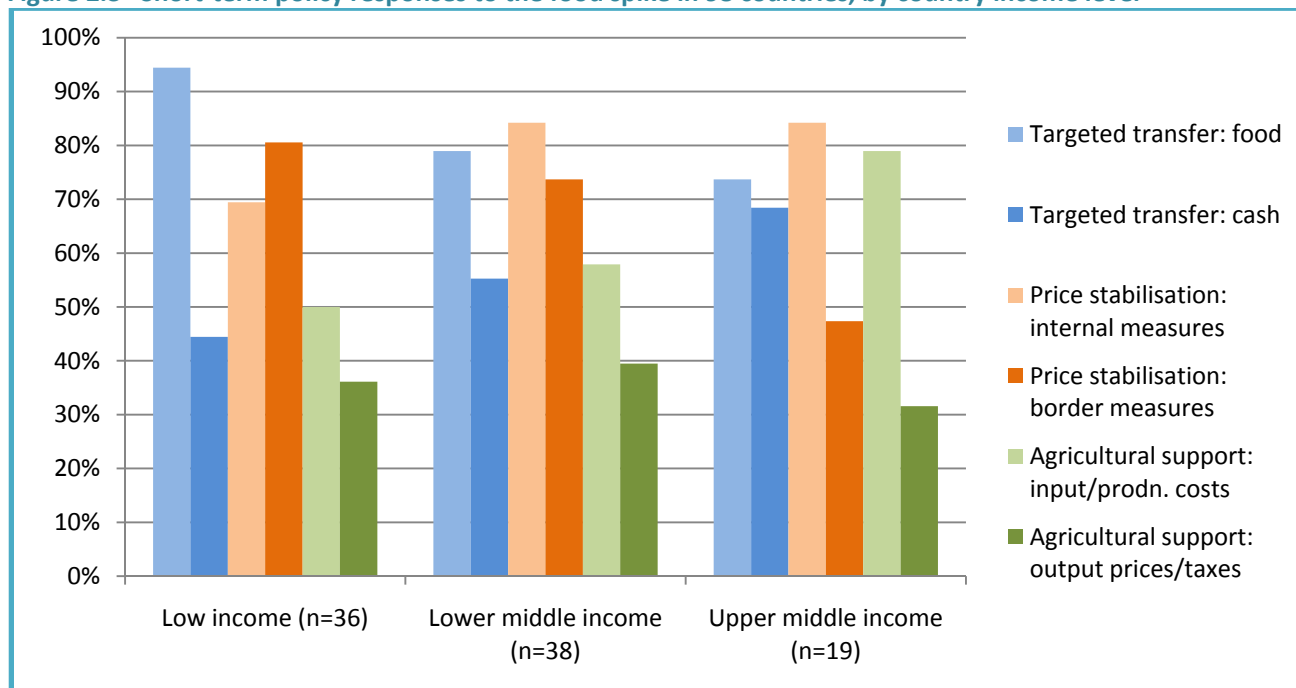
There was some variation in the type of policies adopted by different countries, related to their economy, location and history. For example, *cash transfers* were more frequently reported from middle income countries, while *targeted food transfers* were reported more frequently from low-income countries (Figure 2.3). The main reason is probably because cash transfer programmes were already in place in many middle income countries, while they are still incipient in many low-income countries; a second possible explanation (availability of external support for food transfers) is outlined below. A regional analysis also showed that more than twice as many countries in Asia and Sub-Saharan Africa reported targeted food transfers as reported cash transfers⁹.

(therefore removed from the sample) instead of 'having no policies', a more plausible explanation is that this review covers a longer period and includes a greater variety of policy measures (e.g. agricultural production).

⁹ While the main explanation is probably country income level (these are the poorest continents), a comparison across the lower-middle-income group suggests that there may be a regional effect as well, related most likely to the longer history of cash transfer programmes in Europe and Latin America than in Africa and Asia (with some notable exceptions e.g. India). The regional graph is not presented for lack of space, but is available from the authors.

Support to *agricultural production costs* – particularly through untargeted subsidies for credit, fertiliser and fuel – was reported more frequently from wealthier countries (four fifths of upper middle income countries, compared to about half of low income countries). This may possibly be because the poorer countries are more dependent on financing from international aid institutions, which are frequently reluctant to support untargeted subsidies. Country history and experience also had an understandable effect on policy choice: for example, countries with experience of implementing public works programmes resorted to cash for work and food for work as one of their policy responses, while many countries with a history of distrust of private traders adopted anti-hoarding and price-policing policies.

Figure 2.3 Short-term policy responses to the food spike in 98 countries, by country income level



Source: as for Figure 2.2. Country income classification is from World Bank <http://go.worldbank.org/K2CKM78CC0>

Targeted food transfers comprised one of the most frequently reported policy responses (Figure 2.2). Seventy countries in the sample (71%) reported one or more of the following programmes: food stamps or rations; sales of subsidised food to targeted households or in poor neighbourhoods; Food for Work; and/or school and hospital feeding. Fifty-four (77%) of these countries received support from the World Food Programme (WFP)¹⁰. The remaining 16 – all in the middle or upper income bracket – did not receive WFP assistance in 2008. The availability of external support from WFP may be an additional explanation for the higher prevalence of food

¹⁰ WFP also reported supporting food programmes in 15 additional countries that did *not* report making food transfers as a policy response to high world food prices. This may represent reporting errors, or it may be that although transfers were made, their levels did not change as a result of the food crisis. Worldwide, WFP gave assistance to 82 countries in 2008, although overall food tonnage delivered has been declining consistently over the past 7 years. (WFP Annual Report 2009 and on-line quantity reporting <http://www.wfp.org/fais/reports/quantities-delivered-two-dimensional-report> accessed 5 Feb 2010)

transfers than cash transfers in lower-income countries (Figure 2.3), since the overwhelming majority of WFP assistance in the past has been for physical delivery of food¹¹.

Cash transfers, as mentioned above, were used mainly in the 45 countries that already had substantial cash transfer programmes in place. One of the lessons from the food price crisis has been that it is nigh-impossible to create such safety nets from scratch quickly enough. This has led to renewed international interest in developing permanent social transfer systems which can also form a basis for safety nets as the need arises. A number of countries, e.g. Bolivia (Cuesta and Jaramillo 2009) have now started or significantly expanded national cash transfer programmes, while others have introduced new cash transfer instruments (for example Bangladesh is currently trying out its own version of India's National Rural Employment Guarantee Scheme).

Even when transfer programmes are already in place, responding to rapid food price rises is by no means straightforward – even if there is money in the state budget to do so. First, it requires deciding the appropriate level of compensation. This is difficult during rapid inflation and where prices vary across the country. When food prices are skyrocketing, programme clients may ask for food rather than cash, as happened in Ethiopia¹² and parts of West Africa¹³ in 2008. Second, a number of people who were not previously eligible for benefits may now become the 'new poor' due to food price inflation – thus presenting transfer programmes with the tricky task of identifying and signing on these new clients at short notice. Targeting the poor is extremely difficult at the best of times; a major study found that out of 122 social assistance programmes in 48 countries, in a quarter of the cases targeting was regressive, i.e. "a random allocation of resources would have provided a greater share of benefits to the poor" (Coady, Grosh, and Hoddinott 2004).

'Cash-for-work' schemes present an apparent partial solution to the targeting problem as – provided that wages are set at an appropriately low level - only those people desperate for work will apply. However, such schemes (as well as excluding the elderly, sick and disabled) are also very difficult to scale up quickly if there is to be any prospect of the work leading to sustainable benefits: roads require decent engineering, tree planting depends on seedling nurseries and so on.

Food price management

Nearly all (94%) countries in the sample attempted at least one policy measure – and many enacted 4 or 5 - to control and stabilise prices for consumers. A few countries were notably successful in keeping domestic price rises very low - for example China, India and Indonesia in rice (Dawe and Morales-Opazo 2009), and to a lesser extent Egypt (wheat) and some markets in Mexico (maize) (Keats et al., forthcoming).

As can be seen from Figure 2.2, **border measures** (mainly reducing import tariffs and duties, and/or imposing new export bans and quotas) were the most widely reported response. This is probably because these are relatively quick and easy to authorise, although not always easy to enforce.

Export bans, restrictions or strict quotas were reported from 40% of sampled countries¹⁴. Export bans have been widely criticised for "beggar thy neighbour" effects. For example, world rice prices rose appreciably immediately following export bans in India in 2007 (Timmer 2009).

¹¹ However, since 2008/9 WFP has been given the opportunity to expand its role in market-friendly ways: for example to scale up its support to cash-for work schemes and distribution of vouchers for food and other essential household items (WFP 2008; WFP 2009; allAfrica.com 2009).

¹² Ethiopia - see <http://www.odihpn.org/report.asp?id=2997>

¹³ See <http://blogs.cgdev.org/globaldevelopment/2009/03/cash-or-food-for-thought-the-d.php>

¹⁴ An additional 8% employed increased export taxes or minimum export prices.

However, in many countries export bans may not be an efficient way of lowering prices for domestic consumers, e.g. where zones of surplus production are located far from the major domestic consumption centres and normally sell to a neighbouring country - as in many parts of Africa for example. If transport costs are too high, an export ban may cut the crop off from its habitual market without making it economic to send it elsewhere, causing the price to crash in the production zone. This can both impoverish farmers and discourage them from planting next season - without significantly lowering prices in the main consumption areas (Staatz et al. 2008).

Even where this is not the case, export bans are not always easy to implement in countries with long and scantily-populated borders – as in much of Africa. Bans may also lend themselves to non-transparent deals benefiting a minority¹⁵.

Import tariff, tax and fee reductions (reported from 60% of countries) are a much less contested policy measure. Although they may be less well-targeted to the poor than a good social transfer programme, they can also be much quicker to put in place. Although loss of tariff revenues can be serious for the poorest governments, where they account for a high fraction of government revenues¹⁶, they can also be cost-effective: in a Madagascar study the benefits 'to poor net rice consumers were estimated to be 2 to 8.7 times the value of lost tariff revenues' (Coady, Dorosh and Minten 2006, cited in Grosh et al. 2008). However, following successive rounds of liberalisation, many countries already had very low import tariffs by 2007, reducing their ability to use this measure effectively to reduce food prices in 2007/8¹⁷. Moreover, domestic markets are not very competitive, it may be difficult to ensure that changes in wholesale costs resulting from tariff or tax cuts are transmitted to poor consumers, and don't simply leave the wholesalers better off (Staatz et al. 2008; FAO 2008). And finally, in countries where traders regularly circumvent tariff payments, raising or lowering tariff rates may have a negligible effect on domestic prices (Chapoto and Jayne 2009).

Box A Speed and visibility of measures can be critical for conflict prevention and stabilisation: an example from Haiti

As the prices of basic food staples rose in early 2008, public protests grew large and violent. An attempt to storm the presidential palace led the Senate to vote the PM and his cabinet out of office.

Prior to the riots, a multi-sectoral working group chaired by the PM and supported by the international community had been developing a strategy to deal with rising food prices, including public works programmes, agricultural inputs and expanding food assistance programmes.

The riots indicated a need for more immediate and visible action. Thus the government announced a temporary subsidy to reduce the price of rice, the main staple*.

The authors remark that the subsidy, although not as sharply targeted as a good safety net programme, had less 'errors of exclusion ... than would be expected from the employment generation, agricultural input and food assistance programmes, as these often do not reach the poorest households in Haiti'.

Source: (Grosh et al. 2008, 450) p.449

** this subsidy only lasted until June due to fiscal constraints and concerns about illegal exports to Dominican Republic (Haiti CNCS 2008)*

¹⁵ See for example the (unproven) allegations in <http://www.outlookindia.com/printarticle.aspx?250566>

¹⁶ For example, Action Contre La Faim (2008) estimated that in Liberia, removing the \$2.1/bag tax on rice would cost the government \$6M in lost revenues, 'equivalent to 60% of the budget of the Ministry of Health or twice the budget of the Ministry of Agriculture'.

¹⁷ Rapsomanikis (2009) cites work by Sharma and Konandreas (2008) who found that applied tariffs on cereals were already fairly low in 2006 - under 8% for a sample of 60 low income food deficit countries)

Measures to bring down domestic food prices were also widely reported (76% of countries in the sample). These included:

- Food price subsidies, which are popular due to their speed and broad coverage — one reason that they have been used in Haïti, see Box A. On the other hand, they can be very costly (IMF 2008) and subsidising the better-off may be a poor use of limited resources.
- Administrative price controls, where prices are set and policed. Although much less costly for governments in the short term than subsidising food prices, enforcing maximum prices can be very difficult when demand outstrips supply. It also risks making matters worse in the medium term, by reducing incentives for farmers to plant food crops and for private traders to import and trade food;
- Reduced food taxes. Here the cost is lost public revenue.
- Arranging prices with key importers and wholesalers as an emergency measure, relying on trader ‘goodwill’.
- Taking direct action against ‘hoarders and profiteers’ — for example, by forcing traders to release stock. However, forcing stocks to be released that were being held for later in the season could merely ensure that when stocks run out, prices would rise more dramatically.

Quick food production: Over three quarters of countries in the sample undertook at least one policy measure, to stimulate a quick national food production response and/or to help poor people with access to land to feed themselves. Direct measures to **reduce production costs** included input subsidies (mainly untargeted, particularly fertiliser and fuel), access to cheap credit, and in some cases free distribution of seeds, tools, animals and fertilisers. Some countries also **supported output prices** for farmers, either by reducing taxes or by setting minimum prices to be underpinned by government procurement. Measures to reduce production costs were reported by nearly three times as many countries (59%) as measures to support producer output prices (21%). This may be because minimum price guarantees have unpredictable budgetary implications, create fewer patronage opportunities and are hard to implement, particularly if the infrastructure and institutions for state procurement are not in place (many were dismantled in the 1980s). Another reason in low-income countries may be the availability of aid financing for some kinds of targeted input programmes (e.g. free distribution of inputs to selected farmers).

It is worth noting that four fifths (81%) of countries which invested in measures to stimulate agricultural production also implemented at least one policy that might be expected to have the opposite effect, by reducing farmers’ incentives to plant a marketable surplus: for example export bans or maximum consumer prices. This may be one of the reasons why the short-term production response was not as great as expected in many — especially low income — countries (FAO 2009).

Broader policy measures: fuel subsidies and monetary policy

Fuel prices rose worldwide at about the same time as food prices. Fuel is a relatively low component of *direct* spending by poor households: usually under 5%, compared to 30–50% or more for food. However fuel is an important part of food production and marketing costs. Also, in the case of (mainly urban) households that use paraffin or gas for cooking, saving on cooking fuel costs may lead families to reduce the number of meals they cook per day (Fouere et al. 2000), which may have a negative impact on nutrition.

Thirty-eight out of 49 low and middle income countries surveyed in early 2009 had implemented, since 2006, some sort of fuel price control, subsidy, or tax reduction (Kojima 2009). No evidence was collected on the impact of these fuel subsidies on food security. General fuel subsidies are typically very expensive and disproportionately benefit the rich, while targeted subsidies (for example kerosene for cooking, or diesel for farmers) are tricky to implement (Coady et al. 2006; IMF 2008; Kojima 2009).

Macro-economic policy constitutes another set of policy measures which can affect both food prices and the buying power of the poor, through several channels (IMF 2008).

If **exchange rates** appreciate against the US dollar, then world price increases will be mitigated for food importing countries — as applied in some Asian countries at the time of the spike. Currency appreciation, however, is far from a blessing in the medium term: by encouraging imports and discouraging exports, the trade balance is likely to worsen, with deflationary effects on the economy. That may help keep prices of all goods and services from rising, but at the cost of growth and jobs. Indeed, for countries facing higher food prices that depend significantly on imported food, there is a macro-economic argument for allowing the currency to depreciate in the medium term. Although this will exacerbate any increases in the price of imported food, it is likely to stimulate exports and hence economic growth; while in the medium term it is likely to encourage domestic production to substitute for imports, again tending to raise growth. This, however, presents policy-makers with a dilemma: in the short run a depreciating currency is likely to cause hardship as the cost of imported goods rises; while the benefits appear only in the medium term. FAO (2008) analysed various exchange rate options for high food prices (floating, fixed, or pegged to the dollar or euro) and found that a fixed exchange rate normally has the worst outcome for both food importing and exporting countries

The **money supply** may be another lever to control prices: if food (and fuel) prices are rising on account of higher world prices, to some extent the transmission of these to domestic inflation can be curbed by tighter control of the money supply — exercised through higher interest rates, or mandatory limits to bank lending, as well as reduced rates of emission of banknotes. While such measures will limit inflation, they risk deflation as domestic businesses contract operations faced by higher costs of working and investment capital, and hence growth slows. (Cuesta and Jaramillo 2009; IMF 2008)

There are few reports of countries actively using the exchange rate or money supply during the food price spike, especially in low income, food importing countries most vulnerable to rising food prices. However, a number of developing countries have inflation targeting regimes¹⁸, which do mean that food prices will trigger macroeconomic changes where food prices form a significant part of the consumption basket (e.g. Colombia¹⁹, González et al. 2006).

2.4 Judging policy responses

The **potential** pros and cons of many policy responses to soaring food prices have been discussed by a number of authors and institutions, most often from the point of view of economists. FAO (2008) offers a helpful discussion of the potential benefits, risks and conditions for implementation of a wide range of policy options (although it is thin in a few areas such as nutrition). FAO has also set up a resource centre for food and agriculture policy (Easypol²⁰) which contains analytical tools and training materials for a wide variety of policies.

However, from this literature review it appears that:

- only a few authors have used a **systematic approach** to compare responses against a standard set of criteria – and their criteria vary.

¹⁸ These include some low- and lower-middle income countries such as Honduras, Jamaica, Kenya, Kyrgyzstan, Sri Lanka, Tanzania and Uganda (Lucotte 2010).

¹⁹ González et al. (2006) make the interesting point that “food inflation tends to have a greater impact on total inflation [in developing countries] because their share of food in household budget is higher and their food prices tend to be more volatile. For instance, in Colombia, during the period 1990-2005 food explains about 51 percent of the CPI variability even though the share of food in total spending is only 30 percent”.

²⁰ http://www.fao.org/easypol/output/index_main.asp

- in only a few cases (e.g. Coady, Dorosh, and Minten 2009) have two or more potential responses been compared in terms of **costs and benefits**, e.g. through economic modelling
- no systematic **monitoring and evaluation** of the actual results of policy responses has been located.

What criteria are used to judge a policy will clearly depend on who is making the judgement — for example a politician will normally consider many factors well beyond strict economic measures. Box B shows international evaluation criteria that are commonly used to judge policy and programming, including rapid humanitarian interventions. There are several criteria that might also be used for responses to soaring food prices that do not fit very comfortably in any of those listed. These include:

- **Speed and ease of implementation** is of high importance to many decision-makers (see example in Box A) so could be treated separately. Speed and consistency of follow-through on government decisions is also essential if the private sector is to respond as expected to policy signals. For example, a delay between the announcement of a tariff reduction and its implementation can leave a period without imports (with consequent price rises) while traders wait for it to come into effect. Similarly, 'the delay in [private traders] importing grain into Zambia after the government had announced their intention to import grain in 2008 resulted in a 24% percent increase in the following month's maize prices in Lusaka and 30% in Kabwe' (Chapoto and Jayne 2009).
- **Political acceptability** (with wider peace and stability goals) – this may demand trade-offs between helping the most vulnerable and pleasing powerful interest groups
- **Reversibility**: Many governments cannot afford and/or do not wish to continue to fund temporary social safety nets (as opposed to permanent social transfer programmes) once a crisis is over. However many policies introduced in a time of crisis (e.g. subsidies, tax cuts) can be hard to reverse, as history shows. Managing expectations is key to reversibility. Some countries have managed this e.g. Mexico and Chile made additional payments to recipients of regular social transfer programmes which were discontinued when food prices went down. (Grosh et al. 2008)

Box B International evaluation criteria

1. **Relevance** — the extent to which the activity is suited to the priorities and policies of the target group and other stakeholders.
2. **Effectiveness** — the extent to which an activity attains its objectives.
3. **Efficiency** – a measure of the outputs and outcomes, qualitative and quantitative, in relation to the inputs. It signifies that the programme uses the least costly resources possible in order to achieve the desired results.
4. **Impact** — the positive and negative changes produced by a development intervention, directly or indirectly, intended or unintended, long-term as well as short-term.
5. **Sustainability** — concerned with measuring whether the benefits of an activity are likely to continue after the initial policy or funding has been withdrawn. Interventions need to be environmentally, institutionally and financially sustainable. Any assessment of sustainability should cover the concept of ownership.
6. **Coverage** — which groups are included in/excluded from a programme, and the differential impact on those included and excluded. (including gender equity and disability).
7. **Coherence** — the need to assess other policies and programmes which affect the intervention being evaluated, for example security, humanitarian, trade and military policies and programmes, as well as the intervention or policy itself.
8. **Co-ordination** – a single intervention cannot be evaluated in isolation from what others are doing, as what may seem appropriate from the point of view of a single actor, may not be appropriate from the point of view of the system as a whole.

Source: Adapted from OECD-Development Assistance Committee evaluation criteria, including for humanitarian evaluations http://www.oecd.org/document/22/0,2340,en_2649_34435_2086550_1_1_1_1.00.html
http://www.alnap.org/pool/files/eha_2006.pdf

Finally, a note on **relevance**. In many poor countries, social transfers and other direct government benefits often have a low coverage. Most poor people have to manage as best they can, with the help of family, friends and local social institutions (although social solidarity has been reported to collapse in some crises). Understanding the measures that people take themselves to cope with high food prices is vital in order to make policy measures relevant – both to design and target them properly, and even more important, to avoid making things more difficult for households in trouble. As an example: a minority of parents in dire straits pull children out of school to save fees/costs and sometimes to benefit from additional household labour; in some countries school systems are very strict and they may find it difficult to go back to school later. Some countries (e.g. Colombia) have set up flexible education systems that enable such children to rejoin their studies without major penalties once household finances are back on an even keel (Hadley 2009).

It is important to study household and individual responses because specific ‘coping behaviours’ do vary by locality and the duration of the price spike (Compton et al. 2010).

2.5 Information gaps

2.5.1 Types of policy response

This review was not able to locate sufficient information on some areas of policy response, as follows.

One notable omission from Figure 2.2 is **nutrition interventions**. This may partly be a reporting problem since some ‘targeted food transfers’ may have a nutritional component, for example school and hospital feeding. However, it may also reflect a general lack of nutrition responses to the food price spike. The main reason is probably that if nutrition programmes are not already in place then it is difficult to scale them up quickly during a food crisis. This is potentially a serious lacuna, since there is evidence that micronutrient malnutrition is an early result of rising food prices in poor countries – particularly in infants and pregnant women – and has serious long-term consequences. However, the food price spike has resulted in greatly increased international interest in nutrition (SUN Task Team 2010), and many programmes have started up or expanded in 2009/10, (e.g. Government of Indonesia/UNDP 2009).

Another under-reported policy area is **finance: particularly for the poor and for farming**. Access to finance can help both food production and rural households to smooth over price booms and slumps (Rutherford 1999; Collins et al. 2009), while trade finance may be also critical to keep food moving to where it is needed (Rapsomanikis 2009). Furthermore, finance can play an important role in smoothing consumption: when prices rose, many poor people got food on credit, borrowed funds, or both, from external institutions as well as friends and relatives (Compton et al. 2010). Microfinance institutions (MFIs) have grown rapidly over the past decade and now serve over 90 million people of whom about three quarters are women (Gonzalez and Rosenberg 2006). As a result of higher food prices, many MFIs (e.g. Ahmed and Camilla Nestor 2009) reported lower savings rates, and loans being used for consumption instead of investment, with knock-on effects on the MFIs themselves. However, there is relatively little information about governments’ policy management of the financial area during the food crisis. A few governments e.g. India called ad hoc debt forgiveness or repayment holidays (Demeke, Pangrazio, and Maetz 2009), which can undermine financial systems if not executed very carefully.

Thirdly, **health and education-related responses** to the food price rise were also scarcely reported. Poor households often make savings on health care and medicines when food prices rise, and infant mortality rises significantly in poor countries when household spending power is reduced (Grepin 2009). As mentioned above, children may also be pulled out of school, albeit by a minority of families). Yet no specific policies for

maintaining access to health care and education were recorded in the studies reviewed here. Cash transfers, if available, will of course help maintain access to health and education.

Finally, no country reported **hedging against price risks** through, for example, options and futures... In fact, some countries such as India closed their futures markets as soon as food prices started rising sharply²¹. There may be more scope for hedging in future. For example, Egypt imported an estimated 7M tonnes of wheat in 2007–08, just when international wheat prices were rocketing upwards. According to World Bank calculations (World Bank/FAO/IFAD 2009) the country might have saved over US\$600M dollars if they had bought options contracts.

2.5.2 Coverage

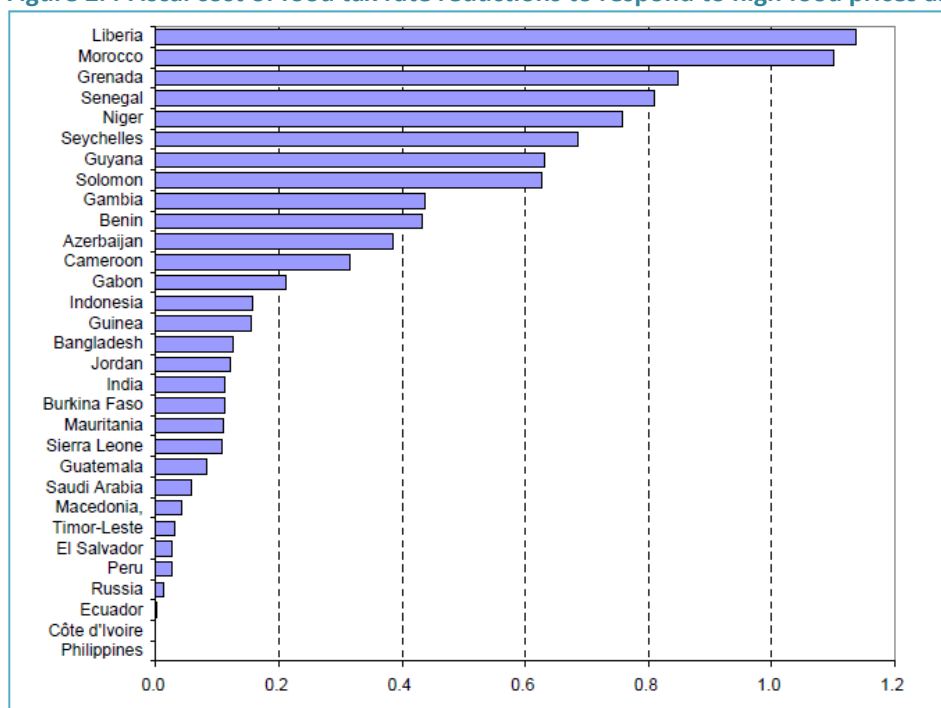
Little quantitative information is available on the extent and coverage of policies and programmes. For example, while 60% of countries in the sample recorded ‘reduction in import tariffs and fees’, the scope varied widely (it might cover only one commodity or a large basket) and the value of the tariff reductions also varied dramatically (e.g. Nigeria slashed its rice tariff from 100% to 2.7% (FAO Committee on Commodity Problems 2009) while Bangladesh had only a 5% import tariff on rice to remove). Similarly, countries which reported ‘school feeding’ or cash transfers’ might be referring to a national programme or to a very small endeavour.

2.5.3 Cost

More information is also needed on the **relative cost of different measures**. This is important both for comparing costs and benefits of different options and also for examining the wider implications of policies and programmes for national finances. The IMF (2008) used its country offices to estimate costs for some areas of policy; an example is shown in Figure 2.4. However, much more information (and cross-checking) is needed.

²¹ E.g. India, <http://www.nytimes.com/2008/05/08/business/worldbusiness/08iht-commmod.1.12690215.html>

Figure 2.4 Fiscal cost of food tax rate reductions to respond to high food prices as percent of GDP



Source: (IMF 2008)

2.5.4 Practicalities and results of implementation

Finally, little detail is available on the **reality of implementation of different policy measures**. As mentioned above, no monitoring or evaluation studies have been located to date.

The majority of studies reviewed were conducted during 2008 when international attention (and research money) was still focused on the 'food crisis' and many country policy responses were naturally still then at an early stage. More recent information is needed, including on whether policies have been reversed. FAO (FAO Committee on Commodity Problems 2009) noted in April 2009 that 'only measures related to export restrictions are being relaxed' and that there was uncertainty about the future of many others.

Furthermore, although many studies have looked at the potential impact of different policies, there is generally a dearth of information on how policies played out in practice. This is important because there is a potential gulf between announcing a policy measure and ensuring that it happens as intended. One example is given by Meijerink, Roza, and van Berkum (2010) who discuss the inconsistency, political battles and corruption scandals surrounding the policy response to high food prices in Kenya. More such detailed reporting into the messy reality of policy-making and implementation is needed.

One area which is often neglected in analyses is **how policies affect the small-scale and informal sector**, where most of the poor work and obtain their food. Box C gives an example from southern Africa.

Another missing area is differential impact within households, particularly **gender impacts**. Women are more sensitive than men to crises owing to lower access to and control over resources, as well as gender-based vulnerabilities such as heavy time burdens, threats or acts of violence, limited legal benefits and protections, limited authority to make decisions, and limited control of financial resources. When crises strike, women are more likely than men to lose assets and formal sector jobs, while their home and informal sector workloads increase more (for example, more time spent in health, education, or care, more time to travel and find lower

priced provisions, and preparation of more time-intensive foods). Women are also more likely to reduce their consumption to buffer other family members (Quisumbing, Meinzen-Dick, and Bassett 2008).

“In Bangladesh, even before the crisis, almost 60 percent of households reported that women skip meals more often than men. As food prices rise and staples consume more of the food expenditures, households frequently cut back on both food quantity (caloric intake) and quality (dietary diversity), which provides micronutrients that girls and women particularly need...Pregnant and lactating mothers are among the groups considered most at risk of food insecurity and poor nutrition induced by crisis, with implications for their health and nutritional status and the future health and productivity of their children.” (ibid)

Gender impacts may also be felt in schooling – as girls’ attendance is more likely in most countries to suffer than boys; in farming, where women’s production response is likely to be more constrained than men’s; and in asset depletion, where women’s assets tend to be sold before men’s’. As Quisumbing, Meinzen-Dick, and Bassett (2008) wrote: “The issues of whether or not women’s assets can be protected against disposal without their consent and whether they can be recovered or restored after a crisis merits greater attention.”

Understanding the actual (as opposed to potential) impact of policy measures is impossible without improving information in these areas; and that means much **more systematic monitoring and evaluation of policies and programmes**.

Box C Policy neglect of the small-scale and informal sector can have serious poverty and nutritional consequences: an example from southern Africa

Small-scale millers play an important food security role. A large proportion of urban consumers as well as rural maize-buying households buy grain from local retailers and pay a fee to mill the grain into local meal at a local small mill. Local meal has a higher nutritional content than refined packaged meal, and is 20% cheaper.

However, during years of production shortfalls, grain supplies in local markets dwindle. Industrial mills have traditionally been given permits to import maize, or been ensured preferential access to government-imported maize. Poor consumers are then forced to pay a higher price for maize meal than would have been the case if imported grain were released onto informal markets through small traders.

The authors recommend smoothing import procedures for small traders and millers when prices rise, and allowing them to compete on fair terms for government-imported grain.

Source: Jayne, Zulu, and Nijhoff 2006

2.6 Conclusion of literature review

This chapter has reviewed the main policy measures undertaken by governments round the world in response to the food price spike; suggests some criteria by which the value of different policies might be judged; points out some important gaps in our knowledge; and calls for increased monitoring and evaluation. The main lessons from the literature review are:

1. All of the 98 countries reviewed enacted at least one policy measure to prevent or mitigate the effects of food price rises in 07/08, and many undertook five or more. This highlights the wide impact and seriousness of the food price shock, as well as the responsiveness of most governments.
2. Government actions aimed to reduce food price increases, protect vulnerable groups via targeted social transfers; and to increase food availability via local production. Nearly two thirds of countries reported taking measures in all three areas.
3. Most international agency responses were delayed by six months or more after prices started to spike, so — in practice, at any rate — they mainly supported medium to long term policy responses. This

meant that governments of poor countries often had few resources to deal with the immediate results of the price spike.

4. Governments were also constrained by what institutions were already in place. For example it was very difficult for governments to use social transfer systems to respond to high food prices unless national systems were already in place, and even then (with a few exceptions, mainly middle income countries) it was not easy to scale up rapidly.
5. Many governments took measures that were rapid and ensured broad coverage, although perhaps not carefully targeted to the poor.
6. However, ensuring that policies were implemented as intended could be challenging: for example enforcing low prices and export bans, or getting the right level of cash transfers to the poor to match rising food prices. Better monitoring and evaluation would be useful to spot difficulties and improve implementation.
7. In some countries, government policy is likely to have discouraged private sector production and trade and potentially made matters worse. Four fifths of countries which invested in measures to stimulate agricultural production also implemented at least one policy that might be expected to have the opposite effect, by reducing farmers' incentives to produce a marketable surplus. Unclear and inconsistent ad hoc measures were particularly unhelpful.
8. Coverage of government interventions to assist directly those vulnerable to food price rises — although data are sparse — is likely to have been quite low. Most households therefore had to rely on their own resources, along with help from family, friends and local social institutions. This highlights the importance of understanding households' own coping mechanisms in order to design effective policies. A key principle should be 'do no harm': don't stop people from helping themselves; then find ways to support them in their responses.
9. Key gaps in our knowledge include: some key policy areas including nutrition, healthcare and finance for the poor; quantitative information on coverage and cost of policies; and details on practical challenges and results of implementation.

3. Country cases

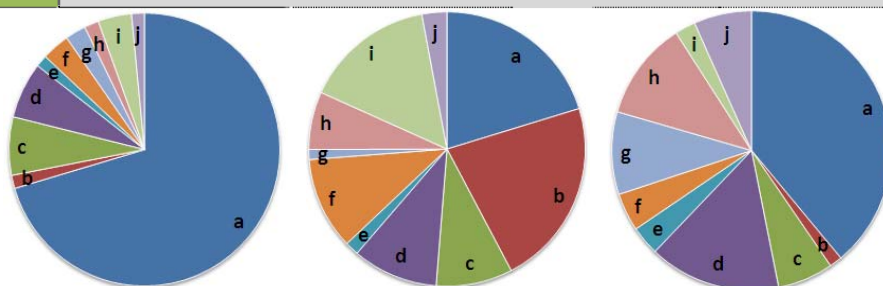
The three countries were selected to represent those where it was to be expected that a spike in world cereals prices would have significant effects, owing to poverty and food insecurity, as well as being coastal with open trade regimes that would allow international price movements to be transmitted to domestic markets. Table 3.1 summarises the main features of the three countries.

Public responses to the price spike and its impacts are considerably influenced by context: by the possibilities and preferences that domestic circumstances in large measure determine. This section sets out key features of content for the three countries, and provides in each case a timeline of the changes in domestic prices of staples, critical relevant events, and response undertaken.

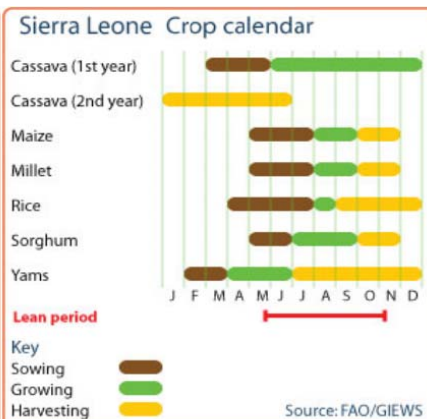
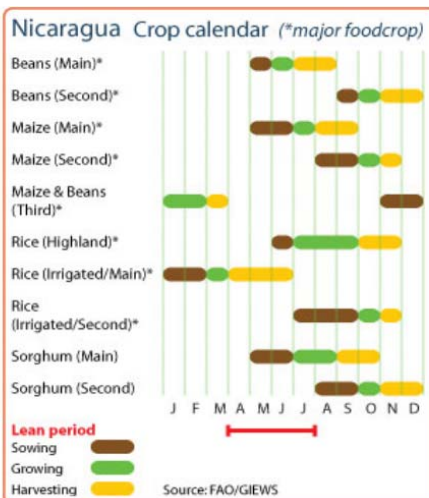
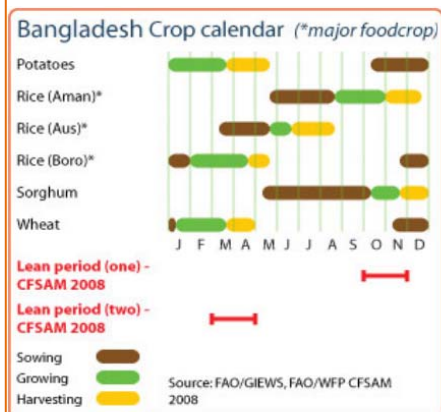
Table 3.1: The three countries at a glance

	Bangladesh	Nicaragua	Sierra Leone	Data source
Area, km2 x 1000	130	121	72	
Population, M, 2006	156.0	5.5	5.7	
Population density, persons/km2	1,200	46	80	
Gross national income per capita (PPP international \$), 2006	1,230	2,720	610	
HDI score, 2007	0.543	0.699	0.365	
HDI rank, 2007	146	124	180	
Poverty rate	40 [2005]	45.1 [2001]	70.2 [2004]	World Bank
Poverty headcount ratio – % population (national / rural / urban)	40 / 43.8 / 28.4 [2005]	45.8 / 64.3 / 28.7 [2001]	70.2 / 79.0 / 56.4 [2004]	WDI
Ages 15+ literacy rate (female / male)	49.8 / 60.0 [2008]	77.9 / 78.1 [2005]	28.9 / 51.7 [2008]	WDI
GINI coefficient	31 [2005]	52.3 [2005]	42.5 [2003]	WDI
Proportion of undernourished, 2004/06	26	21	46	FAO
Number undernourished, M, 2004/06	40.2	1.2	2.5	FAO
Percentage of infants underweight	39.2 [2005]	7.8 [2001]	24.7 [2000]	WHO
Children under 5 years stunted for age (%)	47.8	25.2	38.4	WHO
Under-5 mortality rate, both sexes, 2006	69	36	269	WHO
Cereal production, 2006/08 (kg/capita/yr)	290.32	155.41	195.11	FAOSTAT
Cereal imports per capita, 2005/07	20.25	53.68	23.98	
Dependency on imported cereals	6.5%	25.7%	10.9%	
Consumption profiles, 2005 (kcal/capita) (proportional supply of foodstuffs)	70% rice	22% maize	39% rice	FAOSTAT

- | | |
|------------------------|-----------------------------|
| a) Rice | f) Animal products |
| b) Maize | g) Starchy roots |
| c) Wheat | h) Pulses, incl. groundnuts |
| d) Vegetable oils | i) Sugar |
| e) Fruits & vegetables | j) Other |



Figures constructed with data from FAOSTAT



Figures adapted from FAO GIEWS. Lean period for Sierra Leone added.

3.1 Bangladesh

3.1.1 Background

Bangladesh is one of the most populous countries in the world, with 156M inhabitants in 2006. Densely settled, much of the country lies on the delta of Ganga-Brahmaputra and very large areas flood routinely every year.

Agricultural potential is high, thanks to alluvial soil; plentiful water —more than half the agricultural area is irrigated; and temperatures that allow up to three crops a year to be tilled. That said, the land has to support a very large rural population — in 2001 more than 75% of the population were classed as rural, so that most farmers have access to very small farms.²²

Although Bengal was known for its riches in the sixteenth century, it subsequently stagnated economically while population rose, so that by the time of independence in 1971 it was one of the poorest countries in the world. Heavily dependent on food aid, its prospects at the time appeared limited.

Subsequently, and especially since the early 1990s, a green revolution in agriculture — see below — and the development of manufacturing, coupled with remittances from migrant Bangladeshis in the Gulf, have produced economic growth. This has been matched by some progress in education, health and nutrition. Although poverty remains widespread and the quality of governance causes concern, prospects are brighter than in the past.

3.1.2 Food security and poverty

With large fractions of the population living in poverty, small shocks to food supply are a concern. Bangladesh faces two regular sources of natural disaster: from river flooding above the seasonal norms; and from cyclones sweeping in from the Bay of Bengal.²³ Drought is a less frequent threat, but happens as well.

Memories of famine are not that distant. In 1943 the Province of Bengal suffered one of the worst famines of the twentieth century, when it is reckoned that around 2M persons²⁴ died as a combination of cyclone damage to the main harvest, loss of rice imports from Burma, and wartime procurement, that together drove up rice prices by four times. (Sen 1981)

More recently rice prices doubled in the second half of 1974; probably more as a result of general inflation and fears of shortage, rather than owing to flooding that affected the rice crop. This proved to be an unusually unlucky moment. World prices of rice had just spiked; while a dispute with the USA over exports of jute to Cuba meant that the US threatened to cut off food aid. The government, barely recovered from the war of independence, had limited means to respond: indeed, it lacked credit to buy food in from the world market. For agricultural labourers, the consequences were catastrophic: floods meant little work in the fields in the normally busy months of June to August. Facing much higher prices for rice, and with less income, they starved. As many as 1.5M may have perished in this famine. (Sen 1981, Seaman & Holt 1980)²⁵

As a consequence government took three measures to avert famine and improve food security. First, it intervened in the grain markets through open market sales to maintain rice prices within a band between floor and ceiling prices. This was backed up by expanding public storage of grains that by the mid 1980s saw up to

²² Of a total area of 130,000 km², around 9M ha is used for agriculture. 5.6M ha are irrigated. The area under cereals, most of it rice, every year is around 11M ha, thanks to multiple cropping. If Bangladesh were to be self-sufficient in cereals then each hectare tilled would have to feed 14 people — that implies getting average yields of nearly 3 tonnes per hectare per harvest [assume 200 kg/person/year]. With irrigation, fertiliser and high-yielding varieties this can be achieved.

²³ In the first thirty years as an independent country, Bangladesh experienced severe floods in 1974, 1987 and 1998; and catastrophic cyclones in 1985, 1989 and 1991.

²⁴ The numbers are inexact. Previous estimates ran to over 3M: more recent assessments put the numbers at 1.8 to 2.1M (Dyson 1993).

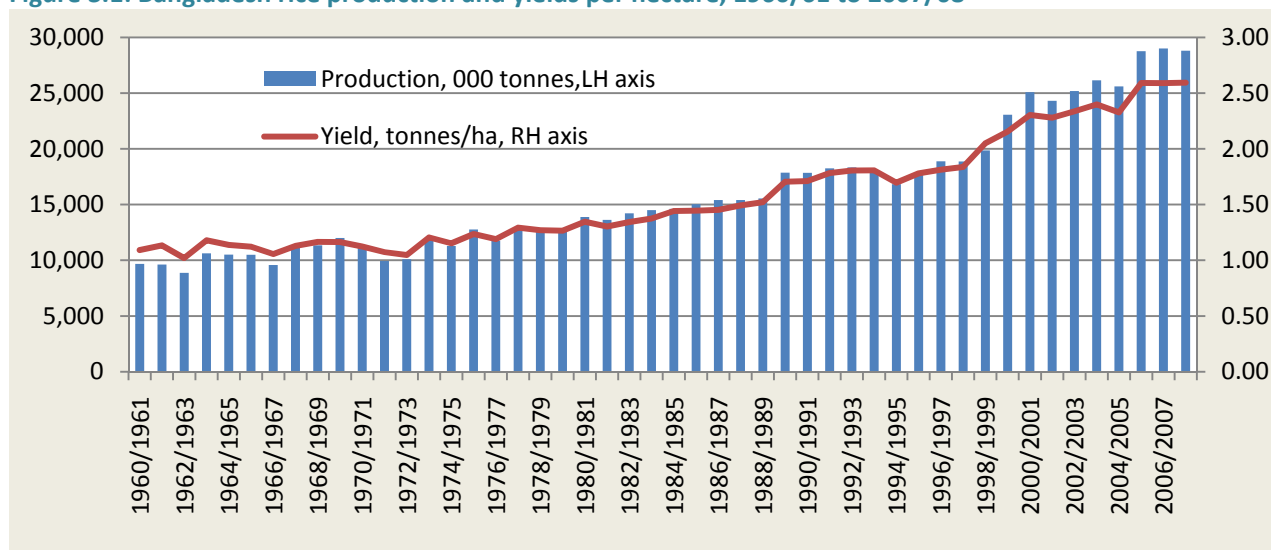
²⁵ Barring future catastrophe, this was the last great famine seen in South Asia.

1.9M tonnes of cereals being held [against annual consumption at the time of around 15M tonnes]. Grain stocks were monitored monthly and co-ordinated this information with donors importing food aid cereals. (Clay 1985)

Second, from the early 1980s onwards Bangladesh engineered a green revolution in its rice fields that saw widespread adoption of high-yielding varieties, increased applications of fertiliser, and, above all, much greater use of irrigation, mostly by pumping from tubewells. This has seen a rise in yields in per hectare, but more important, an increase in the area that is double or triple cropped.²⁶ Total production of rice was below 10M tonnes in the early 1960s and had barely reached 14M tonnes twenty years later; yet over the next twenty years production grew to exceed 25M tonnes, see Figure 3.1.

The green revolution was assisted by a gradual liberalisation of the agricultural and food economy of Bangladesh. In the late 1970s and 1980s trading and import of fertiliser and machinery was liberalised, to be followed by liberalised trading in grains from the early 1990s. (Cabral et al. 2006)

Figure 3.1: Bangladesh rice production and yields per hectare, 1960/61 to 2007/08



Source: USDA data bases

As a result of greatly increased domestic production, the real price of rice has been falling, from Tk20/kg in 1980 to Tk11/kg 2000 (calculated at constant prices for 2000). (Arndt et al. 2002)

Third, Bangladesh greatly expanded its public capacity to assist the vulnerable through several schemes of which the two most prominent are food-for-work to provide employment, and vulnerable group feeding for women and young children. There have been frequent revisions to the schemes to make them more effective and to try and reduce leakage of assistance to those not poor and food insecure.

Despite these considerable efforts, around half of Bangladeshis live in absolute poverty, and as many as one third in extreme (or 'hard core') poverty.²⁷ Success in making staple foods available at lower cost coexists, however, with high prevalence of under-nourishment (insufficient caloric intake) and malnutrition. Food

²⁶ Bangladesh has three rice harvests: Aman crop, June–October, largely rainfed; Boro crop, running December to April–June harvest, mainly irrigated; and the smaller Aus crop, planted before the monsoon, harvested during monsoon. In the past the aman harvest was by far the largest: today the boro harvest has become larger.

²⁷ The poverty line is defined by food intake and set at 2,122 kcal/day, with lower poverty line of 1,805 kcal/day. Data from Gill, Gerry, 2003, Food Security Issues in Asia: Bangladesh Case Study, Report for DFID, Overseas Development Institute, London

insecurity is rife. In 2000, 45% of women had low (<18.5) body mass indices and 52% of children were underweight. Females are especially vulnerable to malnutrition, and the gap between them and males actually increased in the 1990s. Gender imbalances are a striking feature of social indicators in education, health and not least in nutrition in Bangladesh.

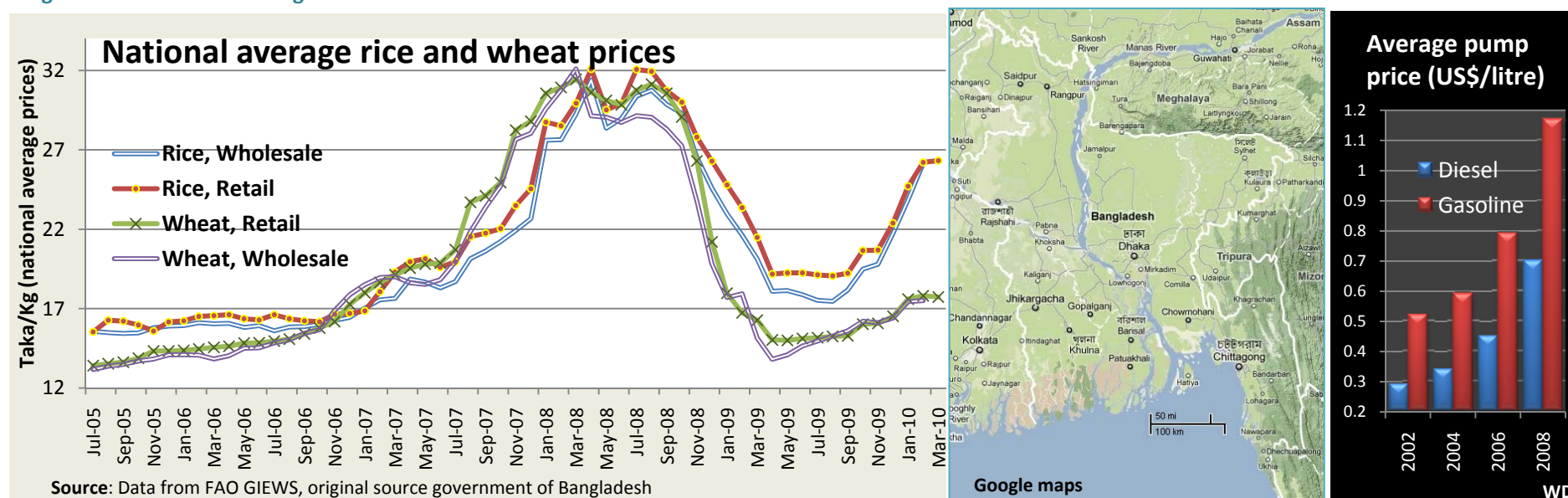
There was some progress in reducing poverty and under-nutrition in the 1990s: for example, the percentage of underweight children fell by 2.4% a year on average.

3.1.3 The 2007/08 price spike and Bangladesh

The effects of the international price spike were exacerbated in Bangladesh by the impacts of super Cyclone Sidr that struck in mid-November 2007, probably the worst cyclone seen since 1991. It caused extensive damage to the aman rice crop that was approaching harvest. Almost at the same time, India, Bangladesh's main supplier of imported rice, announced severe restrictions on its exports. Rice prices rose sharply from the middle of 2007 to peak in April 2008, just before the boro harvest, almost doubling over this period. Prices have subsequently fallen back almost to their pre-spike levels.

Bangladesh responses included measures to stabilise domestic rice markets by a government keenly aware of the havoc that higher rice prices have created in the past, a massive effort to increase the main rice crop of 2008, the boro harvest, and an expansion of existing social safety nets to attend to those vulnerable to higher food prices. See Figure 3.2, a timeline of events in Bangladesh.

Figure 3.2: Timeline for Bangladesh



Year	2007				2008			
Quarter	Jan/March	April/June	July/Sep	Oct/Dec	Jan/March	April/June	July/Sep	Oct/Dec
Events			2 rounds of severe floods Spike in global fuel prices	Super cyclone Sidr [mid Nov 07] India severely limits rice exports	Uncertainties about rice import from India and other major exporting countries	Boro harvest 17% up on previous year		
Responses	Import duty on rice and wheat withdrawn OMS initiated	Bank credit for private food import eased	1 st round of major safety net operations VGF Agricultural rehabilitation	2 nd round of major safety net operations Intensification of OMS operations	Massive support for boro harvest Continuation of OMS operation Announcement of highest ever farm price support India agrees special dispensation for exports of 0.5M tonnes rice	Procurement drive for stock build-up	Targeted continuation of safety nets VGF	OMS operation scaled down

3.2 Nicaragua

3.2.1 Background

Nicaragua is relatively small, both in its population of around 5.5M persons and its area of 121,000 km². More than half the population lives in urban areas, so that the average rural population density is barely 20 per km².

Straddling the Central American isthmus, Nicaragua has three distinct regions: the Pacific lowlands endowed with good volcanic soils where some of the most productive agricultural land is found, as well as the capital and main cities; the mountains of the interior where topography and difficulties of access limit current potential; and the remote and sparsely populated Caribbean lowlands of relatively poor quality soils.

The economy is based on agriculture and associated industries that provide most of the jobs and earn 80% or more of export revenues. Major exports include sugar cane, beef, forest products and in the past, cotton. Economic growth has varied, considerably affected by booms in agricultural exports. The economy grew rapidly in the 1950s and 1960s as Nicaragua converted its best lands into fields of cotton and cane, or pastures for beef cattle. As the fastest growing Central American economy at this time, by 1970 it was the region's most prosperous economy.

But social inequality was high, a country divided between the owners of land and the import-export houses on the one hand, and the majority who subsisted on smallholdings or were plain landless, frequently dependent on seasonal earnings from work on export crop harvests. The excesses of the dictatorial Somoza regime eventually provoked a successful rebellion. In 1979 the Sandinistas triumphed with a radical political programme. Although committed to equality and redistribution, the attempt to control the key points in the economy and to intervene strongly in markets led to perverse incentives and resource mis-allocation: as US opposition escalated to the point of funding the Contra, and government spending on defence rose in response, the economy all but collapsed in chaos and hyperinflation. When in 1990 a new, conservative government was voted in, the first task was to stabilise the economy and deal with a mountainous external debt of more than US\$11 billion.

It was only in 1994 that the economy began to grow again from a low point when GDP was just 60%, and average per capita incomes 40%, of 1977 levels. Subsequently economic growth has been modest — dogged by low rates of savings and investment — rarely rising above 5% a year, not enough to satisfy the job needs of a youthful population, let alone aspirations for less poverty and more prosperity. The structure of the economy has not changed very much over the last forty years: agriculture makes up 18% or so of the economy, industry another 25%, and the rest is in services.

Nicaragua is vulnerable to shocks: natural disasters — earthquakes, storms and hurricanes, civil strife and fluctuations in commodity prices have all had significant effects on the economy.

3.2.2 Food security and poverty

Poverty is widespread. In 2005 the national headcount rate was some 46%, but fully 68% in rural areas where 27% of the population live in extreme poverty. There has been very little improvement in these rates since 1998.

The poor tend to lack education, live rurally, and work as labourers on the fields of others. Regionally, the chronically poor are markedly concentrated in the north and north-west of the country: largely in the mountainous interior where the poor subsist from small farms, many with difficult access to the centres of the country. Poverty rises with remoteness from good roads and access to services.

Inequality is also high: the Gini coefficient for incomes in 2001 was estimated at 0.55. The majority of Nicaraguans live on or close to the breadline, have few assets and little education; while a well-off minority own the vast bulk of the land and other assets. The efforts of the Sandinistas in the 1980s to redistribute wealth and opportunity have had little lasting effect.

Food security is poor for a country where the average national income was estimated at more than US\$2,700 in 2006, classified as lower middle income by the World Bank. More than one fifth of the population are considered undernourished, while more than one quarter of children under five years suffer from stunting. Outright famine may not be a threat, but hunger persists undermining the prospects for the children of the poor.

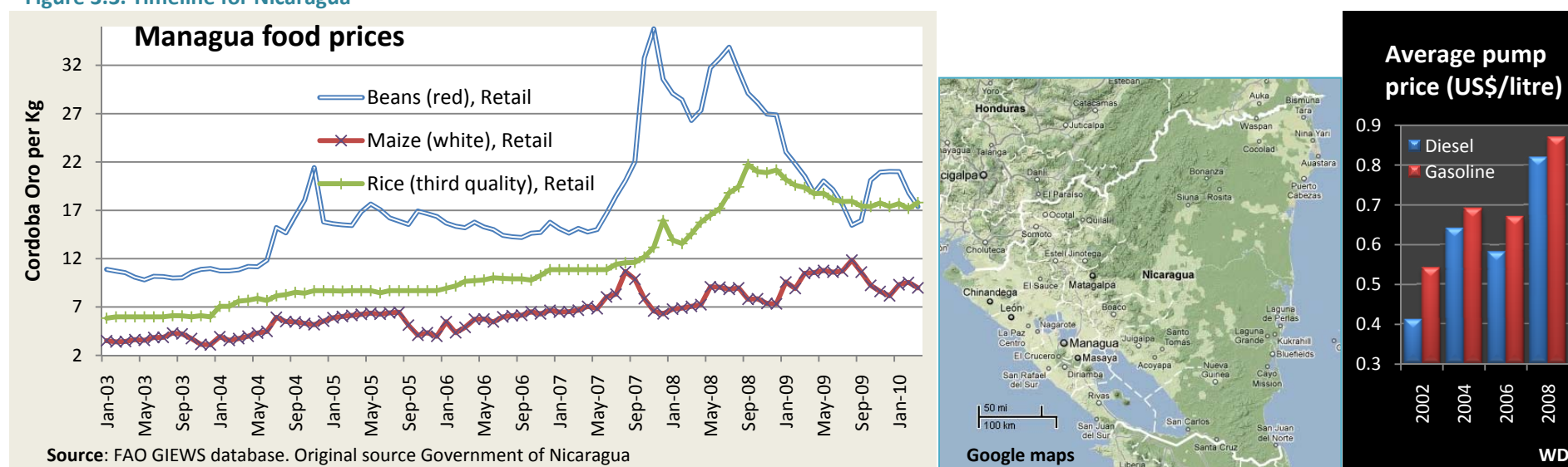
3.2.3 Nicaragua and the 2007/08 price spike

Rising international prices were not the only shock to hit Nicaragua. In September 2007 Hurricane Felix hit northern parts of the country causing extensive damage. The international food price spike was matched by large increases in the Nicaraguan price indices for basic foods that tripled between 2006 and 2008.

Early responses by the government were informed by analysis that saw the rise in international oil prices and consequent domestic rises in the cost of fuel as the primary threat to the cost of living.

Actions specifically designed to counter the effects of the international spike in food prices included measures to reduce the cost of imported food, sales through a public agency, ENABAS, of staple foods at subsidised prices, and an accelerated implementation of programmes to provide poor farmers with livestock and seed in an effort to boost domestic production. It also seems there was some expansion on an employment programme.

Figure 3.3. Timeline for Nicaragua



Year	2007				2008			
Quarter	Jan/March	April/June	July/Sep	Oct/Dec	Jan/March	April/June	July/Sep	Oct/Dec
Events			Hurricane Felix hits northern parts [Sep]					
Responses			Tariffs on beans suspended		ENABAS opens 2,485 more stores to sell subsidised staples Bono Productivo expanded			

3.3 Sierra Leone

3.3.1 Background

Sierra Leone is a small country, 72,300 km², with a population of just over 5M. The country is largely apt for farming, with copious rainfall of between 2,000 and 4,000 mm; the main limitation being acidic and infertile soils. It also has significant mineral deposits, plus fisheries potential both inland and marine, as well as tropical forests.

In the first two decades after independence in 1961, the economy grew albeit modestly; but in the 1980s growth began to stagnate, 'on account of misguided economic policies and economic mismanagement' (SL-PRSP-2005). In 1991 civil war broke out and for the next eleven years the country was ravaged by conflict. By the time that peace was restored in early 2002, the economy was in tatters, many people had been displaced, and large numbers of the best educated Sierra Leoneans had fled.

Subsequently the country has been recovering economically and politically, but from a very low base: it is estimated that GDP per capita of around US\$350 in the mid-1970s fell to US\$230 in 1990, and further declined during the war so that by 2003 it was reckoned to be just US\$120 a head.

With 66% of the population living in rural areas, agriculture employs around 70% of the labour force, and produces just under half the gross national income. Minerals are also important, generating most export revenue: diamonds, rutile and bauxite lead the list of exports — with cocoa and coffee the only major agricultural exports.

3.3.2 Food security and poverty

Sierra Leone is one of the world's poorest countries by any measure. The 1993/94 household survey showed no less than 70% to be living below the poverty line, 79% in rural areas, with 25% living in food poverty.

Very poor health conditions and low levels of literacy combine with poverty incomes so that Sierra Leone has one of the lowest Human Development Indicator scores in the world, being currently ranked 180th, with only two countries scoring lower.

Not surprisingly, then, food insecurity is high, with almost half the population undernourished and almost 40% of under-five's stunted. Despite the country's agricultural potential, the effects of war and under-investment mean that barely more than two-thirds of the main staple, rice, is now produced domestically, the rest being imported.

Given the importance of imports, combined with the poverty of most Sierra Leoneans, perhaps no country in the world was more vulnerable to the impacts of a food price spike on international markets.

[Information from country report, PRSP II, ASR].

3.3.3 Sierra Leone and the 2007/08 price spike

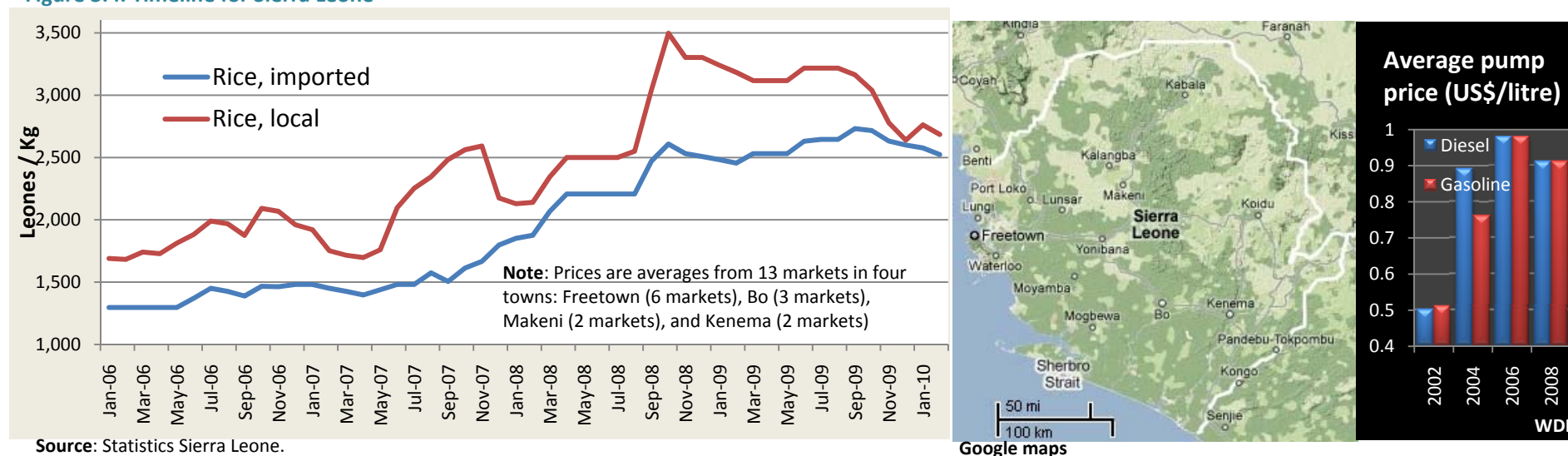
Local rice sells at a premium in Sierra Leone, with the imported rice being cheaper but less preferred. The price of imported rice began to rise in September 2007 and rose through to April 2008 by some 35% in real terms [47% in nominal terms], then fell a little and rose again in the third quarter of 2008 before falling back a little.²⁸

The responses undertaken included most of the measures that might be imagined: efforts to cut the cost of imports, to mitigate domestic price rises through agreements with traders; a campaign to boost domestic food

²⁸ Local rice prices over this period appear to follow seasonal patterns, with prices rising before the October harvest and then falling afterwards.

production; and the expansion of existing social safety nets — employment, school and supplementary feeding — to serve more people.

Figure 3.4. Timeline for Sierra Leone



Year	2007				2008			
Quarter	Jan/March	April/June	July/Sep	Oct/Dec	Jan/March	April/June	July/Sep	Oct/Dec
Events				Price of imported rice begins to rise				
Responses				Rice import duty cut	Additional imports arranged through Harmony trading: special deal with India Donors provide funds for NARP		NACSA gets extra funds from World Bank to expand employment programme [Aug 08]	WFP expands school feeding to Western region [Nov 08] Also expanded supplementary feeding

4. Responses

4.1 Border and market measures to dampen price pass-through

Table 4.1 summarises border and market measures taken by the case study countries, as well as what is known about their costs, funding, and potential influence on prices and related elements such as stocks – in the short term. There is some degree of guesswork involved in quantifying benefits and costs of border and market measures without a counterfactual to identify what would have happened in the absence of intervention. It is also difficult to attribute results (i.e. percentage of price dampening) to particular interventions.

A more detailed description of measures follows the table.

Table 4.1.1 Border and market measures to dampen price pass-through

Measure	Bangladesh	Nicaragua	Sierra Leone
BORDER MEASURES			
Export bans / restrictions	Banned export of rice, soybean oil and palm oil	<i>None recorded</i>	Banned export of local rice and palm oil & re-export of imported rice
Import tariff reductions	5% duty on rice and wheat withdrawn	30% import tariff on beans suspended - Import levy on wheat cancelled. - Import tariffs changed to 0 or 5% for some types of vegetable oils	- Import duty on rice cut from 15% to 10% - Harmony trading co. granted retrospective <i>ad hoc</i> import duty waiver on rice - Import duties also reduced on wheat flour, sugar, petrol, diesel and kerosene
Public import facilitation	- Government encouragement to private importers—small importers were helped to open lines of credit. - A deal with the Indian government allowed GOB to secure ½ million tonnes of rice from India at below Indian rice export ceiling price.	<i>None recorded</i>	Government appealed to India for a special import deal. On March 26, 40,000 tonnes were exported from India to Sierra Leone. Government coordinated a consortium of small traders (Harmony co.) to import and distribute the Indian supplies
Exercising risk hedging deals	<i>None recorded</i>	<i>None recorded</i>	<i>None recorded</i>
MARKET MEASURES			
Release of stocks	Government released some of its national stocks through various public distribution channels; all targeted or self-targeting	Government distributed a total of 8601 tonnes of food in 2007; 12,447 tonnes in 2008, targeted or self-targeting	<i>None recorded</i>
Price controls by fiat	<i>None recorded on consumer side</i>	<i>None recorded</i>	- Government initially struck a deal with the 3 major importers to increase rice prices by 500 Leones fortnightly; this then doubled to 1000 Leones fortnightly. - After the rice import deal with India was negotiated, government arranged a ceiling price of 2000 Leones/kg with the Harmony consortium
Untargeted staple food tax reduction	<i>None recorded</i>	<i>None recorded</i>	<i>None recorded</i>
Untargeted food subsidies	<i>None recorded</i> (though targeted food subsidies linked to procurement and safety net policies were reported, & targeted food distribution via WFP)	<i>None recorded</i> (though targeted food subsidies linked to procurement and safety net policies were reported)	<i>None recorded</i> (though some targeted food distribution via WFP) In some senses the tax waiver granted Harmony importers, combined with price controls functions in a similar way to a rice subsidy.
Restricting speculation/ private stockholding	Strong anti-hoarding activity was recorded	Some anti-hoarding activity was recorded	Strong anti-hoarding activity was recorded
Costs	IMF estimated losses from food tariff reductions	Revenue losses from tariff reduction on pulses	Revenue loss estimated from reduced import tariffs of

Measure	Bangladesh	Nicaragua	Sierra Leone
	were over 0.1% of GDP >79 million US\$	alone likely >1 million US\$	US\$ 1.43 million for food [over 1.95 million by IMF estimates]; and for fuel US\$1.53 million (4.3 and 15.9 billion Leones respectively) in 2008 —losses continued into 2009 Government had to refund more than 1 billion Leones (USD 333,000) to Harmony co. before they would continue importing
Funding	Government of Bangladesh	- Government of Nicaragua - Most of Nicaragua government hunger programmes are funded by international donors	- Government of Sierra Leone. - World Bank provided US\$ 3 million under the GFRP to compensate for revenue lost as a result in tariff reduction on basic commodities <i>and</i> to aid delivery of public services during the crisis. - Other donors?
RESULTS <i>Prices</i> <i>Stocks</i> <i>Other</i>	- Rice (wholesale, Dhaka, local currency) prices increased 73% from June 07 to April 07. That is 35% of price rises seen on world (Thai 100%B) markets from Sep 07 to their April 08 peak. - Wheat (wholesale, Dhaka, local currency) prices increased 87% from May 07 to March 08. That is 70% of price rises seen on world markets (US HRW) from May 07 to their Mar 08 peak - Public stockholding increased—in 2008/09 rice stocks were 91% higher than over the previous decade - Wheat stock-to-use ratio (STUR) went from 15.2% for year ending June 07 to 13.6% for year ending June 08, to 25.6% for year ending June 09, and is forecast (USDA FAS) at 27% for year ending June 2010. - Rice STUR went (over the same periods) from 1.5% to 1.8% to 3.7% to 1.4%. (rice accounts for about 70% of dietary energy supply and wheat for less than 10%) - Export ban predominantly taken for cosmetic reasons, may have contributed to consumer	- There is little indication Nicaraguan white maize prices are linked in the short term to international yellow maize prices—(see Figure A.1 in Annex A). - Rice prices (retail, Managua, local currency) increased 87% from Sep 07 to Sep 08. That is 42% of international (Thai 100%B) rice price rises from Sep 07 to April 08 peak. - Beans prices may have spiked higher in the absence of import tariff reductions, but impossible to say. Perhaps timing of tariff reductions coincides somewhat with price declines (See Figure A.3) - Storage capacity of ENABAS increased some 175% from 35 thousand tonnes in 2006 to 96.3 thousand tonnes in 2008. Storage of actual food is less clear. - Maize STUR went from 14% for year ending June 06 to 10.6% for year ending June 07 to 10.7% for year ending June 08, to 8.5% for year ending June 09, and is forecast (USDA FAS) at 9.5% for year ending June 2010. - Rice STUR went from 37.3% for year ending Dec	- Imported rice prices increased 73% from Sep 07 to Oct 08. That is 35% of price rises seen on world (Thai 100%B) markets from Sep 07 to Apr 08. - Though differentials in transport costs may have dampened the price increases to some extent, they cannot account for the majority of this disparity²⁹ - Some indication that price controls dampened rice prices over the period of the spike in particular. - Quantitatively; wait for details on timing, but it appears price controls by fiat plus ceiling prices were only partially successful. Had they worked completely, prices would have increased less. - That said, the apparent elimination of all margins (Figure A.2 in Annex A) at the height of the price spike is very marked and suggests some success in mitigating effects of international price rises - Import rice prices in neighbouring Guinea (Conakry) increased 74% from Dec 2007 to May 2008; over the same period, Freetown imported rice prices increased 23% (each in local currency) - Export ban predominantly taken for cosmetic reasons; failed to stop movement of rice into Guinea (with which

²⁹ They are highly unlikely to have dampened price rises by more than a quarter (not a conservative estimate), rather than the two thirds observed here.

Measure	Bangladesh	Nicaragua	Sierra Leone
	confidence. • Short term effects of removing a 5% import tariff on dampening price increases are likely to be marginal; particularly with world rice prices skyrocketing. • Indication that imports by the private sector increased probably owing to lines of credit. • Special imports from India were delayed until Bangladesh prices were already heading down	06 to 33.8% for year ending Dec 07 to 27.9% for year ending Dec 08 to 24.5% for year ending Dec 09 and is forecast (USDA FAS) to be 20.9% for year ending Dec 2010. • Removal of the 30% import tariff on beans may have encouraged increased bean import quantity • Food distribution increased almost 4000 tonnes from 2007 to 2008	SL farmers have long-established trade relations) • Short term effects of removing a 5% import tariff on dampening price increases are likely to be marginal; particularly with world rice prices skyrocketing. • Import tariff restrictions persisted into 2009. It is not clear if the government has received further compensation (for example from IBRD)

Sources: Rahman (2009), Nitlapan (2009), CESPA (2009), FAO GIEWS (2008), USDA FAS PSD database

4.1.1 Border measures

Measures on exports or imports can stop or dampen pass-through of high international prices to domestic markets. Because of their untargeted nature, and because some of them can be rolled out at speed, they have an immediate political appeal that explains their popularity with governments across the income spectrum.

For countries trying to avoid high international food prices, *responses on exports* came in the form of increased restrictions—tariffs, bans, or quotas—on exports or re-exports. Countries may restrict exports either to prevent supply from falling when domestic produce leaves the country, or to bolster consumer confidence in food availability.

Bangladesh and **Sierra Leone** both imposed export bans as an early response to the international food price crisis—Bangladesh on rice, soybean oil and palm oil; and Sierra Leone on local rice, palm oil, and re-export of imported rice—despite the fact that neither are major exporters. These bans may have contributed to civil order—or at least to limiting civil unrest, particularly in Bangladesh. The export bans in Sierra Leone became relevant for their own sake after rice prices in neighbouring countries rose above Sierra Leonean prices³⁰. There is however little indication export bans were effective in preventing smuggling of rice across the border—understandable where borders are particularly porous and long-established patterns of trade exist.

- The extent to which exporting or civil unrest would have occurred in the absence of export measures is unknown, making it difficult to quantify benefits and costs. There is a strong indication however that measures taken to limit exports in Bangladesh and Sierra Leone would have had a very marginal effect on dampening food price increases.
- Export restrictions can also have medium-term costs related to damaging producer incentives, which can stunt growth and development.

Measures on imports fall into two main categories: 1) import tariffs and quotas, and 2) import facilitation. Under the first, reduction or elimination of import restrictions were typically applied in response to the food crisis³¹. Import facilitation may take the form of: a) public-private coordination on importing, b) public financing on food importation, which may be linked to food distribution and subsidy programmes to be discussed in subsequent sections; and c) exercising risk hedging deals such as call options (which will have required advanced planning), or barter deals.

As well as dampening prices, reductions in import tariffs could (all else being equal) increase aggregate supply in the country through encouraging importers to increase quantities imported—though only to a small extent with small reductions, and to what extent this occurs when prices are rapidly rising, particularly where markets are thin, is less clear.

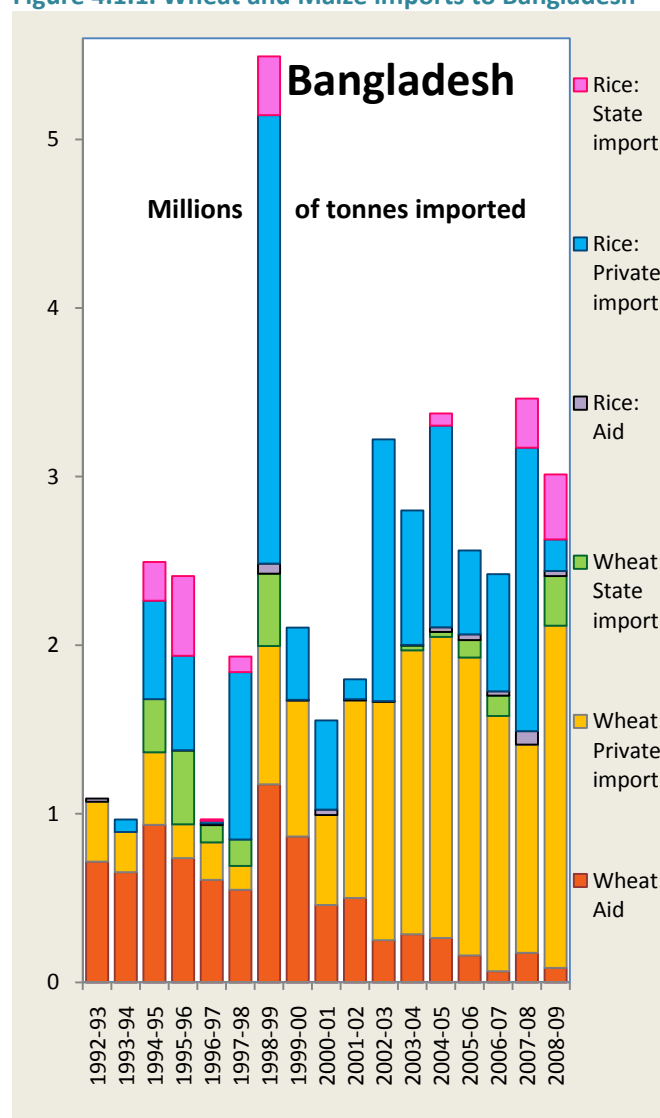
Nicaragua suspended its 30% import tariff on beans in October 2007 for three months—and extended the suspension for a further three months in Jan 2008, and then again, up to May when the import tariff for beans was removed (according to FAO). Also the import levy on wheat flour was cancelled in February of 2008—to the end of 2008 or up to a quota of 10,000 tonnes under a joint agreement with El Salvador, Guatemala, and Honduras (FAO). Import tariffs were changed to zero or five percent for some types of vegetable oils.

Trends from 2007 to 2008 in quantity and value of maize, rice, beans, and sorghum imports to Nicaragua are provided in Figure A.5 in Annex A. These illustrate very clearly the impact of higher prices on import bills.

³⁰ For example, in May 2008, imported rice prices in Sierra Leone were 38% lower than imported rice prices in Conakry (measured in US dollars). Local rice prices were 25% higher in Conakry than in Sierra Leone (see Figure 4.1.2).

³¹ Though there is some indication that other countries may have increased or maintained import tariffs—Indonesia for one—perhaps to improve consumer confidence in levels of domestic supply.

Figure 4.1.1. Wheat and Maize imports to Bangladesh



Source: Annex 3, Rahman 2010. Original source DG Food, 2009

Bangladesh withdrew its 5% duty on rice and wheat, which understandably had little effect on dampening price increases. The government also actively encouraged private importers to import rice and wheat (small importers were helped to open lines of credit for importing), while at the same time arranging public procurement. Following the two floods and the cyclone Sidr in 2007, 2.05 million metric tons of rice and 1.40 million metric tons of wheat were imported in 2007/08—almost entirely by the private sector. See Figure 4.1.

Following the cyclone, the Government of Bangladesh also successfully negotiated with India—which had banned rice export—to allow the import of 500,000 tonnes of rice. Unfortunately,

“Procedural delays in negotiating the price, modality of transport and the time schedule for supply however, did not allow Bangladesh to benefit from the anticipated positive supply side impact of this special gesture to the extent that such a gesture would otherwise have allowed during a crisis situation. In fact, the shipment of bulk of this pledged rice export did not take place until into the middle and later half of 2008³². The uncertainty over the

³² Though the pledge was made in Dec 2007.

timely supply of this 500,000 of pledged rice impacted considerably on the market dynamics in Bangladesh adding to the prevailing worries and sense of uncertainty in the country.” Rahman (2009)

Sierra Leone also combined relatively small import tariff reductions with public-private coordination on imports to alleviate pressure on prices. The Sierra Leonean Government reduced import duty on foods including imported rice from 15% to 10%—a decision that has since remained in place³³. For certain parties they also refunded the 10 percent tax—via a retrospective tax waiver.

This last point is linked to the trade facilitation practiced. When rice supplies destined for Sierra Leone were diverted on the high seas by traders looking for higher profits in Guinea and Liberia, the government of Sierra Leone appealed to India for a special import deal (access to Indian rice at a time when Indian rice exports were largely banned or facing prohibitively high export ceiling prices). They coordinated with a consortium of small traders to deal with the domestic supply logistics. This strategy contributed to maintaining supply at a time when physical shortage was a threat. About 40,000 tonnes of Indian rice was exported to Sierra Leone in late March³⁴.

- Generally speaking however, actions taken on import tariffs by these three countries were small and likely had minimal impact on dampening prices³⁵. For example, if a country has a 5% tariff on staple food imports, the staple food price increases 100%, and the country then cuts the import tariff to zero, the price facing consumers in the country will still have increased 90%. Small reductions in import duty are also likely to have small influence on quantities imported.
- Furthermore, there are costs to lowering import tariffs:
 - 1) Some loss in government revenue — which may be worrying for governments with fiscal imbalances — though few developing countries are likely to receive more than a modest portion of tax revenue from import tariffs on staples³⁶.
 - 2) Damage to producers who might not be efficient enough to compete with low-cost, intensive, subsidised production from abroad. Such producers may lose local markets and suffer depressed production incentives—though in the situation of rising international prices, this will only occur if the reduction in the import tariff is maintained in the absence of high international prices. Used as a measure to temporarily dampen international price pass-through, it is unlikely to damage local producer incentives.

Regarding the first point, **Sierra Leone** estimated losses in 2008 from import tariff reduction on food of approximately 4.3 billion Leones (about 1.43 million US dollars at the exchange rate prevailing in late 2008³⁷). Losses from fuel import tariff reductions in 2008 amounted to Le15.9 billion (US\$ 5.3 million). The World Bank provided US\$ 3 million in 2008 intended to compensate the government for this revenue loss. Since the food and fuel tariff reductions have remained in place into 2009, to buffer consumers faced with rising inflation, it is likely government revenue losses have exceeded compensation.

³³ It was in place at the time the CESPA study was conducted in late 2009.

³⁴ According to “Rice Exports: It is more of commercial transactions”—at: <http://www.thehindubusinessline.com/2009/05/22/stories/2009052250581600.htm>.

³⁵ The exception may be for beans prices in Nicaragua; though without a counterfactual it is impossible to know how much of price movements were related to tariff reductions; See Figure A.3 in Annex A.

³⁶ Coady et al 2009, looking at the example of Madagascar also suggest that: “although there are likely to be substantial efficiency gains from tariff reductions, these accrue mainly to higher income households. In addition, poor net rice seller will lose from lower tariffs. Developing a system of well designed and implemented direct transfers to poor households is thus likely to be a substantially more cost-effective approach to poverty alleviation. Such an approach should be financed by switching revenue raising from rice tariffs to more efficient tax instruments” (excerpt from abstract)

³⁷ See Table A.1 in Annex A for a graph of monthly Leone to US dollar exchange rate. The IMF estimate for losses from food tax reduction—at more than 0.1% of GDP—would be higher than this: over 1.95 million US\$

For **Bangladesh**, as Figure 2.4 showed, estimated losses from food tax reductions were over 0.1% of GDP—over 79 million dollars in 2008. For Nicaragua, revenue losses are not estimated by IMF, but it is likely they lost over 1 million dollars from tariff reductions on pulses alone³⁸.

Box D What did key informants and focus groups in Sierra Leone say about prices?

Figure D.1 shows findings from key informants and focus groups in Sierra Leone

- Even in Freetown, trade monitors were unsuccessful in containing prices (Funkia, Tombo, Fourah Bay.... for example are in Freetown)
- In Tombo community, the key informants reported that particular shops in the town were stocked with rice from the government, and were supposed to be selling rice at reduced prices, but the key informants if the retailers indeed sold the rice at those rates.
- Some wholesalers interviewed in Bo mentioned that retailers inflated the price of rice at the village level. (x community is in/near Bo)
- Price of rice (and other foodstuffs) is higher in mining towns (for example, Koidu Town).
- Dambala is not a mining town, but the high price of rice here can be explained by the fact that the road network in the area is so bad haulers charged exorbitant rates.

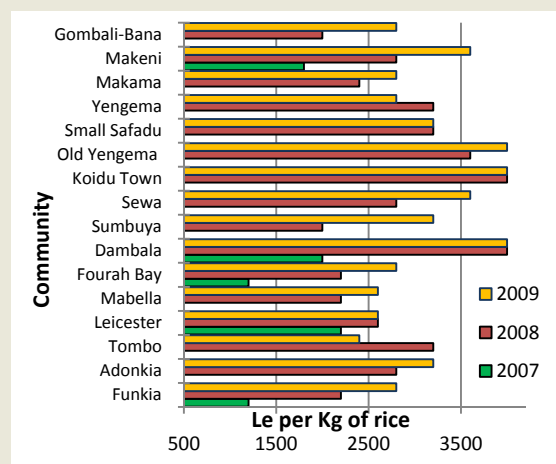
The price of rice increased first and caused an increase in the prices of other food items"

– Tombo chief informant

All 13 focus groups asked said price rises were highest in rice, followed by palm oil. 5 of the 13 also mentioned cassava (unprocessed or processed) price increases. Three of the groups reported sugar price increases.

Source: CESPA 2009.

Figure D.1 Rice prices in different communities over time



Note: Where 2007 is missing, respondents could not recall prices

Exercising risk hedging deals is the final category of import facilitation. Countries that import staples face price risks. It is possible to hedge against these by use of futures contracts and call options on commodity exchanges. Few developing countries do so, but there have been some trials in southern Africa. Reviewing the various possibilities, some of them technically quite sophisticated, Dana et al conclude that while they could reduce costs, other more fundamental improvements matter more: *"SADC governments are likely to achieve more through clarity of policy, transparency of execution, and a reduction in transport costs than through hedging."* Dana et al., pp 369.

There is no record in the cases reviewed here of futures or options tools being used as responses. Such measures are generally little used—and there is also no futures market for rice; overwhelmingly the main staple for both Bangladesh and Sierra Leone.

Related measures such as barter deals were reported for some countries, though not for the case study countries. For example, Malaysia signed a barter deal with North Korea, Cuba and Russia to swap palm oil for

³⁸ In 2007, value of pulses (mostly dry beans and lentils) imported to Nicaragua exceeded US\$ 3 million (FAOSTAT). This is only about 0.02% of 2008 GDP. It may be an underestimate since equivalent estimates for rice and wheat import tariffs in Bangladesh produce a figure only one third as large as the IMF estimate (25 million). It is not clear why.

fertiliser and machinery³⁹. Venezuela bartered oil for supplies of food from Portugal, and rice from Ecuador in the first half of 2008.⁴⁰

4.1.2 Measures on domestic markets

These fall into four main categories: 1) Price controls by fiat; 2) Releasing stocks from grain reserves; 3) Removing or reducing food taxes and/or introducing or increasing food subsidies, and 4) Other restrictions on private trading, including speculation on commodity markets and outlawing 'hoarding'.

As with the border measures, whether and how most of these can be implemented depend on the prevailing conditions in-country. How well they function may also in many cases depend on complementarities with other market measures as well as with both border measures and those designed to protect vulnerable consumers.

Controlling prices by fiat may be a popular response from the consumer perspective—though it is less likely to be well received by suppliers and producers, especially if losers are not compensated. It is also extremely difficult to enforce – not least in developing country settings where markets may be small and scattered. For example, Broudic (2008) reported that although the Government of Liberia set a ceiling price for 50 kg bags of rice⁴¹, most poor people were paying about 26% above this—because they tend to purchase frequently smaller measures (such as by 400g cup), rather than occasionally in bulk—for many simply an unaffordable option. With hundreds of vendors in markets across the country, monitoring and enforcement of price control policies becomes practically impossible.

Sierra Leone reacted quickly to international price rises by attempting to control domestic price increases via coordination with major traders. They assumed the major traders⁴² could afford not to increase prices in line with international movements because they were holding supplies they had purchased earlier at relatively low prices. The initial arrangement was for 50kg bags of rice to increase by US\$ 0.15 every 2 weeks. As prices continued to rise, they changed this to US\$ 0.30 every two weeks (in local currency increments of 500 and 1000 Leones respectively)

International rice (Thai A1 Super) nominal prices per tonne were growing at a rate of about 14 US dollars per week between the first week of January and the 3rd week of March 2008. After which point they began an accelerated increase – at a rate of about 40 US dollars per tonne per week for the next six weeks (from the 3rd week of March to the last week of April). In contrast, price rises in Sierra Leone were **set to rise** at a rate of about three US dollars per tonne every two weeks (1.5 US\$ per week), after which the rate was doubled to six US dollars per tonne per fortnight—three dollars a week—less than 10% of the international rate of 40 US dollars per tonne/week.

What actually happened? From Sep 07 to August 08 prices increased about 72 percent – at an average rate of about US\$8 per week – just over half the percent of the rate of international price rises from September 07 to their peak in May 08, which was about US\$15 per week.

Although clearly price controls by fiat were not enforced or adopted to the letter, it is possible this policy had significant influence on dampening local prices—though it also encouraged major private traders to divert rice shipments destined for Freetown to ports in Liberia and Guinea where they could achieve higher prices. For example, in May 2008, imported rice prices in Conakry were 20% above imported rice prices in Sierra Leone, while local rice prices were 27% above those in Sierra Leone (measured in US dollars – even though the Guinean Franc was appreciating against the Leone around this period).

³⁹ See news report at: <http://farmlandgrab.org/2724>

⁴⁰ http://www.stratfor.com/memberships/116605/analysis/global_market_brief_venezuela_resorts_bartering

⁴¹ US\$ 30 at wholesale level and US\$31 at retail level

⁴² Three major traders reportedly supply most of Sierra Leone's rice import needs.

As discussed in the previous section, the government of Sierra Leone responded by arranging for a special deal from India and coordinating small local importers into a consortium – Harmony co – in order to supply markets at a price agreed by the Government. They negotiated with the consortium to fix prices at 100,000 Leones per 50kg bag, which worked out to about 33 US dollars compared to the 45 US dollars a 50kg bag was achieving in neighbouring Guinea. On March 26, 2008, 40,000 tonnes of rice was exported from India to Sierra Leone. This is a significant proportion of annual imports (according to USDA FAS data that is about 30% of the total rice imports for the year 2008). According to the price figures, by **March 08** prices were already above 2000 Leones/kg – the govt fixed price of 100,000 Leones/50kg).

This could partially owe to marketing margins on smaller volumes, as discussed in the case of Liberia earlier. It could also owe partially to transport costs – though not entirely. Statistics Sierra Leone calculates the national average price using prices from 13 markets across four towns; Freetown (6 markets), Bo (3 markets), Makeni (2 markets) and Kenema (2 markets). A survey of transport costs in 2006⁴³ showed that at most transport costs could add 80 Leones per kg (See Table 4.2); and in March the prices were about 200 Leones above the ceiling price. This supports the idea that traders raised prices disproportionately – See Box D

Table 4.1.2: Cost of goods transport by truck Sierra Leone, late 2006

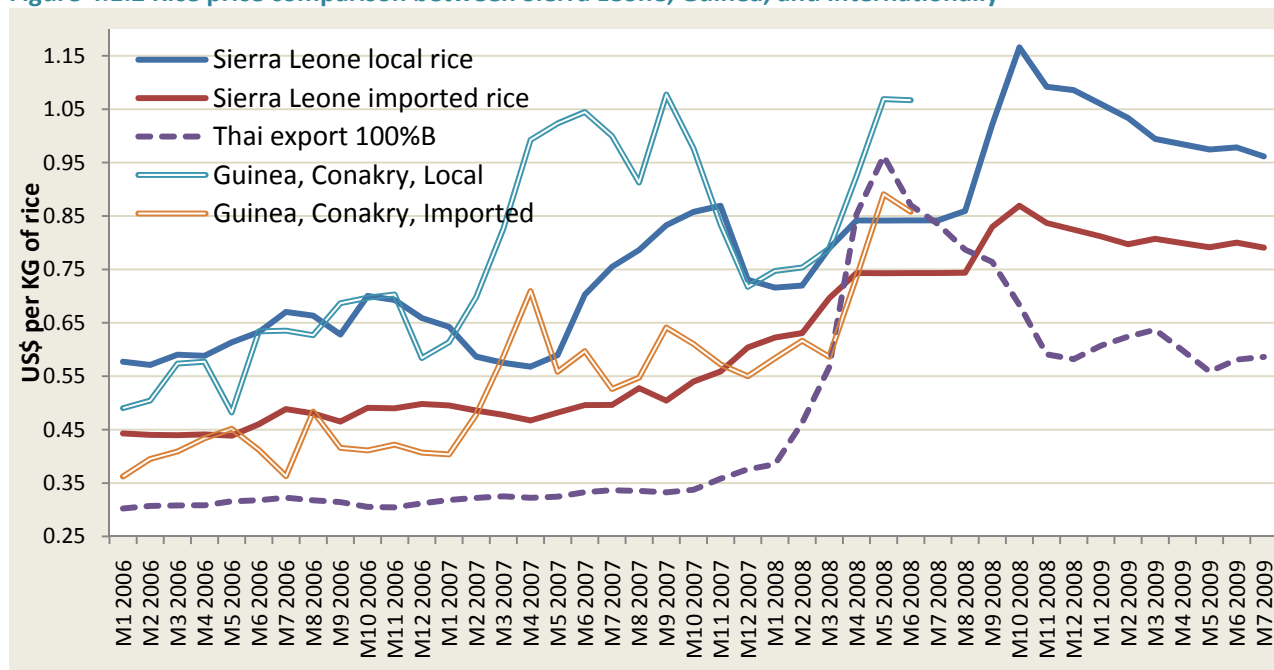
Journey	Road	Cost, Le per 50 kg bag	Imputed cost, Le per kg
Freetown to Makeni, year round	Trunk, metalled	2,000	40
Freetown to Kabala, year round	Trunk, metalled	2,500	50
Freetown to Bo, dry season	Trunk, mostly metalled	3,000	60
Freetown to Bo, rainy season	Trunk, mostly metalled	3,500	70
Freetown to Kenema, dry season	Trunk, mostly metalled	3,500	70
Freetown to Kenema, rainy season	Trunk, mostly metalled	4,000	80
Freetown to Kono, dry season	Trunk, mostly metalled	3,500	70
Freetown to Kono, rainy season	Trunk, mostly metalled	4,500	90

Sources: Interviews with farmers and road haulage operators, November-December 2006.

There is also some indication that the 2000 Le/kg ceiling resulted in importers in the consortium selling rice at below cost. The government refunded these importers more than 1 billion Leones (over 300,000 US dollars) in tax before they could import more.

⁴³ It also seems unlikely fuel price changes would have increased this from 2006 to 2008; according to WDI data, the average pump prices for diesel and gasoline were lower in 2008 than in 2006 (see figure in Sierra Leone timeline, section 3).

Figure 4.1.2 Rice price comparison between Sierra Leone, Guinea, and internationally



Sources: Statistics Sierra Leone for SL prices, FAO GIEWS for Conakry prices, IMF for exchange rates to convert them to US\$. **Notes:** 1) Spikes in Guinean prices prior to 2008 are artificial (exacerbated by exchange rate movements—the Guinean Franc appreciated sharply against the US dollar between January and May 2007). 2) In the Sierra Leonean prices a peak occurs every year around September/October—coinciding with the end of the main crop season that runs April / October. It appears to be a classic case of prices peaking just before the new harvest arrives. What is striking here is how local rice prices jumped in line with international ones—indicating local farmers should have seen a real windfall in their prices—which may have translated to increased production in 2009—assuming traders were not buying at longstanding prices and capturing the profits. 3) Although prices appear to be trending down over the last six months or so, this is a feature of the exchange rate (see exchange rate in Table A.1. which shows sharp currency devaluation over this period) —in local currency they were still heading up over this period. 4) The flat period in Sierra Leonean prices between May and August 2008 appears odd; likely an error in data collection, rather than an entirely faithful representation of price trends.

The success of this policy was likely linked to how well traders cooperated and how widely the government was able to enforce not only fiat price control measures, but also export bans. There has furthermore been some allegation of corruption⁴⁴, though without knowing the volumes and value of imports it is impossible to confirm or deny. Consider for example if 40,000 tonnes were imported in April, as reported earlier, and the FOB cost of this was about 470 US\$ per tonne⁴⁵. If a 10% ad valorem were charged on the FOB cost of 40,000 tonnes, that amounts to about 1.88 million US dollars, or approximately 5.6 billion Leones at the exchange rate of 3000Le/US\$. If transport costs were say 100US\$/tonne⁴⁶ rice CIF at Freetown would have been worth about 1710 Le/kg. On a 2000 Le/kg ceiling price that's a margin of about 15% – 10 cents US a kilo – or on 40,000 tonnes about 3.87 million US\$ (11.6 billion Le). If they were indeed making margins of 15% it is difficult to see why government refunds of any part of the 10% ad valorem would be necessary. The unknown here is transport

⁴⁴ See for example reports at http://www.news.sl/drwebsite/publish/article_200511793.shtml which allege about 2.75 million Leones were refunded to the private importers

⁴⁵ As in this reference: <http://www.outlookindia.com/printarticle.aspx?250566>

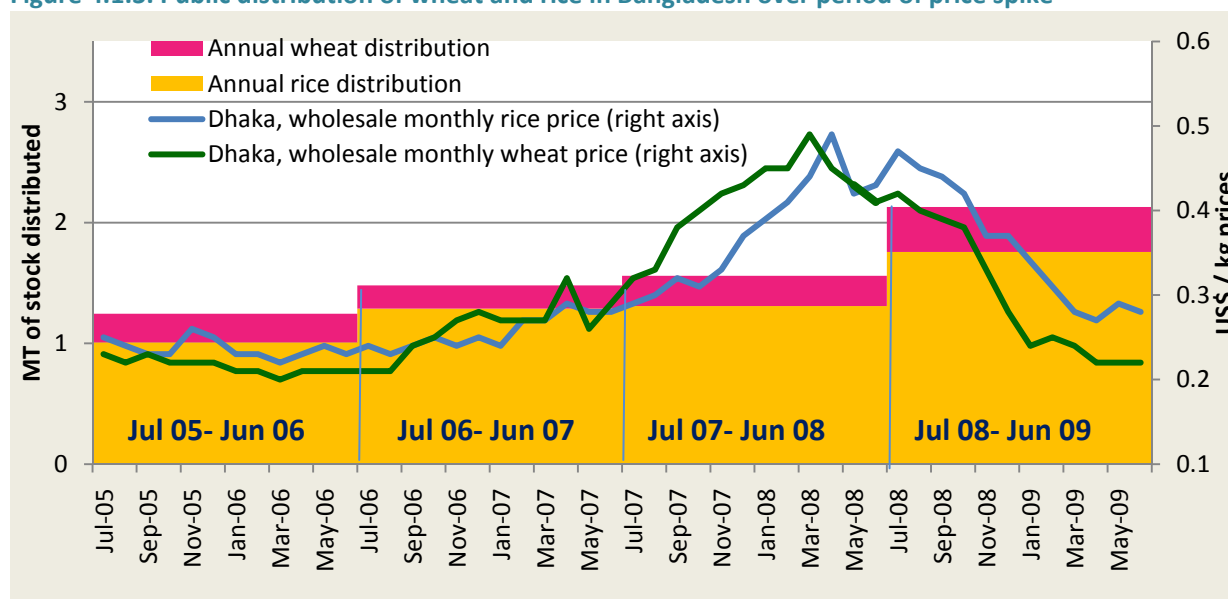
⁴⁶ In May 2009, shipping rates from Gulf of Mexico to Hamburg peaked at US\$ 88/tonne – and it is not known what the cost per tonne for shipping rice from an Indian port to Freetown might be, but the distance is much greater. The following source reported a cost of around US\$78 /tonne to ship from India to Tema in Ghana—date unknown: <http://www.gfzb.com.gh/Download/COST%20OF%20DOING%20BUSINESS1.pdf>

costs; if costs of transport were higher (say \$160/tonne), traders could very well have been making much smaller margins—around 4.4 billion Le on the 40,000 tonnes, in which case having to pay 5.6 billion Le ad valorem would remove all margins, and a refund of 2.75 billion Le wouldn't seem unreasonable at all.

CESPA (2009) noted that trade monitors were sent to shops in Freetown to check prices were not unduly increased. The Ministry of Trade and Industry also attempted to ensure that the price of rice leaving Freetown to the provinces was only increased by the cost of transportation, though it may have been only partially successful, as the powers of enforcement would be limited. It is likely that there was leakage to neighbouring countries—owing to low prices of Sierra Leonean rice and the generally porous nature of borders in the region.

Release of stocks is another widely practiced type of market measure. Countries may release stocks with the expectation that increased supply in the local market will contribute to dampening prices. None of the case study countries hold large national stocks, however, **Bangladesh** and **Nicaragua** both implemented forms of rationed and targeted stock release linked to safety net, procurement and subsidisation programmes—as will be discussed in more detail in section 4.4. The government of **Bangladesh** distributed a total of 2129 thousand tonnes of grain in 2008/09—up 36% on the previous year, as shown in the following figure. The increase in 2007/08 distribution on the 2006/07 figures was much smaller; although June 2007 to July 2008 was the (market) year when prices were rising.

Figure 4.1.3. Public distribution of wheat and rice in Bangladesh over period of price spike



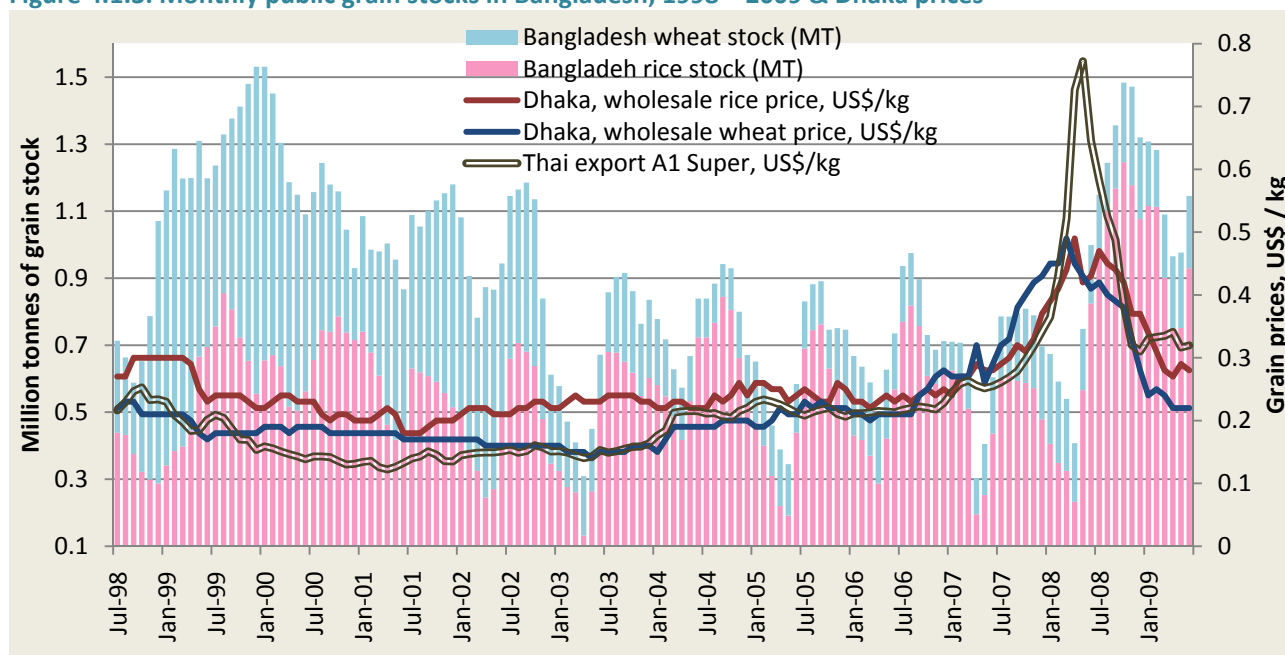
Sources: Rahman (2009) Annex 6 for wheat and rice distributions, FAO GIEWS for monthly prices

Stock-to-use ratios also appear to have increased from their 2007 levels. Bangladesh's wheat stock-to-use ratio (STUR) went from 15.2% for year ending June 07 to 13.6% for year ending June 08, to 25.6% for year ending June 09, and is forecast at 27% for year ending June 2010 (USDA FAS). Their rice STUR went from 1.5% for the year ending June 07 to 1.8% for the year ending June 08 to 3.7% for the year ending June 09, and is forecast to be to 1.4% for the year ending June 2010 (ibid).

The government of **Nicaragua** distributed a total of 8601 tonnes of food in 2007, and 12,447 tonnes in 2008. Both countries also made investments in stockholding capacity, with the result that much larger government

stocks are being held than has been the case in recent years. Bangladesh for example increased government storage of rice in 2008/09 by 91% over the previous 10 year average—as shown in Figure 4.3.

Figure 4.1.3. Monthly public grain stocks in Bangladesh; 1998 – 2009 & Dhaka prices



Source: Annex 3 in Rahman (2009) for stocks data. Original source Directorate General of Food, GOB. FAO GIEWS for price data

Notes: 1) Average stock of rice for the decade July 98 to June 08 was 0.54MT, while average for July 08 – June 09 was 1.03MT; an increase of 91% over the previous decade average. Wheat stocks show a severe decline from levels in the late 90s and early 2000s. 2) Much of the increased stock accumulation appears to have occurred from mid 2008, as prices were falling, stock was being built up—contrary to the case in some other countries (the Philippines is a good example) where public stocks were being built as prices were rising, exacerbating international price increases.

Capacity of Nicaragua’s ENABAS system increased 175% from 35 thousand tonnes in 2006 to 96.3 thousand tonnes in 2008.

According to USDA FAS, Nicaragua’s stock to use ratios for Maize went from 14% for the year ending June 06 to 10.6% for the year ending June 07 to 10.7% for the year ending June 08, to 8.5% for the year ending June 09, and is forecast to be 9.5% for the year ending June 2010. In contrast, rice STUR went from 37.3% for the year ending Dec 06 to 33.8% for the year ending Dec 07 to 27.9% for the year ending Dec 08 to 24.5% for the year ending Dec 09 and is forecast to be 20.9% for year ending Dec 2010 (USDA FAS). According to Viatte et al. (2008), Nicaragua plans to further strengthen grain reserves. They also mention a regional agreement — between Bolivia, Cuba, Nicaragua and Venezuela — describing a “US\$100 million fund to finance multilateral cooperation on food sovereignty.” Current status of any such agreement is not clear.

Removing or reducing **food taxes** is another market option. Taxes on basic staple foods consumed by the most poor and vulnerable however are not common (except as border measures, where as discussed earlier they tend to be minor), and were not used in any of the case study countries⁴⁷.

⁴⁷ There may also be a tendency to confuse ad valorem tariffs on staples at the border with value added tax to consumers

Introducing or increasing untargeted *subsidies on food* has a similar impact to the removal of food taxes—except it may require a larger initial financial commitment on the part of the government. It is also potentially more attractive to producers and traders than the option of setting price ceilings—in poorly functioning markets it may however require enforcement in the same way.

None of the countries responded with direct blanket subsidies on commodities — however there was a degree of (however limited) government subsidisation in Nicaragua and Bangladesh, and in Sierra Leone some limited targeted distribution (school feeding) through WFP.⁴⁸ In Nicaragua, certain products were purchased from farmers at market prices and released through ENABAS at subsidised prices. For example, in urban areas, ENABAS reportedly offered 36% lower prices for maize, 29% lower prices for beans, 12% lower prices for vegetable oil, and 10% lower prices for rice. Bangladesh also offered subsidised distributions, for example through its OMS (Open Market Sales) programme. These measures will be discussed further in the section on measures to protect the vulnerable.

Moves to *restrict speculation* or *limit private stockholding* are among the most controversial of market measures. Economists are particularly divided over the role (if any) financial speculation plays in price spikes. Regardless, restricting speculation on commodity markets is a politically popular option as it shows governments to be interested in the problem of rising prices. It also allocates a certain degree of blame.

For similar reasons, limiting private stockholding, or outlawing ‘hoarding’ may be popular—though long run risks of scapegoating private traders may be severe—particularly in many developing country markets where the private sector is already operating in an uncertain and high-risk business environment. Interfering with private traders by forcing them to release stock damages their incentives to hold stock in the future—which in turn places a strong onus on the government to have sufficient stockholding capacity to make up for private sector reluctance to stock in sufficient quantities.

Restrictions on financial speculation were not recorded in any of the case study countries as a response to the food price crisis of 2007/08. On the other hand, anti-hoarding activities were recorded in all three. In **Bangladesh**, news reports indicated for example that in November 2007, government officials found about 250,000 tonnes of imported wheat left on board about a dozen ships which were employed to transport it from larger cargo ships in the Bay of Bengal to the port of Chittagong⁴⁹. An IMF team in 2007 suggested “Administered measures to prevent hoarding and control the prices of essentials are creating uncertainty and supply disruptions and may actually have the opposite effect on inflation.”⁵⁰ There is also some indication that restrictions on private sector activities that took place in previous years in (during an anti-corruption drive), increased the necessity for government intervention to help small importers over the time of the crisis with lines of credit—as discussed in the section on import facilitation.

In **Nicaragua**, there were less reports of anti-hoarding activity, though one source noted that government authorities were meeting with small business owners specifically in order to discourage hoarding or speculation⁵¹.

⁴⁸ In some senses it is possible that the Sierra Leone combination of price controls by fiat plus the import tax waiver functioned as a form of subsidy. In the framework used here however, this is not obvious.

⁴⁹ Reuters. Sun Nov 4, 2007. *Bangladesh finds grain hoarding on port vessels*. Chittagong, Bangladesh (Reuters). Online: <http://in.reuters.com/article/southAsiaNews/idINIndia-30322320071104>

⁵⁰ The Daily Star. Friday April 20, 2007. *Anti-hoarding drive disrupting supply*. Vol 5 no. 1025 Online: <http://www.thedailystar.net/2007/04/20/d7042001149.htm>

⁵¹ Reported in: Sabo, E. Aug 13, 2008. *Nicaragua Central Bank Warns of Spiralling Inflation*. Bloomberg. Online: http://www.bloomberg.com/apps/news?pid=20601086&sid=aHktYnZc06Y0&refer=latin_america

Finally, in **Sierra Leone**, reports of strong anti-hoarding measures against rice traders exist. For example, the government reportedly gave 25 year jail sentences—or alternate fines of 20 million Leones each—to five rice traders who pleaded guilty to hoarding 115 bags of Indian special rice⁵².

4.1.3 Summary of border and market measures

Bangladesh wholesale rice prices in Dhaka—in local currency—increased 73% from June 07 to April 08; 35% of the price rises seen on the world markets (for Thai 100% B variety) from Sep 07 to April 08. Wholesale wheat prices in Dhaka—in local currency—increased 87% from May 07 to March 08; 70% of the price rises seen on world markets (for US hard red winter wheat) from May 07 to March 08.

In the short term, **Nicaraguan** white maize prices do not appear strongly linked to the international yellow maize price. However, on average, monthly maize prices in 2008 and 2009 were 13% higher than the average monthly price for the previous eight year period – 2000 to 2007 – in real terms. Rice prices are more clearly integrated with world markets—with local currency retail prices in Managua increasing 87% from September 2007 to April 2008; that is about 42% of the international rice price rises from Sep 07 to April 08.

Of the three, **Sierra Leone** saw the strongest case of dampened price transmission – where transmission was expected to begin with. Price of imported rice (in local currency) increased 73% from Sep 07 to Oct 08 – as with Dhaka rice prices, 35% of the world rice price rises from Sep 07 to April 08 – but unlike Bangladesh this increase occurred over 13 rather than 10 months, and in a country with 1 rather than 3 annual rice harvests. However, in Sierra Leone, rice prices did not spike so much as move steadily to a new higher equilibrium—while in Bangladesh they had fallen back by early 2009 to the levels of early 2007.

Main findings for Bangladesh, Nicaragua, and Sierra Leone

- The influence of export bans and import tariff reductions appear to have been relatively marginal. Government import facilitation for the private sector, particularly in Bangladesh and Sierra Leone may have been more useful.
- Overall, the three countries appear to have dampened price pass-through for staple foods from international to domestic markets — with varying degrees of success. Despite this dampening, price rises were still alarming: especially in the case of rice.

⁵² Assuming 50kg bags, this is about 5.8 tonnes of rice. 20 million Leones in Sep 2008 was about US\$6,700. Source: Awareness Times News. Sep 2, 2008. Online: http://news.sl/drwebsite/publish/article_20059630.shtml

4.2 Stimulating agricultural production and marketing

High food prices sparked renewed interest across the world in agriculture, food production and self-sufficiency. The majority of country governments reacted by introducing measures to stimulate a quick increase in domestic food production (Demeke, Pangrazio, and Maetz 2009; FAO 2009). These normally have two main aims: bringing down overall food prices, and helping poor families with access to land to feed themselves (as even in rural areas the majority of households normally buy food).

Box E: Input supply: other options

Why do governments not simply give more cash to farmers to invest in inputs themselves? One reason is that farmers may underinvest (from the point of view of the government) and choose to spend their money on health care or other pressing needs, instead of agricultural inputs ((FAO/GTZ 1998; Lapenu–Cerise 2001). Second, badly- functioning markets in many countries mean that farmers may have little or no access to good-quality inputs. Thirdly, some inputs are best supplied alongside technical advice on how to use them safely and effectively (for example pesticides). Vouchers given to farmers to buy agricultural inputs have proved to be an effective way of bypassing many problems of government input distribution. Where markets are nascent and thin, seed and input fairs’ - where farmers are given vouchers to buy inputs from merchants gathered together in a designated location and time – have been shown to be effective.

Direct support to agriculture can take various forms, for example:

- Fixing a minimum support price at which government agents will buy produce from farmers
- Subsidies (or free handouts) of annual farm inputs such as fuel, seed, fertiliser, pesticides and irrigation water. These may include high-yielding varieties of crops and livestock which are expected to result in higher production.
- Subsidies (or free handouts) of capital investment items such as irrigation pumps, tractors and farm animals
- Organising farmers into groups to receive government benefits and technical advice

Table 4.2 shows the measures adopted by the three case study countries for support to agricultural production in 2008. All three countries already had some support to food and agriculture underway, and the measures adopted to combat high food prices were influenced by their history, experience and (particularly in **Sierra Leone**) by international partners who underwrote the programmes.

4.2.1 Prices, taxes and markets

Providing a guaranteed floor price for government purchases of crops can be a powerful incentive for farmers, if governments have done this effectively in the past and announce prices in good time to influence planting decisions. A considerable challenge faced by governments is how to keep farm-gate prices high enough to incentivise farmers to produce a crop, while simultaneously keeping retail prices low enough for poor consumers. Filling this price gap through subsidies can be a major drain on the government budget. Government purchasing can also be logistically tricky to manage and requires a network of purchasing and sales points and storage facilities.

Bangladesh has a considerable history of government intervention in the market, and the government offered a minimum purchase price in 2008 for rice and wheat that was considerably higher than the previous year (Table 4.2.1). This was reported to be a major factor contributing to high rice yields and a good harvest in 2008.

In **Nicaragua**, some central purchases were carried out by the government food company ENABAS, but these represented only a small fraction of the total marketed surplus and there is no clear evidence as to whether they

provided an effective floor or influenced planting decisions. ENABAS also made significant investments in rehabilitating storage and purchasing points with a view to further intervention in the market in future.

All three countries used **fuel subsidies and/or reduction of fuel import tariffs**. Fuel is a large part of input and marketing costs. In Bangladesh the government also subsidised (20%) electricity for pumping irrigation water and protected the farming sector from national electricity cuts. This was reported as a key factor in the record *boro* (dry-season) rice harvest in 2008.

4.2.2 Supplying and/or subsidising agricultural inputs

All three countries also heavily subsidised and/or gave free agricultural inputs to farmers (Table 4.2.1) For example, rice and groundnut seeds were supplied to Farmer Based Organisations in **Sierra Leone**, and seeds and fertiliser were supplied to farming families in **Nicaragua**. The **Bangladesh** government did not get involved directly in distribution but provided substantial subsidies (40%) on fertiliser.

NGOs were also involved in this type of project – *CARITAS* for example, with funding from *CAFOD* assisted families with improved rice seed, groundnuts, vegetables seedlings, simple agricultural tools such as hoes and cutlasses, and training in improved agricultural techniques, benefiting about 300 farm families. *CESPA* reports that families confirmed these interventions resulted in improved rice production and that they have surplus stocks of rice they intend to sell to raise funds.

Welthungerhilfe is another NGO with a long-running operation in Bo. Between 2004 and 2007, with funding from the EU, they were supporting farmers to improve food security through training in farming, and inputs of seeds and basic tools which led to an increase in production. Though not specifically geared towards responding to the global food crisis, in 2007/08 they received additional funds to continue, and *CESPA* reports this led to an increase in production. They also note that 70% of the FBOs in communities where *Welthungerhilfe* operates have been able to open bank accounts and as such are better able to carry out their farming activities.

There is a long international history of handing out seeds and tools to farmers after natural disasters – whether they are in fact needed or not ((Levine and Chastre 2004). Some of the well-known challenges include:

- Choosing the right crops and varieties. ‘High-yielding’ varieties may give lower yields than local ones if they do not get sufficient fertiliser and rainfall. Some vegetables introduced by external projects (e.g. lettuce, in a **Sierra Leone** example) have a considerably lower nutritional value than traditional crops.
- Getting inputs there on time. If the seeds miss the planting season there is little point. This reportedly happened in some programmes in **Sierra Leone**.
- Getting the quantities right. Predicting what seed is available and needed in a locality is difficult, and if the quantity is very insufficient, distribution can be tricky to organise and may cause conflict. Both **Sierra Leone** and **Nicaragua** reported these challenges.
- Technical issues: If seeds are poorly stored en route to distribution, their quality may be compromised. It is normally impossible to determine whether a seed will germinate and grow well by looking at it, so there is a potential problem of trust, as reported from **Sierra Leone**. Treating the seed with pesticides may improve germination and yield, but is risky if there is a chance that the poorest people may use the seed for food.

Table 4.2.1 National responses for increasing agricultural production in response to the price spike

Response	Bangladesh	Nicaragua	Sierra Leone
Background	Widespread floods and Cyclone Sidr in 2007 had reduced production and prices started rising in 2007. Fertiliser, fuel and electricity prices had risen by 60% (however, fuel is subsidised by 40% and electricity for irrigation by 20%).	Previous domestic food price spikes in 2003 and 2005. Hurricane Felix in Sept 2007 had reduced second season maize and bean production and prices rose from late 07.	A large number of aid agencies and NGOs are engaged in supporting the country in its post-war reconstruction.
National strategy	Caretaker Government put together a multi-ministry plan of action for rising prices.	Five year national agriculture plan (2008-12); National Development Plan 2008, National Food Security and Sovereignty Plan 2009, inter alia	National Agricultural Response Programme produced by Ministry of Agriculture (MAFFS) with support from IFAD, WFP, FAO and ADB
Farmer organisations created.	Nothing new in response to high food prices	Nothing new in response to high food prices.	No new FBOs were formed, but existing FBOs were targeted for distribution of inputs, plus receipt of longer term training in management and technical issues. Inputs supplied including: 50 power tillers were made available; 10 to each of the ASREP districts; Eight threshers were given to each of the five ASREP districts, making a total of 40. 40 mini rice mills were made available; 8 to each of the ASREP districts. The MAFFS is assisting the FBOs in production, processing and marketing of farmer produce. The FBOs are also being encouraged to register as limited liability companies to help raise their income levels.
Minimum price set and/or government purchase of farm produce	Possibly the most key action was to raise the minimum procurement price for <i>boro</i> paddy rice by 60%, for <i>aman</i> rice by 33%, and for wheat by 44% from the previous year, and publicise this widely. The reduced capacity of public grain silos (down from 1.5 million MT capacity in 1980s to 0.6 million MT in 2008) may have made the logistics of procurement more difficult for the Government.	ENABAS (national supply company) bought 11K tons beans (6% of national production), 5K tons rice (6%) and 4.5K tons (1%) maize from farmers. Meanwhile, open market prices to producers rose 50% or more for beans and rice, and 20% for maize.	Not reported.
Seeds and inputs	Fertiliser subsidies were increased by 35% from the previous year which likely contributed to fertiliser use	ENABAS provided 4K tons seed (maize, rice and sorghum) to farmers. An estimated 148K families	National MAFFS programme supplied high yielding rice seed to farmers 72.8K bushels in 2008 – compared to

Response	Bangladesh	Nicaragua	Sierra Leone
	being fairly stable (down by 10-15% from previous years) despite rapidly rising external prices. The government also helped 'streamline timely distribution of inputs, arranging electricity and diesel as well as seeds'. Rural irrigation was reportedly given priority for electricity use, being protected from cuts hitting urban areas.	benefited. Fertilisers were provided to 5.5K families. In addition, 1.5K families in the capital city Managua received a 'patio coupon'. Generally, coverage was low and delayed due to decision to use MAGFOR (previously reduced to a smallish regulatory agency) as distributor, rather than the private sector.	67K in 2006. The National MAFFS programme under the NARP supplied 350 bushels (8750kg) of improved rice variety to each of the five ASREP⁵³ districts; Kambia, Port Loko, Moyamba, Kenema and Pujehun. Bo and Bombali districts were each supplied with 1,100 bushels (27,500kg) and Bonthe district was supplied with 700 bushels (17,500kg) of improved seed rice. In all, 4650 bushels (116,250kg) of improved rice varieties were supplied to the districts; this can cultivate 4650⁵⁴ acres (1882.6 ha) of land. The average yield for rice in Sierra Leone is 1.43 tonnes per hectare⁵⁵ and the annual consumption of rice is 104 kg per person⁵⁶. Therefore, the 4650 bushels (1882.6 ha) of seed rice can produce 2,692,118kg of rice which can feed 25,886 Sierra Leoneans for a year. Rice and groundnut seed supplied to Farmer Based Organisations – some reportedly came too late. A variety of small NGO programmes supplied tools and seeds – typically rice, vegetables.
Capital items	None reported.	The Food Distribution for Vulnerable Groups programme planned to provide cows, pigs and chickens (as well as seeds and fertiliser) to rural households. Procurement problems in MAGFOR led to delays. By the end of 2008 seeds and animals were reportedly distributed to 37K families (19% of target population).	Tractors, power tillers, threshers, irrigation pumps and rice mills were proposed in 2008 but only supplied in 2009/10 through FBOs.
Reducing transport and	Fuel subsidy of 40%.	Fuel subsidy introduced	Fuel import tariff cut by 5% from 15%. Feeder roads identified for rehabilitation in medium term

⁵³ Agricultural Sector Rehabilitation Project (ASREP)

⁵⁴ In Sierra Leone, one bushel of rice is cultivated on an acre of land

⁵⁵ Source: 2004 census data

⁵⁶ 2004 Census data

Response	Bangladesh	Nicaragua	Sierra Leone
tillage costs			
Funding	GoB financed most of the agriculture-related interventions. The budget subsidy for fertiliser was taken 57.85M. Overall 2.2% of GDP was spent on input, food and fuel subsidy, to a total of US\$ 1.978 billion.	Nicaragua is aid dependent on donors for a substantial part of its central budget. Aid has been suspended on several occasions however. Funding for Food Distribution for Vulnerable Groups is supported by FAO, IFAD, EC, IADB and 4 bilaterals).	\$2.25M from ADB, FAO, Irish Aid for immediate support. €20M from EC for medium term (delayed arrival of funds)
Results	The rice harvest was very good at 30.5 million tons (irrigated <i>boro</i> harvest was 18.5 million tons, continuing an upward trend in yields). This made a major contribution to food security and reduced the need to import rice. Rice and wheat prices have declined by about 40% in 2009. National stocks have been built up to 1.3 million tons of rice and 150K tons wheat (Sept 08 levels).	Generally, coverage of input support to farmers was reported to be low, irregular and delayed. There are plans to scale up which could increase production in the medium term, but high aid dependency and disputes between donors and the government could threaten sustainability. It is not clear whether the measures adopted affected production or prices. National statistics show no national increase in production of maize or beans, and prices had not fallen significantly to early-2009. Margins between paddy and milled rice prices have risen significantly (which may reflect increased milling costs).	Few farmers were reached in time to influence high prices. Farmers interviewed said they did not increase their planting area or surplus yields in 2008. Nominal rice prices in 2009 have still been 15-30% higher than in 2008. However there are hopes that the measures will result in medium-long term improvements in production and marketing (e.g. feeder roads) which may decrease inter alia) foreign exchange needs for imports. Aid dependency could threaten programme sustainability.

4.2.3 Supplying capital investment items to farmers

Both **Nicaragua** and **Sierra Leone** provided significant **capital items** for selected farmers, sometimes through scaling up existing farm support programmes. These included some expensive items like tractors, threshers and rice mills in Sierra Leone, and cows in Nicaragua. These programmes have not yet been evaluated.

However the history of governments providing large capital items to farmers in poor communities has generally been a sorry one, especially when such programmes are put in place hastily as a ‘crisis response’. Some of the challenges noted in past such programmes have included:

- **Equity.** Large capital items such as tractors often end up belonging to a small and relatively wealthy minority (e.g. leaders of farmer organisations). The poorest families in any case can rarely afford to maintain them. Whoever receives them, giving an item worth more than a year’s salary to a few hastily-selected families may cause discontent and social unrest. Sharing equipment among members of a farmers’ organisation is rarely easy, especially since the seasonal cycle means that everyone needs to plough, plant and thresh over the same few days.
- **Conflict over natural resources.** Giving out irrigation pumps as a ‘crisis response’ without full consideration of local water rights and the management of irrigation schemes, or giving out cows without full consideration of local grazing rights, can be a recipe for conflict.
- **Sustainability.** Repayments on large items are often low and politically hard to enforce, so ‘revolving funds’ often don’t last long. Machinery frequently falls into disuse through poor maintenance and a lack of spares, and animals may die or fail to thrive due to poor animal healthcare systems.

These are well known problems and some steps have been taken to mitigate them in the case study countries. For example, in Sierra Leone, over the food crisis tractors under the supervision of MAFFS district directors were made available to farmers on the basis that they bought fuel. The farmers bought five gallons of fuel (diesel) for every acre of land to be cultivated. The drivers of the tractors were employees of the MAFFS and were therefore paid by the government. Currently, the government through the MAFFS sells the tractors to the farmers/FBOs; they make an advance payment of between Le 16,000,000 and Le 20,000,000 depending on the type of tractor. The remaining amount to be paid is staggered over a period of time.

4.2.4 Organising farmers into groups

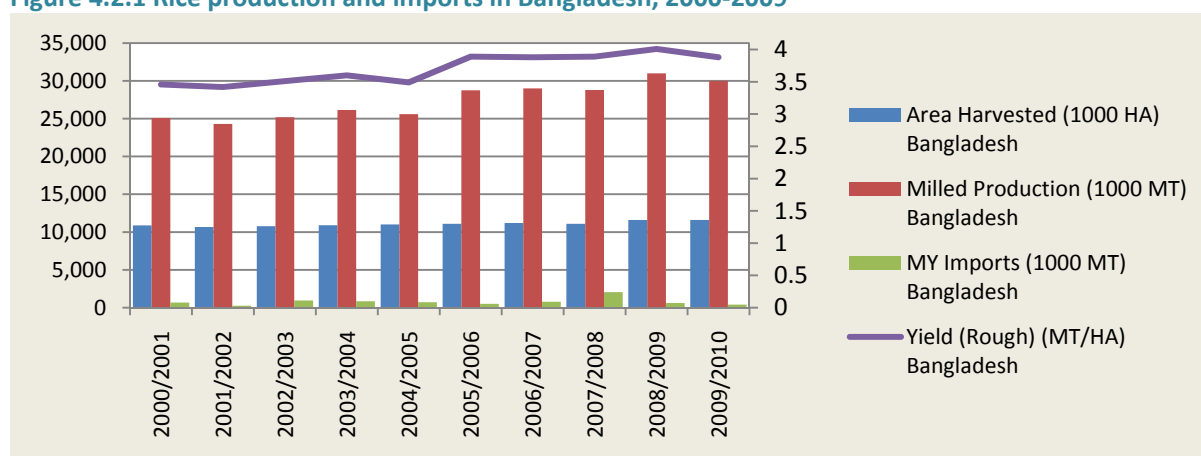
Farmer groups such as cooperatives potentially have many benefits for small farmers, for example in generating economies of scale in marketing and input supply, and for social and political organisation, for example to improve the regulatory environment and public infrastructure. From the point of governments, farmer groups are often popular as they make it easier to provide farmers with inputs, services and advice. The downside of farmer groups is that their benefits are often ‘captured’ by a small relatively wealthy number of farmers and they often exclude the poorest households, in part because participation can be very time-consuming. The most successful farmer groups have been built up over a period of years and provide intrinsic economic benefits to members. The least successful groups have normally been created in a hurry to respond to government (or aid agency) hand-outs. In Sierra Leone the National Agricultural Response Programme (NARP) was set up as a temporary measure to cushion vulnerable people against the effect of the high food prices. It is now incorporated into the National Sustainable Agricultural Development programme (NSADP) which spans over a period of 25 years. The NARP is now called Smallholder commercialisation scheme.

4.2.5 Results

Bangladesh had success with its agricultural response to the high food prices. There were record rice harvests in 2008/9, with the irrigated Boro (main) crop (harvested April – May, in 2008 at the height of the price rises), up over 18% on the previous year, itself a normal harvest. See Figure A2.1 in Annex A. According to USDA data (see Figure 4.2.1), all types of rice harvest in Bangladesh were up nearly 8% on the previous year. This can be attributed to a small (5%) but significant increase in total area planted over the three rice seasons, plus a further (3%) rise in rice yields over the already-significant (11%) increases in yields recorded in the previous three years. The high yields are likely to have been aided by better irrigation (through electricity supply) and possibly in some cases higher applications of fertiliser (see Figure A2.2 in Annex A for some statistics on fertiliser use) as well as the government guaranteed floor price, which was well publicised in advance of planting⁵⁷. The good harvests contributed to a considerable saving in foreign exchange, through a reduction in rice imports from highs of around 1.5 million tons in 2006/7 and 2007/8 to only 175 thousand tons in 08/09 (USDA data). Bangladesh was able to respond quickly due to its long experience with intervention in the agricultural markets (and associated infrastructure).

Earlier Green Revolution investments also helped Bangladesh respond quickly: the widespread introduction of irrigation and high yielding ‘boro’ varieties means that farmers can now produce two or even three good harvests a year. In countries where farmers are dependent on rain to water their crops, production responses may be slower as they are dependent on the timing of the rainy season.

Figure 4.2.1 Rice production and imports in Bangladesh, 2000-2009



Source: USDA Foreign Agricultural Service Data, <http://www.fas.usda.gov/psdonline>

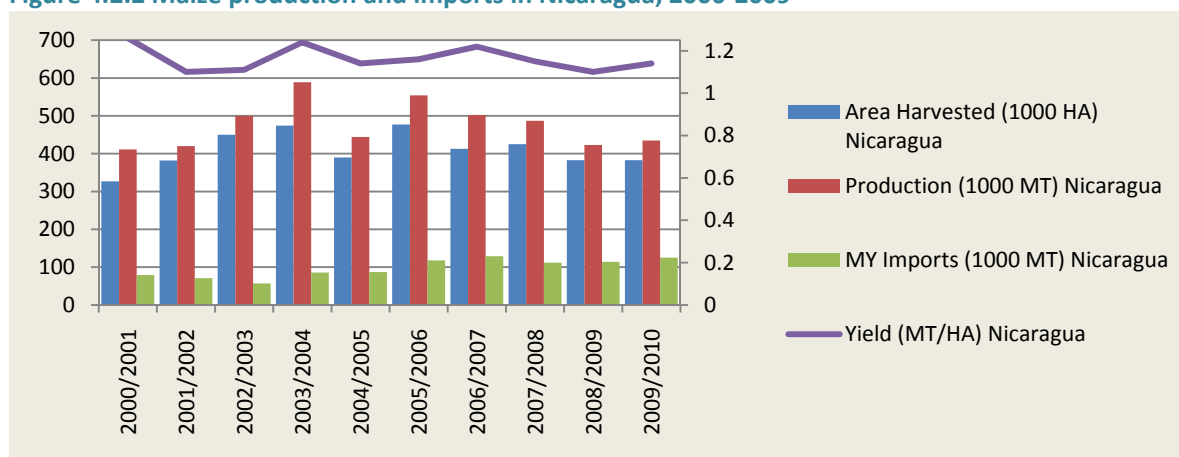
Nicaragua presents overall a less positive picture of ‘too little, too late, and not well managed’. USDA production statistics for Nicaragua (Figure 4.2.2) actually show declines in both harvested area and yields for maize, the main staple, over the period 2007-9; there could be many explanations for this including weather, but there is no evidence of a positive response to government policies. There are question marks over the price signals given to farmers by government purchases, for example: were intentions communicated in time to

⁵⁷ There is little evidence to support the idea that increased fertiliser applications contributed strongly to the supply response, as fertiliser use actually decreased over 2007/08.

influence farmers' planting decisions, and is ENABAS believed to have the capacity to follow through on its price promises?

Nevertheless, Nicaragua's renewed interest in agriculture and food issues and the set of national policies published since the food price crisis have the potential for a better medium term response. Moreover, the 'patio coupon' for urban dwellers in Nicaragua's capital city, although it had a small reach in 2008 (1500 families) could potentially make a significant contribution to urban nutrition in a food crisis. One of the first responses to rising food prices in many countries is to cut expensive but nutritious vegetables from the diet (Block et al. 2004; Fouere et al. 2000); encouraging urban vegetable growing may be a positive response to this, which was not reported from the other country case studies.

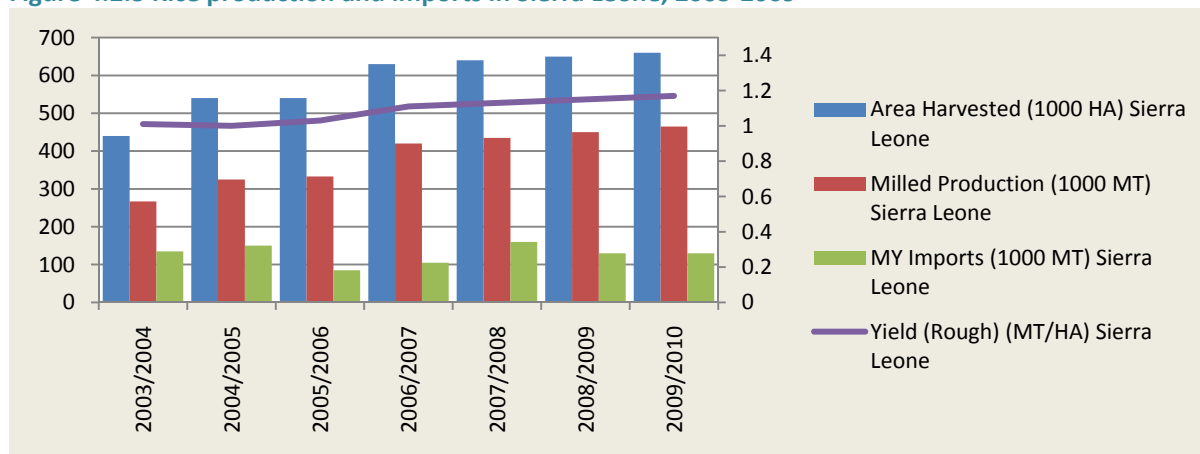
Figure 4.2.2 Maize production and imports in Nicaragua, 2000-2009



Source: USDA Foreign Agricultural Service Data, <http://www.fas.usda.gov/psdonline>

In Sierra Leone, the poorest of the three countries, the long term outlook for agriculture is good. Areas planted, yields and overall production of rice (the main urban staple) have been steadily rising since the end of the war in 2002 (Figure 4.2.3). However, the case study shows that many of the activities started up hastily in response to food price rises may not have made much difference in the short term. Farmers' perceptions (from focus groups) were that these responses had not made much difference to area planted or yields. Some of the actions came too late – for example seed distribution in some areas. At the same time, there is a risk that some of the actions taken - such as starting up farmer groups too quickly based on a promise of hand-outs - will compromise longer term development goals.

Figure 4.2.3 Rice production and imports in Sierra Leone, 2003-2009



Source: USDA Foreign Agricultural Service Data, <http://www.fas.usda.gov/psdonline>

4.2.6 Summary of agricultural production response measures

This chapter looks at the measures taken to stimulate food production in the three case study countries in response to soaring food prices. Bangladesh was particularly successful in increasing short term rice production. This reflected not only the short term measures taken by the government of the day (including setting a floor price for rice, and subsidies for fertiliser and electricity), but also – very importantly - earlier long-term investments in irrigation and Green Revolution varieties, so that planting and harvesting could be carried out in the dry season, in time to bring prices down quickly. Nicaragua and Sierra Leone were less successful in stimulating a quick national production response, partly because their infrastructure and institutions were not fully developed (or had been run down during earlier conflicts), and partly because both countries are largely dependent on rain-fed agriculture. However, both countries had some programmes which are likely to have been successful in helping some vulnerable groups. For example Nicaragua provided vouchers for agricultural inputs and urban gardens, and Sierra Leone had some input distribution programmes. However the scarcity of monitoring and evaluation meant that little solid data could be obtained on programme impacts. A few ‘emergency’ programmes (e.g. hand-outs of expensive capital items) also raised questions about potential conflicts with longer term development goals.

4.3 Safety nets and other measures to protect consumers

When border and market measures, as well as rapid response programmes cannot contain food price rises entirely, some burden of high and rising food price will fall squarely onto consumers. In Bangladesh for example, a FAO/WFP CFSAM (Crop and Food Supply Assessment Mission) estimated that 7.5 million additional people in Bangladesh were made hungry by the crisis, with the number of people believed to be consuming less than 1,805 kilocalories per day increasing from 27.9 million to 34.7 million.

The response of governments, NGOs, civil society and the international community then needs to address preventing or reducing this burden, particularly for the most vulnerable. For poor people who already spend very large fractions of their income on staple foods, extreme price hikes such as those seen over the food crisis of 2007/08 are cause for serious concern.

Without intervention, people may be harmed in many ways, for instance: increased malnutrition, children dropping out of school to save on fees, take up labour, or both; selling or consuming assets on which their livelihoods depend; taking up dangerous work; and even abandoning family members.

So what did governments and other actors do to mitigate impacts of higher food prices? An array of social safety nets and related measures were taken, that can be broadly divided into transfers and nutrition, as follows, see Table 4.3.1 for a summary:

Compensating transfers

- Cash & food transfers – direct, targeted, and including subsidised sales
- Public works (or training) programmes paid in cash, food or both
- Wage increases to public sector staff
- Additional loans, at low interest

Nutrition interventions

- School meals
- Supplementary feeding to infants, mothers, and other vulnerable groups (incl. hospital feeding)
- Home gardens

Some of the measures listed were already in place before the price spike but served to mitigate the impacts, while others were started specifically to respond to the price spike.

In assessing these measures the following questions arise:

- 1) How relevant were the interventions seen and were they likely to do the job?
- 2) Was the planning adequate and were the interventions timely?
- 3) Were they implemented as intended and did they have a chance of being effective?
- 4) How effective were they and did they reach the intended groups? i.e. How wide was their coverage and what else is known about their effectiveness?

Given the lack of formal evaluation of many of the measures, the country studies conducted focus groups and discussions with key informants to gauge public perceptions of the interventions and their effectiveness.

Table 4.3.1 Measures to protect the vulnerable from impacts of high food prices

Measure	Bangladesh	Nicaragua	Sierra Leone
COMPENSATING TRANSFERS TO VULNERABLE CONSUMERS			
Cash & food transfers – direct, targeted, and including subsidised sales	GOB scaled up grain distributed via Vulnerable Group Feeding and Vulnerable Group Development (VGD) (up from 372,000T in 2005/06, to 393,000T, 687,000T, and then 786,000T for the next 3 marketing years ending 2008/09. GOB scaled up open market sales targeted by location in poorer areas (up from 18,000T in 2005/06 to 408,000T in 2007/08.) VGD also includes cash components, though it is not reported to what extent the cash transfers were scaled up in response to the food crisis. Evidence that payments to vulnerable elderly and widowers were highly inadequate.	<i>No reports of cash transfers specific to the food price crisis</i> WFP food transfer emergency programmes were ongoing at the time of the food crisis, though most of the focus was on the aftermath of Hurricane Felix; It is not clear whether the food price crisis influenced targeting.	Some by NGOs. For example in Freetown IRC helped 360 families with a total of 32 million Leones, which is about an average of US\$ 30 per family. WFP serviced 286,000 additional beneficiaries mostly in urban and peri-urban areas.
Public works (or training) programmes paid in cash, food or both	Food for work & cash for work already in place; Not clear to what extent (if at all) they were scaled up in response to the food price crisis. Test Relief is another food for work programme. Provisions fell in 2007/08 on the 2005/06 numbers, but there was a large scale up in 2008/09, with 380% more wheat & rice being distributed than the previous year (76,000T to 368,000T)	Some programmes implemented in response to Hurricane Felix were prolonged	WFP scaled up food for work and food for training in response to the higher food prices (12% of WFP Sierra Leone beneficiaries in 2008 were reached through food for work) World bank scheme; NCSA US\$ 4 million cash-for work Focus on youth in urban and peri-urban areas WFP pilot scheme cash-for-work; to begin in 2009 (4000 recipients planned)
Wage increases to public sector staff	Reported in Demeke <i>et al</i> 2009	<i>No reports</i>	<i>No reports</i>
NUTRITION			
School feeding	School feeding programmes expanded. For Example, USDA provided Wheat for the Food For Education programmes of WFP, intended for around 350,000 beneficiaries and worth approximately 7.97 million US\$	School feeding programme reported – Nicaraguan government and WFP initiative, supported by a number of donors	WFP scaled up their school feeding programme in response to the higher food prices
Supplementary feeding to infants, mothers, & other vulnerable	WFP and partners, including NGOs involved in this; not enough information on whether/to what extent may have been scaled up in response to the international food price crisis	Yes as part of WFP regular programme; budgets impacted by higher commodity prices	Unicef for example, has one feeding centre in SL. WFP supports people living with HIV/AIDS (PLWHA) – in 2008 there were 10,300 beneficiaries (PLWHA plus family members). Families received a set ration per day, which may have cost more in 2008 for WFP to procure. Hospital feeding

Measure	Bangladesh	Nicaragua	Sierra Leone
Home gardens	Home garden programmes exist in Bangladesh, such as those organised by Helen Keller International (HKI), though it is not clear whether or not these were scaled up as a response to the food price crisis.	Government of Nicaragua provided vouchers for agricultural inputs and urban gardens	<i>Not reported</i>
Costs or Funding,	Government of Bangladesh, bilaterals, IFIs (World Bank, IMF), UN agencies, NGOs. US\$ 130 million from the World Bank as credit through IDA Combined GOB budget for inputs, food, and fuel subsidy was 2.2% of GDP or US\$1.978 billion Government of Bangladesh budget for safety net programmes was about 115 billion Taka for 2007/08, increasing to 138 billion Taka for 2008/09, and increasing again to 160 billion taka for 2009/10.	Government supported by donors such as the World Bank., WFP, etc. E.g. TNT provided WFP with 3.4 million US\$ in 2008, used for school feeding micro-projects in five countries – Cambodia, Gambia, Malawi, Nicaragua, and Tanzania (WFP 2009b). Some support for WFP also came from the Government of Brazil, as part of the National Education Development Fund – originally established in 2006 to finance school feeding in Brazil. In Jan 2008 channelling of US\$1 million was provided and beneficiaries expanded. Further expanded (\$1.2 million) in 2009, and Nicaragua is one of 9 countries benefiting from the NEDF-WFP partnership.	WFP funding from a variety of donors (total contribution US\$20 million – of which an estimated 8 million was needed to balance out increased food prices and US\$ 12 million to cover the needs of an additional 286 thousand beneficiaries mostly in urban and peri-urban areas. 25% of funding from Saudi-Arabia, 13% Germany, 11% Ireland, 10% Canada, 9% Spain, 7% Sweden, 4% Italy & Denmark each, 3% Japan & Netherlands each, 2% Switzerland, 5% other governments plus UNDP & UNICEF, and 5% from private donations (for example, Howard Buffett foundation gave 838,000US\$ to SL (Globally 83US\$Million). In 2008 as a whole, WFP Sierra Leone received 20.2US\$ million in donations and spend US\$15.9 million – this probably reflects delays and annual carryovers on longer projects. Also ministry of education and NGOs involved in, for example, food for training programmes. Circa 10,000 US\$ for IRC cash transfers Commodities from USDA worth around 2.32 million US\$, intended to benefit 36,800 children World Bank cash-for-work programme; Under GFRP, 4 million US\$

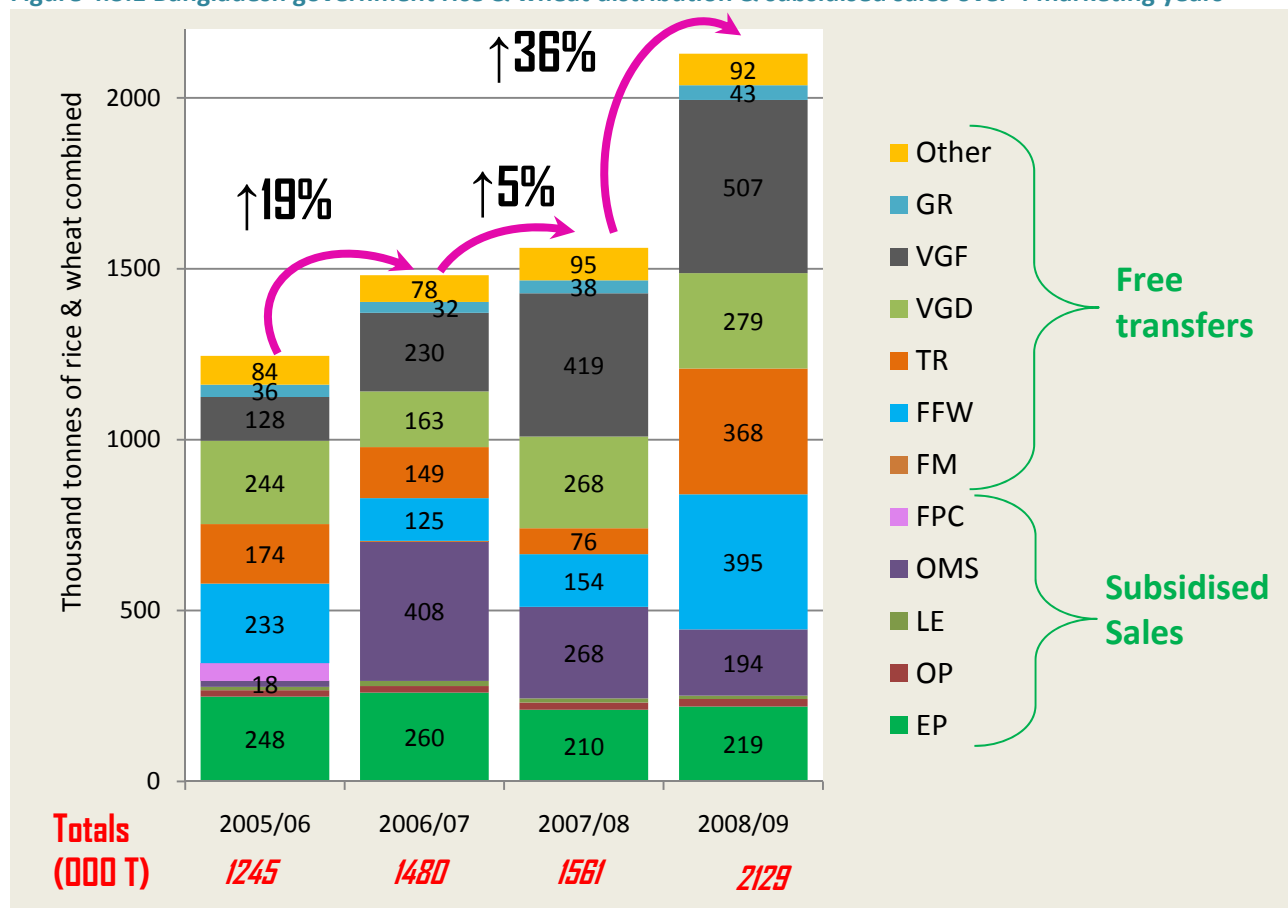
Sources: Rahman (2009), Nitlapan (2009), CESPA (2009), WFP 2009b, WFP 2010, Hossain et al. (2009), World Bank GPRF, Ahmed et al. (2010)

4.3.1 Compensating transfers to vulnerable consumers

Food transfers: rations or subsidised sales.

Some governments distributed *rations*, often to previously identified vulnerable groups. Bangladesh scaled up its Vulnerable Group Feeding (VGF)⁵⁸ and Vulnerable Group Development (VGD)⁵⁹ programmes in response to the food crisis. Together, rice and wheat distributed through VGD and VGF went from 372,000T in 2005/06, to 393,000T, 687,000T, and then 786,000T for the next 3 marketing years ending 2008/09 — see Figure 4.3.1.

Figure 4.3.1 Bangladesh government rice & wheat distribution & subsidised sales over 4 marketing years



Source: Annex 7 in Rahman 2010. Original source: FPMU, Ministry of Food and Disaster Management

Notes: EP = Essential Priority. OP = Priority. LE = Large Enterprise Support (Tea garden etc.). OMS = Open Market Sales. FPC = Food for Chakri (Employment). FM = Food for Farming. FFW = Food for Work (other). TR = Test Relief (a type of public works programme). VGD = Vulnerable Group Development. VGF = Vulnerable Group Feeding. GR = Gratuity Relief (one of two relief programmes—the other being VGF.)

⁵⁸ VGF is a relief programme, designed to mitigate impacts of natural disasters such as floods. Unlike many other programmes, it has no pre-set criteria or conditionality for participation (Ahmed et al. 2010)

⁵⁹ VGD is a training programme exclusively targeting poor women that provides monthly rations for 24 months (of wheat or of whole wheat flour, called *atta*). It was introduced as a relief programme in the 1970s, but has evolved to include: training on income-generating activities; raising awareness of social, legal, health, and nutrition issues; and basic numeracy and literacy (Ahmed et al., 2010). Hossain (2007) noted that reviews in the 1990s and 2000s of this programme found it was effective—in its targeting of extremely poor women, and also in helping many of them with the transition from receiving relief to more sustainable and mainstream development activities such as micro-credit programme membership.

Sales to targeted groups at low prices was also a strategy used in Bangladesh and Nicaragua. Coverage however, was limited. In **Nicaragua**, subsidies to consumer prices were found only at key urban sites such as Chinandega. The only smaller city in which they were reportedly offered was Malpaisillo, vulnerable owing to its location in a dry region. Rural communities had no opportunity to buy subsidised food, in spite of having a much higher relative incidence of poverty than urban areas

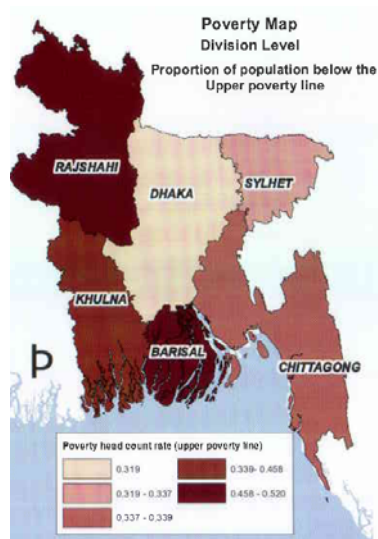
In **Bangladesh**, sales of food at low or controlled prices were similarly skewed to urban areas. Open Market Sales (OMS) of subsidised rice were conducted by the Bangladesh Rifles⁶⁰ (BDR), beginning with twelve outlets in Dhaka from March 2007. Nearly 300,000 tonnes of rice were supposed to be sold at US\$0.41/kg (Demeke et al., 2009). Sales were later expanded to include other foods. At its peak there were 210 BDR outlets⁶¹. Of these outlets however, 100 were in Dhaka, and many of the others were in towns and cities.

Participants in focus groups thought that although subsidised sales were welcome, it was not on a large enough scale outside of the capital, particularly in rural areas⁶². Furthermore, the BDR outlets reportedly began charging prevailing market prices for products — especially rice — towards the end of 2007 and early 2008, which means the window during which people were able to access subsidised rice from these outlets was relatively short, and did not coincide with the sharpest part of the spike, as prices were highest in the second and third quarters of 2008, see Figure 4.3.1. Figure 4.3.2 shows that the OMS were highest in 2006/07, and by 2008/09 had reduced to about two thirds of the previous year's amount.

⁶⁰ The logic being that BDR would make food distribution fair and uncorrupted, drawing on perceptions that the military were less tainted than civilian agencies.

⁶¹ Selling mostly rice, though some sold also edible oils, pulses, and dates (during Ramadan)

⁶² Dhaka is home to about 4.3% of Bangladesh's population. Although urban poor are certainly vulnerable to sharp price rises, rural poor may be equally or more vulnerable. Spatial mapping of poverty at the district level in Bangladesh also shows that the Dhaka district is the least poor: (data is from 2005).



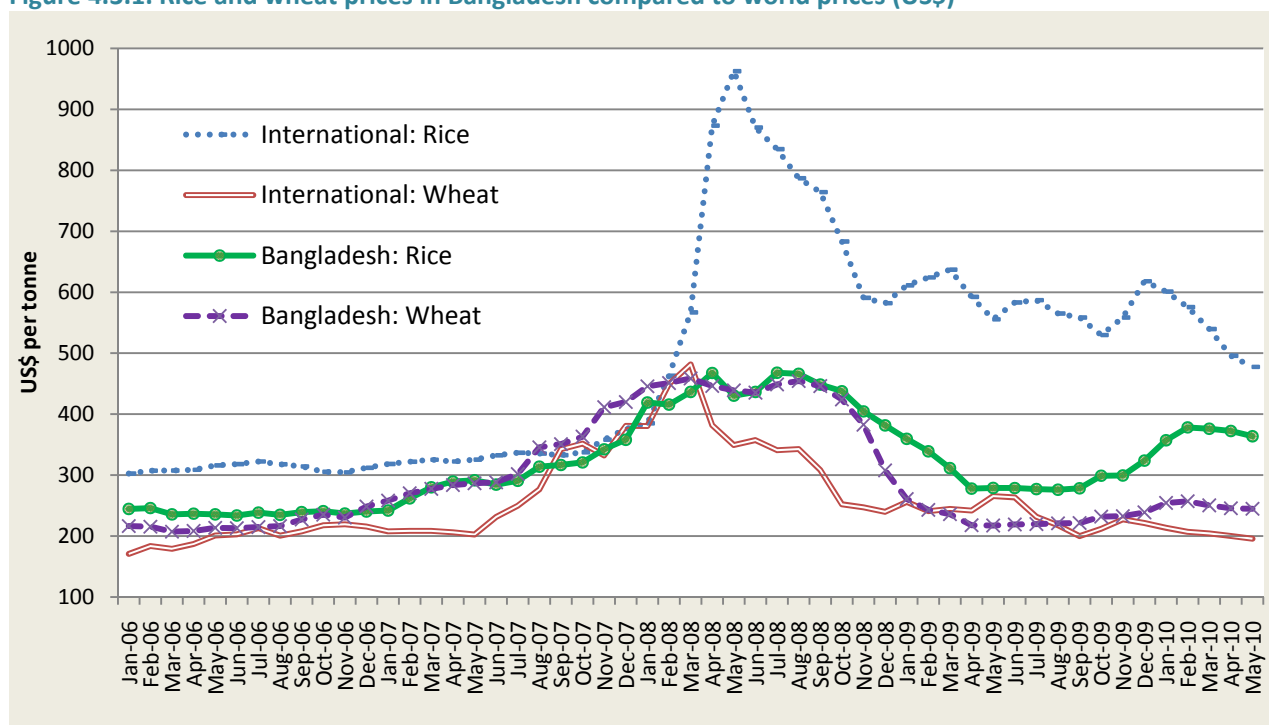
Ahmed et al. (2010) contended: “more resources should be targeted to those geographical areas where the prevalence of the specific problem a program intends to address (such as serious food insecurity, malnutrition, school dropouts) and the incidence of poverty are high. That is, resource allocation should be proportional to the intensity of the problems.”

That is still not to say interventions in Dhaka were not useful. Hossain et al. (2009) described at length a feeding programme for the local poor around the Tomb of Shah Ali (See Box 4.1 in *ibid*), where they wrote: “At the height of the food price crisis, more than 550 people ate there daily; because food costs had spiralled, they were turning away 50 people each day. The numbers had started to rise after the 2007 floods; before that it was barely 300 per day”

Ahmed et al. (2010) also stated: “When selection is done on the basis of vulnerability or poverty maps, some extreme poor in relatively non-poor regions will not be included.”

Source: World Bank/ Bangladesh Bureau of Statistics/ WFP 2009

Figure 4.3.1. Rice and wheat prices in Bangladesh compared to world prices (US\$)

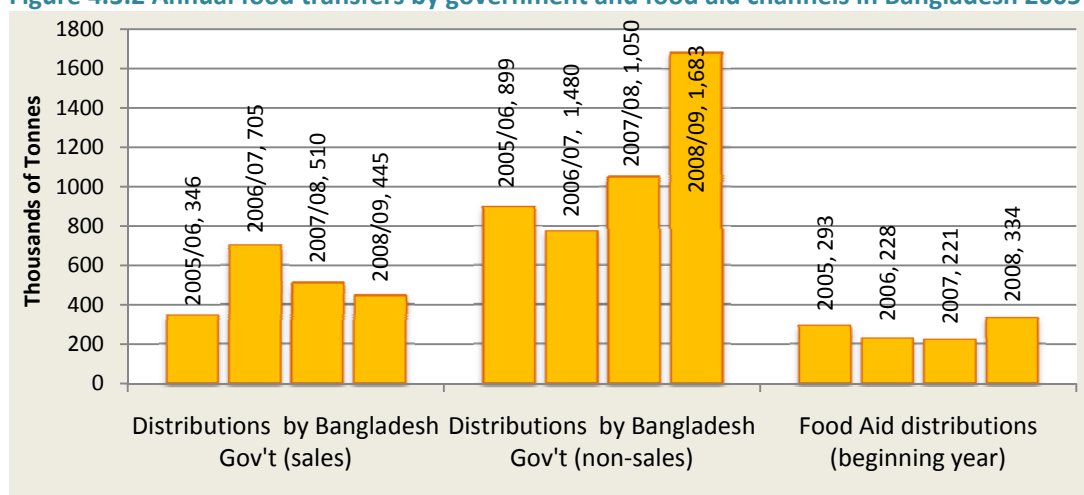


Source: FAO GIEWS. **Note:** International rice is from Bangkok, (Thai 100% B), Export. International wheat is US Gulf of Mexico No. 2 Hard Red Winter, Export. Bangladesh rice and wheat prices are retail and National Average.

Food aid has also been used to supply rations. In the case study countries, there was some increase in food aid deliveries⁶³ in 2008 over previous years in Bangladesh — from 0.22M tonnes in 2007 to 0.33M tonnes in 2008, while in Nicaragua there was an increase in 2007 — from 46k tonnes in 2006 to 55k tonnes in 2007. Deliveries to Sierra Leone appear to have steadily gone down; from 31k tonnes in 2006 to 30k tonnes in 2007 to 26k tonnes in 2008. Figure 4.3.2 provides an example of how food aid transfers to Bangladesh compared to Government of Bangladesh sales and non-sales food distribution programmes. On average over the years shown, food aid distributions have been about 17% of the amount provided through government distribution and sales together (26% and 59% respectively when they are considered separately). In the last year on record, 2008, distributions of food aid represented 75% of the volume distributed by government sales in 2008/09, and about 20% of the government giveaways for that marketing year.

⁶³ As logged by WFP FAIS (Food Aid Information System), which measures food aid deliveries not only from WFP but also various other providers (bilateral, NGOs, the private sector, etc.) These do not of course represent food aid delivered solely in response to the high food price crisis of 2007/08. They also do not represent only emergency food aid, but that used in programmes including for example, school feeding or other nutritional interventions. Tonnes of different products are furthermore not necessarily nutritionally comparable.

Figure 4.3.2 Annual food transfers by government and food aid channels in Bangladesh 2005-2008



Sources: Bangladesh Government distributions from Rahman 2009. Food aid Distributions from WFP FAIS (includes for emergency and non-emergency delivery)

Cash transfers

Cash transfers aim to protect vulnerable people's purchasing power in the event of higher food prices⁶⁴. Transfers are usually targeted, although this may be difficult, particularly at short-notice, and especially difficult to change or upgrade in the event of a food crisis which requires those most vulnerable (or newly vulnerable) to be assessed in some way.

In Bangladesh, part of the Vulnerable Group Development programme involves transfer of cash to participants; although it is not clear to what extent the crisis prompted any scale up or increase in funds disbursed through cash transfer programmes. Hossain et al. (2009) wrote for example that: "cash pensions for the elderly and widowed poor in Bangladesh... were all seen as too small in amount to compensate for the food prices at their height." (pp14)⁶⁵

NGOs also gave limited cash transfers. In Sierra Leone for example, IRC (International Rescue Committee), in collaboration with two local NGOs — *Camp Women's Multipurpose Development Organisation* and *Afford Sierra Leone* — helped 360 families (targeting vulnerable families with children) in Freetown with a total of Le32 million to cushion against high food prices: an average of a little less than thirty dollars for each family⁶⁶.

⁶⁴ In some sense a separation of cash and food based programmes is artificial, since they are often used together. In Bangladesh for example, the Vulnerable Group Development (VGD) programme provides some participants with food only, and some with a combination of food and cash (Ahmed et al. 2009).

⁶⁵ This refers to national programme of small monthly cash payments to locally selected elderly and widowed — a programme which began in 2001

⁶⁶ At say 3546 kcal/kg of rice, that is about enough calories for one person for 70 days (assuming 1800kcal/person/day), so for a family of four represents about 18 days' worth of free rice.

Public works programmes

Public works (or training) programmes, paid in cash, food, or both are interventions which help people acquire work and skills, while also allowing them to maintain their food consumption. They may in addition provide benefits to communities, since much of the work offered through this type of programme creates public goods (for example irrigation canals, maintenance for feeder roads, etc.).

In **Nicaragua**, a Food For Work programme was implemented by WFP and partners as part of a package following Hurricane Felix — and although not a direct response to higher food prices their work was influenced by the food crisis which followed soon after. Their first programme was a general food distribution designed to assist 38,000 people for 3 months (540 grams/person/day for 20 days). Though they initially planned to use stocks in the country, subsequent high prices of local commodities led them to use internationally sourced supplies instead. They extended the programme into other areas in 2008 and expanded it to 80,000 people under general food distribution and 35,000 under supplementary feeding with special attention to women and under-fives. A Food for Work (FFW) programme was part of this extension, estimated to benefit 55,000 people⁶⁷.

In **Bangladesh** the government distribution of wheat and rice through food for work was scaled up 23% from marketing year 2006/07 to 2007/08, and then increased by one and a half times from 2007/08 to 2008/09. NGOs were also involved in this work, to a relatively marginal degree. Test Relief, a kind of food for work programme, was also scaled up in 2008/09, with 380% more cereal distributed than the previous year (76,000T to 368,000T), see Figure 4.3.1.

Ahmed et al. (2010) argued that most such programmes in Bangladesh address only ‘economic vulnerability’ and neglect ‘demographic vulnerability’⁶⁸, stating: “The demographically vulnerable—including children, the elderly, and those who are severely disabled or chronically ill—are often not able to perform the intense physical labour involved in cash- or food-based public works programs...a broader social protection system is required for them. Programs that involve providing allowances to elderly and disabled people are a start, but coverage and transfer amounts are currently inadequate.”

Some NGOs also reportedly expanded cash-for-work programmes following Cyclone Sidr⁶⁹.

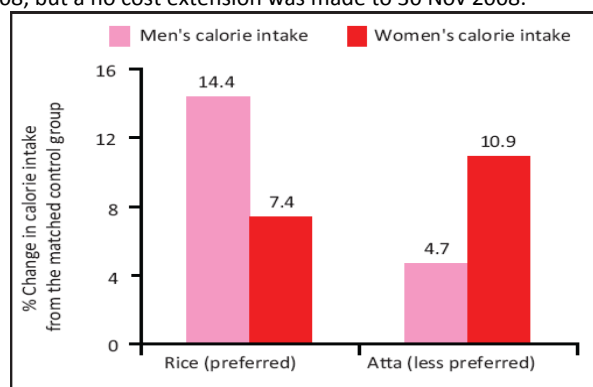
Bangladesh was the only case study country which already had an extensive system of direct transfers and public sale of food to vulnerable groups, as well as cash-based safety nets. According to Ahmed et al. (2010), there are

⁶⁷ The recovery activities were initially planned to last until 30 June 2008, but a no cost extension was made to 30 Nov 2008.

⁶⁸ In contrast to some of the food rations; VGD for example has a demographic element as it targets women specifically. Another way to help women at an intra-household level may be via type of ration provided. Ahmed et al. (2010) found that using micronutrient fortified atta (whole-wheat flour) food transfers was best for ultra-poor households, and especially for women in such households. The adjacent figure shows how the type of food transfer influences intrahousehold food distribution.

Comparing people in households receiving rice and atta via safety net programmes to those in a control group, researchers found that rice transfers increased men’s calorie intake by 14% and women’s by half of that. Conversely, atta transfers (the less preferred food) increased women’s calorie intake by 11% and men’s by 5%.

Source: Ahmed et al. 2010, pp 11



⁶⁹ For example, the NGO Caritas Bangladesh, funded by CRS and USAID helped a reported 10,000 individuals with a cash for work programme. See: <http://www.alertnet.org/thenews/fromthefield/217466/127165343691.htm>

about 58 social safety net programmes in Bangladesh in total, excluding interventions to improve nutrition of children and women since they do not fall neatly into the heading of transfer programmes. The government budget for safety net programmes was about 115 billion Taka for 2007/08, increasing to 138 billion Taka for 2008/09, and increasing again to 160 billion taka for 2009/10 [US\$1.7G, US\$2.0G, and US\$2.3G, respectively]. Large increases in volume of grain distributed were observed in vulnerable group feeding, test relief and food for work programmes (see Figure 4.3.1).

In **Sierra Leone** the World Bank funded a small cash-for-work programme from scratch in response to higher food prices, with funding of US\$4M. Beneficiaries worked on a variety of projects, including community road works, street cleaning, garbage collection, land reclamation and swamp development. They were paid below national labour rates to avoid migration. Only the unemployed were considered and 30% of beneficiaries were supposed to be women. Everyone was supposed to be employed for two months and the project was intended to reach over 5,300 youth beneficiaries in urban and peri-urban areas.

CESPA (2009) found the experience of implementation was slightly more complicated. In the Western Rural area of Tombo, it was reported women were receiving less than half the daily wages of men; resulting in 13 of the 15 women employed abandoning the work. Most communities also interpreted the rules differently to employ more people, changing the duration from two months to one month; thereby helping more people, but to a lesser degree.

Interestingly, the WFP, generally considered a distributor of food, also began Cash-for-Work projects in Sierra Leone, explaining this as follows:

“High food prices in 2008 highlighted the need to find new approaches to livelihood support projects. As food is available on the urban markets, WFP has decided for the first time to pilot Cash-for-Work projects, or a combination of Food for Work and Cash for Work, in the Western Area. About 4,000 workers will be involved and the family rations they earn will reach an estimated 20,000 beneficiaries in 2009.”

Wage increases to public sector staff improve or maintain people’s access to food when prices are rising. Though relatively simple, this can be costly. Moreover, it only benefits households with public sector workers; not those most vulnerable who tend to be unemployed or dependent on low-paid informal activities. When households benefiting help to support others, such as family in villages, it may be effective. Sometimes, however, the motive for pay rises is largely political: to head off tensions amongst groups that may agitate or riot⁷⁰.

Of the cases, only **Bangladesh** is reported to have pursued this option (Demeke et al, 2009). Related ways of improving access include reducing taxes for those in the lowest paid groups, though again this is not likely to have much more than a very marginal effect on the nutrition and access to food of the poorest and most vulnerable⁷¹.

Emergency credit

Additional loans, at low interest are another means of improving people’s purchasing power⁷². This strategy was employed in **Bangladesh**, where microfinance facilities are widespread. Rahman (2009) described a World Bank survey in 2008 which found that 46% of urban respondents and 60% of rural respondents reported increases in

⁷⁰ “Such measures helped to reduce tension in urban areas, particularly in “administrative” cities where civil servants constitute an important proportion of the population.” Demeke et al. (2009)

⁷¹ “El Salvador, Guyana and Panama reduced income tax for low income groups, while Burkina Faso reduced the cost of electricity, but these measures may not help the poorest of the poor since they may not pay tax (e.g. unemployed) and they may not have access to electricity.” Demeke et al. (2009)

⁷² In contrast to the well-documented harmful coping strategy which sees people resorting to taking out the only loans available: ones with very high interest rates.

loans taken. Focus group discussions found that people purchased more food on credit during the crisis, and that loans taken out by the poorest people increased over this time. Many women reported taking loans from more than one NGO to meet daily requirements, or to service existing loans.

4.3.2 Nutrition schemes

School feeding aims to improve children's nutrition⁷³, as well as to encourage attendance and capacity to learn since a child who is not hungry will be more receptive in the classroom. In the context of high or rising food prices, this strategy can also be used to try and prevent children from dropping out of school — for example, to work, or because their carers can no longer afford fees as the cost of food eats into non-food budgets⁷⁴.

In the context of a food crisis, there are also limitations to the capacity of school feeding programmes. They may be difficult to expand quickly enough to prevent children dropping out. They also do not necessarily reach those most vulnerable to malnutrition — infants and children of pre-school ages. The type of food being distributed probably makes a difference in this though, since a bowl of bulgur will be more difficult to bring home and share with a sibling than a packet of biscuits.

WFP reports that it scaled up its school feeding projects by five million children in 17 countries — the three case study countries were all among this list,⁷⁵ and Bangladesh saw one of the largest increases. That said, coverage still remains relatively low considering the large vulnerable population.

In **Sierra Leone**, most of WFP's beneficiaries (63%) were helped through the school feeding programme that reached 273,400 primary school children in nearly 1000 schools, expanded by about 100 additional schools... Cooks also benefited from employment. To complement this, some 417,000 school children underwent de-worming (WFP 2010).

Programmes mostly began in November of 2008, when food arrived at the schools from WFP. Parents were required to make small payments (about 200 Le per child per day, or US\$0.07) to buy vegetables and fish to include in the meals, or to pay cooks; while children were also required to bring firewood into the school for the cooking.

USDA's McGovern-Dole food for education programme also worked through Catholic Relief Services in Sierra Leone, with donations in 2008 worth 2.32 million US\$, and intended to benefit 36,800 additional children⁷⁶.

⁷³ Debate remains about the nutritional benefits of school feeding, though some studies have been positive. For example, Ahmed (2004) evaluating a school feeding programme (SFP) in Bangladesh (a long-term programme providing high nutrient biscuits) found while it raised enrolment by 14%, reduced dropout probability by about 7%, and increased attendance; it also increased calories consumed by the children (97% additional to their normal diets). He wrote: "SFP biscuits are the most important source of energy, protein, and iron in the diet of program participants. Average energy intake of participating students are 11 percent and 19 percent higher in rural and urban slum areas, respectively, than energy intake of primary school students in corresponding control areas. Participating students also appear to share SFP biscuits with younger siblings and sometimes other household members. Sharing creates an interesting spillover effect: energy from SFP biscuits accounts for 7 percent of total energy intake of children ages two to five in beneficiary households in the rural area." Pp iv

⁷⁴ See Table A3.1 in Annex A for an example of household budget expenditures shares for different items (food and non-food) for poor households. In times of crisis however, it does not necessarily follow that families would put aside money saved on school meals to pay for fees; fee waiver schemes may be more useful mechanisms for keeping children in school in such circumstances. Hossain et al. (2009) describes unpredictability in delivery of a primary education stipend (a conditional cash transfer for poor households whose children attend school) in a rural area of Bangladesh which replaced a food for education programme since 2002. Women in some focus group discussions reportedly "complained that their children were no longer receiving the primary school stipend programme: 'if they miss school for one day, their name gets cut' – suggesting the difficulties of meeting the conditions of the transfer was causing unpredictability around access to the stipend" (pp64).

⁷⁵ **Bangladesh**, Benin, Burundi, Central African Republic, Ghana, Guinea, Guinea-Bissau, *Haiti*, Kenya, Liberia, Mozambique, **Nicaragua**, Occupied Palestinian Territories, **Pakistan**, **Senegal**, **Sierra Leone**, and **Tajikistan**. (Countries in italic are in the top 5 in terms of additional number of children fed in 2008)

⁷⁶ See USDA FAS website at: <http://www.fas.usda.gov/excredits/foodaid/ffe/2008GrantAwards.asp>

School feeding programmes were scaled up in **Bangladesh**, though to a limited degree. USDA committed an extra 2M US\$ to WFP primary school feeding programmes in Bangladesh, bringing their total contribution to over US\$20M⁷⁷. In the mid 2000s they were reportedly supporting around 350,000 children with USDA funding. Another source⁷⁸ explained that WFP originally sought to feed 300,000 children in Bangladesh in 2009, but had to cut back to only 70,000 children owing to funding shortfalls⁷⁹.

In **Nicaragua**, the World Bank Global Food Crisis response programme provided some 7 million US\$ to support an on-going school nutrition programme implemented by the Ministry of Education, benefiting around 263,000 pre-and primary school children living in severe or high poverty (World Bank, 2009). It is not clear how many of these will be new or whether the money is intended to help with additional costs of running the programme under high commodity prices.

Supplementary feeding to infants, mothers, or other vulnerable groups aims to protect the nutrition of some of the most vulnerable to food price rises. By directly ensuring minimum intake of food, it can be highly effective; although such feeding can be costly and demanding to administer. Considering long-term implications for people's welfare⁸⁰, the cost-benefit ratio may not be considered too high. For example, Horton (1999) looked at cost-effectiveness of nutrition interventions in South Asia, and found that although they are not as cheap as micronutrient fortification or supplementation, they are cost-effective "as long as they are highly targeted and accompanied by strong complementary investments in nutrition education."

These programmes however were relatively minor in the case countries. WFP in Sierra Leone for example, had some programmes already in place for mother and child health & nutrition. It is not clear how much was scaled up in response to rising prices, but in 2008, 55,050 children and 40,550 pregnant women and nursing mothers received rations of vitamin and mineral fortified corn-soya blend, oil, and sugar. In addition, 900 carers of moderately malnourished children were assisted (WFP 2010).

Other vulnerable groups were also targeted; again it is not clear whether in response to higher prices or if part of business-as-usual. Higher food prices would have made providing them more expensive, unless they were scaled down. For people living with HIV/AIDS and their families, WFP provided a per family daily ration⁸¹. Other vulnerable people, including TB patients, orphans, and destitute children, some 1,700 in all, were assisted, via Peripheral Health Units, hospitals, orphanages, or other distribution points.

Other potential nutrition interventions were not often reported in response to the price spike. For example, *micronutrient supplements* to provide vitamins or minerals to vulnerable people seems to have been little used. That said, there were existing programmes in the case countries. For example, HKI (Helen Keller International) provides supplements of vitamin A and iron in Bangladesh and Sierra Leone, but for the poorest people in these countries, the question of micronutrient supplementation is more one of a chronic lack than an acute problem brought on by a spike in the price of rice.

⁷⁷ Available at: <http://nation.ittefaq.com/issues/2008/05/01/news0631.htm>

⁷⁸ Available at: <http://www.pakistantimes.net/pt/detail.php?newsId=2950>

⁷⁹ This source also explains that though WFP planned to feed 5 million Bangladeshis in 2009, it had to cut its target to 1.4 million people. WFP's core budget in Bangladesh covers only about 33% (close to 2.4 million people) of the needs that WFP operational capacity can address. To reach an additional 5.4 million people (via vulnerable group development, community nutrition, food for education, food for enhancing resilience, school feeding and initiatives for orphans and vulnerable children) they resort to contributions. See details at: <http://www.wfp.org/content/country-programme-bangladesh-2007-2010>

⁸⁰ Benefits of reducing the burden of hunger and malnutrition are high in terms of increased productivity, higher incomes, less premature death or disability, and better intellectual development. For example, Haddad & Bouis (1991), using evidence from a Southern province of the Philippines found that height-for age led to higher wages in the long run.

⁸¹ 750g bulgur wheat, 250g beans, 250g corn-soya blend, 150g vegetable oil, 125g sugar, and 15g salt

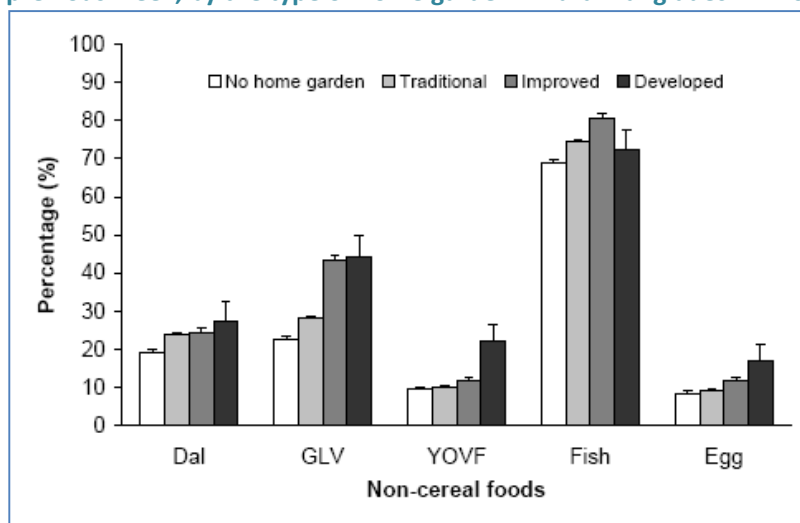
For example, IDS (2008) reported research by Save the Children UK comparing the cost of a diet with adequate micronutrients with household earnings in Bangladesh, Ethiopia, Myanmar and Tanzania which showed just how difficult it is for people to attain adequate micronutrition. In one district of Bangladesh, 80% of households in the study couldn't afford a minimum healthy diet, and for the poorest people, it would cost three times their usual earnings. In all of the countries, their findings showed that

“... families do not have enough money for a nutritious diet, let alone fuel, clothes, school fees and health costs. They have to eat food that is not nutritious enough for their children to be healthy or protected from sickness.” (IDS 2008, 4)

Micronutrient programmes thus cover only a small fraction of people suffering from dietary micronutrient deficiencies.

Finally, *home gardens* have nutritional benefits. HKI for example runs large homestead gardening programmes in Bangladesh to try and improve consumption of foods rich in micronutrients, especially vitamin A. Those with home gardens have more diverse diets, especially in consumption of green leafy vegetables — see Figure 4.3.3.

Figure 4.3.3: Percentage of households consuming common non-cereal foods on at least three days of the previous week, by the type of home garden in rural Bangladesh in 2000



Source: Helen Keller International 2003, pp2

Notes: n = 53,848. Bars indicate 95% confidence intervals. GLV = Green leafy vegetables; YOVF = yellow/orange fruits and vegetables.

Talukder et al. (2010) also found that participating households in Bangladesh (interviewed around mid 2006 so prior to the international food price crisis) were using income from selling home garden products, including vegetables, eggs, and poultry, for other purposes; the top five being food, education, productive investments, clothes, and savings (in that order).

People were also provided with tools and seed kits for such gardens in Nicaragua.

4.3.3 Assessing safety net and similar measures to protect vulnerable consumers

Overall, what can be said about the relevance, planning, implementation, and effectiveness of these measures?

1) *How relevant were the interventions seen?*

Most interventions seen were appropriate. Cash transfers, however, make less sense when prices are rising. The food price crisis challenged the wisdom of cash transfers being preferable to food distribution.

Nutrition interventions tended to be neglected; something that may stem from the ‘demographic vulnerability’ of the very young and elderly being less visible...

Questions might also be raised about how sufficient they were to meet needs. For example, in Bangladesh, a cash for work programme implemented following Cyclone Sidr assumed that three month’s work for one adult from participating households at a low ‘self-targeting’ salary would be sufficient to prevent “negative coping strategies, such as distress sales of assets or taking out high interest loans”, although those evaluating were not so sure. (WFP 2009c)

The length of the programmes may also have been insufficient in some cases, such as open market sales at low prices in Bangladesh, school feeding or cash for work programmes in Sierra Leone.

2) *Was planning adequate and were interventions timely?*

Often interventions came late, particularly when safety nets were already in place, or had limited capacity to scale up.

For example, schools added to the Sierra Leone school feeding programme in response to the high food prices only saw their first set of rations in November 2008, when food prices had already been high for several months.

Some CFW/FFW programmes set up in Bangladesh also only began in February to May of 2008; not a rapid response.

Targeting proved difficult except where existing schemes have already identified vulnerable groups, such as the Bangladesh Vulnerable Group Feeding programme. Even where groups had already been identified, others not previously targeted were vulnerable to higher food prices; so the need to assess situations and populations was not eliminated. Given that rising food prices affects populations over large areas, the shock not being geographically concentrated as applies with natural disasters, makes targeting that much more difficult.

Moreover, prior targeting does not necessarily mean that targeting is accurate or fair: on a pilot programme providing 100-days of public works in rural Bangladesh, modelled on India’s NREGA, people felt benefits were accruing mostly to those with good connections to local government representatives.⁸² (Hossain et al. 2009) This was aggravated by the gap between the numbers who would be eligible on criteria set, versus the resources available, as applied in Bangladesh:

“The most disturbing fact is that the majority of rural households—poor and non-poor—meet the official selection criteria for programs. These criteria, therefore, provide the scope for exercising perverse discretion in the beneficiary selection process.” (Ahmed et al. 2009, p. 12)

Given the need to act quickly, planning was often understandably kept to a minimum, particularly in making accurate and detail assessments of needs. Even if the priority was rapid reaction, months later, however, little had been done to improve the quality of assessment: re-assessments were rare or skimped. (WFP 2009c)

⁸² They quote a woman saying “I went and begged at the feet of the council member, telling him I have no husband, please give me work, but he wouldn’t give me work. First he said, you are a woman, you won’t be able to do it. But I said, I only eat by working. Even then he didn’t give it to me.”

3) *Were they implemented as intended?*

Most were implemented as planned, though there were some reports of amendments in practice.

For example, in Sierra Leone, the World Bank cash for work project was designed to provide 5200 youth with 2 months of work, and those implementing the project chose to provide more people with shorter periods of work (one month mostly) to widen coverage. Though directly helping more people, this likely traded off against efficacy for those who were helped, particularly since the period of high prices was sustained for several months in Sierra Leone, making short periods of work insufficient⁸³.

4) *How effective were they and did they cover intended groups?*

Evaluations of effectiveness are few and far between at the moment. Many programmes were implemented as a rapid response and did not have monitoring and evaluation built into them. Much of the evidence comes from key informants and focus groups, raising questions over how accurate the observations of interviewees may be, and how representative they are.

Focus groups, however, reported that they were generally appreciative of the programmes.

For example, In Sierra Leone, the school authorities took a very positive view of the school feeding programmes, finding they marginally improved the attendance of the children and also improved their concentration. In one of the focus schools, they also found the attendance of teachers improved because of the programme.

That said, **coverage** by safety nets was generally quite low, especially in a very poor country such as Sierra Leone. Even in Bangladesh where safety nets have a better foothold, before the international food price crisis they were failing to protect many vulnerable people.

Estimates of coverage suggest many food-insecure people were not assisted. For example, the 2009–10 budget for public safety net programmes in Bangladesh would cover 6.9M families, 27% of the population: but given poverty rates of 40%, that leaves at least 13% of those in need uncovered. Targeting errors — which are considerable — mean actual coverage of the poor would be considerably lower. (Ahmed et al. 2010).⁸⁴

What cover there was tended to go to urban areas, partly since they were reckoned to be more vulnerable to higher food prices⁸⁵, partly since it was more difficult to offer a safety net in rural areas, and partly since urban areas in some countries had political priority.

Lack of cover was largely down to resources; scarcity of which was exacerbated by the rise in food, oil and ocean freight prices cutting into the purchasing power of their budgets.

Responses to the food crisis by and large added some, limited, extra assistance to existing safety nets. While useful, the extra help did not cover many people, and was often quite short term.

Moreover, the limited additions were made to safety nets that were already inadequate, since the situation before the spike was already one failing large numbers of the poor. Expecting even scaled-up social safety nets

⁸³ It was not clear that the original plan would have transferred sufficient resources to avoid hardship.

⁸⁴ A FAO/WFP assessment showed just how much emergency aid from non-governmental channels was used in Bangladesh, highlighting the inability of GOB programmes to cover the vulnerable. CARE and Save the Children US with USAID funding were reportedly providing food assistance to 4.8M, BRAC helping 1.4M with food and cash, and WFP assisting 4.7M people — 3.8M of whom were also supposed to be beneficiaries of GOB programmes. In total they estimated these and other NGOs were helping about 8.1M people, more than over 12% of the estimated 65.3M food insecure. (Demeke et al. 2009)

⁸⁵ For example, In Sierra Leone, before the food price crisis an estimated close to one million people in Freetown were living below the poverty line, and according to the World Bank, the crisis pushed an additional 200,000 people into poverty, mostly in urban and peri-urban areas. (WFP 2010)

to prevent hunger is simply not realistic, and highlights the need for development and expansion of existing safety nets and social protection systems in non-crisis years.

‘... a more concerted effort and additional resources will be required for the food-based safety net programme to effectively cope with high food prices, large numbers of food insecure people and the unprecedented natural disasters that Bangladesh is faced with year in and year out.’ Demeke et al. 2009

Although not about the effectiveness in terms of preventing hardship, there were concerns about the sustainability of works carried out on employment programmes. For example, in Sierra Leone, informants said that the workers built drainage dams in a flood zone on a cash-for-work scheme, with no provision for their maintenance.

4.3.4 Summary and discussion of safety nets

Generally, the overall sense is one of interventions well-conceived, imperfectly — but not that badly— implemented, but provided on too small a scale. Coverage — in length of time programmes were offered as well as number of people they benefited — was limited.

The corollary of this is that most people vulnerable to higher food prices had to rely on their own coping strategies, see the next section. Given that to an extent some of the affected people did cope, the limited efforts of governments and NGOs, supported by donors, could nevertheless be valuable if they were well targeted to those unlikely to cope.

There was thus an underlying dilemma for public policy arising from the price spike: how much should the state help people through difficult times, and how much should it expect household, families and communities to bear the brunt of the shock?

Some argue that measures to address such shocks should be additional to on-going safety nets, designed to assist the chronically poor. Creti and Jaspars (2006) for example, argue that cash transfers can meet emergency needs but are far from sufficient on their own. They should be used until people are able to meet minimal requirements without help, or until national relief or social protection systems are in a position to absorb the responsibility. That may be so, but this may be simply out of the question for countries with limited resources.

That said, there were differences between countries. Middle income countries often had safety nets in place and the capacity in funds, staff and procedures to expand these to meet the effects of higher food prices. Low income countries, on the other hand, never had the safety nets desirable in the first place, and thus found it difficult to do more.

4.4 Coping by individuals

It was clear from the focus group discussions in the three countries that while public programmes were appreciated, they had limited impact on most informants. Either they had not received any direct benefit, or else what they got was a small contribution — as exemplified by the youth employment schemes in Sierra Leone that provided work for a couple of months at very low wages for a fraction of youth living in poverty.

The corollary was that most of the adjustment to higher food prices was down to individuals and households, taking one or more of the measures set out in Table 4.4.1. In consumption, where possible they tried to switch staple foods from those whose prices had risen most to those less affected, usually switching from a traded to a non-tradable food. They reported consuming less of higher-value, more costly, complementary foods — above all meat, fish and vegetables. Some reduced their intake, often by eating less frequently. To try and maintain food intake, other expenses were cut back, including spending on clothing, medicines, and some school costs.

Table 4.4.1 Coping strategies reported by focus groups in the three countries

	Bangladesh	Nicaragua	Sierra Leone
Changes to food consumption	Reduced intake of vegetables pulses, meat Women eat less	Smaller quantities consumed — rice, beans, vegetables, pulses, meat, fish, palm-oil. Reduced frequency of meals Replacement of high and medium quality of rice with low quality rice.	Less rice eaten, increasing consumption of gari (cassava); also sweet potatoes, wild yams in the rural areas Reduced consumption of vegetables, fish, meat, palm oil Reduced frequency of meals
Reduced spending on non-food items	Cooking less often to save fuel. Reducing other non-food expenses, including tuition & exam fees	Lowered spending on non-food items, including tuition, exam fees, medicines, and school products (note-books, pencils, clothes) Cooking less often In urban areas, reports of families buying larger (wholesale) quantities of food rather than from retailers, a strategy requiring large amounts of cash thereby reducing other expenses to a minimum	
Seeking additional work	Search for extra jobs. Women in some areas joined the work force. In others, they were constrained as this was seen as socially unacceptable	Search for more work Women in some areas joined the work force	Increased petty trading, cutting firewood, sand mining, stone breaking, palm wine tapping Farmers reported more efforts to grow food crops
Migration	Not reported	Some reports	From rural to urban areas to earn from petty trading
Debt, borrowing, gifts and begging	26% urban, 60% rural took out extra loans. Loans from NGOs reported. Some reports of day labourers offering to work in the future for advance payments.	Day labourers offering to work in the future for advance payments	Begging and borrowing commonly reported
Children's education	Spent less on education, but few children taken out of school	Spending decreased on education but few children removed from school	Frequent reports of children taken out of school to save on school fees
Sale of assets	Some reports, especially sale of gold ornaments	Some reports, such as sale of animals	Few reports
Illicit activities	(Petty) crime Prostitution		Some reports of increased prostitution from focus groups in urban communities

Source: Compiled from reports of focus groups discussions

Notes: Two caveats apply: Firstly, it is not always possible to separate coping strategies in response to the 'international food prices crisis of 2007/08' from food crises in general. Secondly, this study represents a snapshot in time, rather than a longitudinal study, and thus is not likely to be comprehensive; however, the snapshot came quite late after the peak of the crisis, so hopefully captures a broad range of strategies people employed to cope with it.

There were many reports of trying to increase income to meet higher living costs, through petty trading, or by undertaking onerous and low paid work such as breaking stones. People also looked for loans and gifts, even begging in some cases. Other increased sources of incomes were illicit, such as reports of people taking to petty crime or prostitution to get by in Sierra Leone.

Most of the coping reported involved the hardships of more work and less consumption. There were fewer reports of more damaging activities, such as asset sales that might undermine future livelihoods. In education, in Bangladesh respondents reported cutting back on education expenses, but not on withdrawing children from school. In Sierra Leone, in contrast, some had taken their children out to save money and to contribute to earning more.

It was clear that for most informants, their own ability to cope was their principal recourse to the difficulties of higher food prices. What is less clear is how damaging to their long-term health and livelihoods were these reactions. Cutting food consumption and switching to a monotonous but cheaper diet may mean little more than hardship for adults, but for infants there may be more serious consequences. Equally uncertain was how long some responses, such as running up debt or calling on family and friends for help, could be maintained before it was necessary to take more drastic action, such as selling off productive assets.

The answers to these will only be clear from studies carried out well after the price spike, when the pathways taken by the vulnerable can be investigated and the nutritional consequences for infants can be assessed.

5. Conclusions

5.1 Summarising

The three countries took measures to mitigate the impact of higher world food prices on local markets, by, at the border, cutting tariffs on imports, negotiating special deals for exports of rice from India that was restricting such exports, facilitating private imports and restricting exports; and, on domestic markets, releasing stocks, trying to negotiate price rises with traders and to prevent hoarding.

None of these were that effective in stemming price rises: staple prices rose considerably in all three cases. There were limits to what the governments could do: for example, having already low tariffs on imported cereals meant that any reductions did little to reduce prices; while releases of stocks could not contain prices since none of the countries had sufficient public stocks to do so. More drastic action, such as generalised food subsidies were just too costly to contemplate.

Only one country, Bangladesh, was able to stimulate a marked supply response to the higher prices. It could do so since it had the administrative capability to set floor prices, subsidise fertiliser and electricity for irrigation pumps; but it was possible since the country has three rice harvests a year that helped a rapid response, while irrigation made sure that increased use of fertiliser and other inputs would be effective.

Nicaragua's public capacity to intervene was more limited, partly since it had been cut back during liberalisation; while Sierra Leone's capacity to anything similar was very low indeed. Both countries did try to get more inputs to their farmers, but it is moot question as to how effective this was given the other limitations that farmers faced.

All three countries tried to offer safety nets to alleviate the hardship of higher food prices by measures such as food and cash transfers, subsidised sales of food, public works programmes, school feeding and some supplementary feeding. These efforts were well intentioned, but suffered from delays in planning and implementation. Above all, their coverage was limited. Moreover, what little was done tended to focus on urban areas rather than rural areas.

Hence most people vulnerable to higher food prices had to rely on their own coping strategies, including eating cheaper foods, cutting back on spending on anything other than food, looking for extra income, looking for help, and taking out loans. At the time of the study there were only infrequent reports of people selling off productive assets or other measures that might imperil their future livelihoods. To what extent coping could be maintained in the face of continuing high food prices, aggravated by other shocks such as higher oil prices and economic downturn, is not known: neither is it known what the impacts of changes in diet have been on the most vulnerable groups, infants and young mothers.

5.2 Discussion and implications

Three points stand out from this study, namely:

1. Low income countries cannot do much to prevent higher world prices raising domestic prices and creating hardship. They lack the finance, and administrative capacity to do so; the latter in part a result of the economic liberalisation that took place in the 1980s and 1990s. The situation may not be quite so difficult in middle income countries, but their populations are less vulnerable to higher food prices than those in low income countries;
2. Effective safety nets cannot be put into place in response to shocks: they have to be there before the shock if they are to be expanded to meet increased temporary needs;

3. Most of the reaction to higher food prices was a matter of family, household and individual response as vulnerable people sought to cope. Only a minority of informants had been aided by either the state or NGOs.

These prompt two reflections:

A. Even if there were limits to what low income countries were able to do, which measures were more or less effective in protecting the vulnerable?

A prime consideration concerns coverage: some measures, above all those designed to ameliorate rising prices, cover everyone in the same market; while others offer support only to particular groups. The former convey benefits to people who perhaps do not need state support to cope with higher food prices: but they do more or less ensure that almost all the vulnerable benefit as well. The latter clearly can be more efficient in reaching those who need help, but administratively they are demanding and risk covering only a fraction of those vulnerable to higher food prices.

The greater the share of the population who are poor or otherwise vulnerable to higher food prices, the less broad spectrum measures include those who do not assistance. This suggests that low income countries should look first and foremost to measures of broad coverage. These are, however, interventions to mitigate price rises on domestic markets. For low income countries with limited administrative capacity, most of these are neither simple nor cheap. Reducing import tariffs, restricting food exports, controlling prices by fiat, releasing public stocks, subsidising the price of staples — all have high costs, either directly or indirectly.⁸⁶

The calculus is then one of the political importance of holding down food prices versus the costs of intervention. It is middle income developing countries where such costs are bearable; and hence it is no surprise to see that there was virtually no increase in food prices in China during the price spike, and limited increases in India. Both countries, however, pay a heavy price for their public stores that provided this protection.

Programmes to stimulate production response may be a degree less costly, have less danger of distorting markets and incentives. Their problem, however, is that they may not be that easy to mount in countries with low levels of agricultural development.

Of the measures targeted to the vulnerable, the principal issue seen is that having safety nets in place that can be widened and deepened to accommodate additional needs. The rationale for having such safety nets in normal times, to deal with chronic poverty, is an issue beyond the scope of this paper. The implication here, however, is that when such measures are considered, their potential ability to offer relief when temporary shocks arise, is another reason for having them in place.

B. With so much coping down to individuals and families, what is the role of public assistance?

One implication is that of ensuring that public policies do not get in the way of private responses; another is to facilitate such responses where possible; and a third is to complement private efforts when possible.

⁸⁶ Banning food exports may apparently have little or no cost to government, but the costs to domestic farmers from loss of export earnings may be considerable, if indirect.

Quite what these would be specifically will clearly vary by context, so the overall implication is that planning need to be aware of coping measures and take them into account. Examples of potential responses that do this include:

- Suspending regulations controlling petty trade or migration;
- Temporary programmes of vitamin and mineral supplementation to infants and young mothers in vulnerable households; and,
- Making additional second-tier funding available to micro-finance agencies responding to additional requests for emergency loans.

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ANNEX A: Additional technical detail about country responses

A1 More detail related to border and market measures

Figure A1.1 White maize prices in Nicaragua

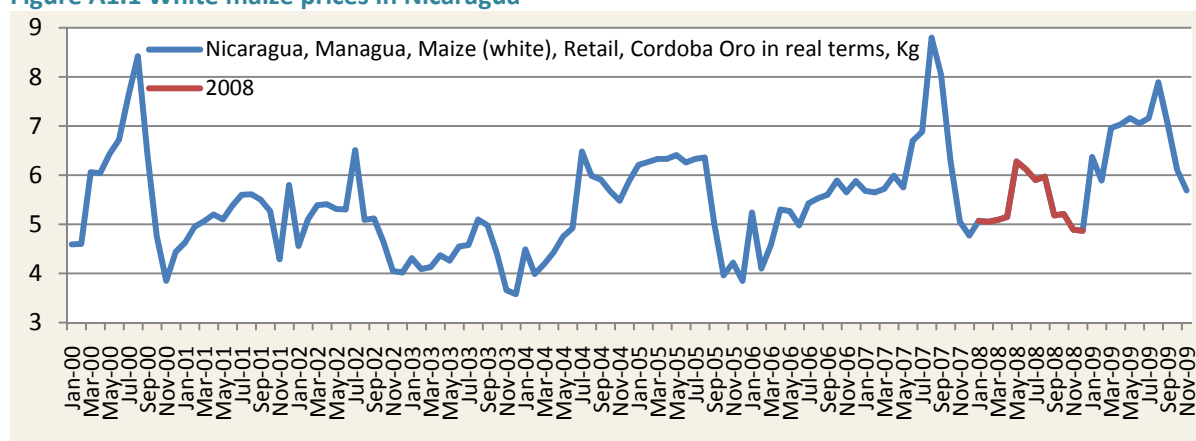
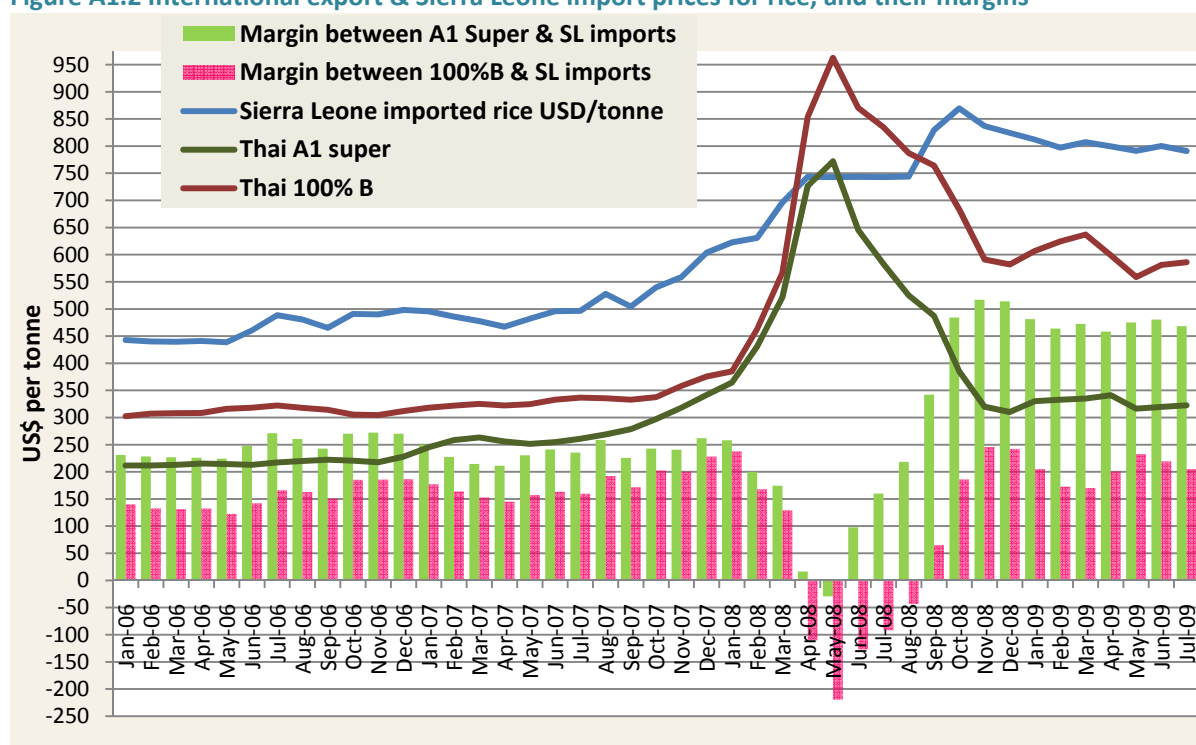


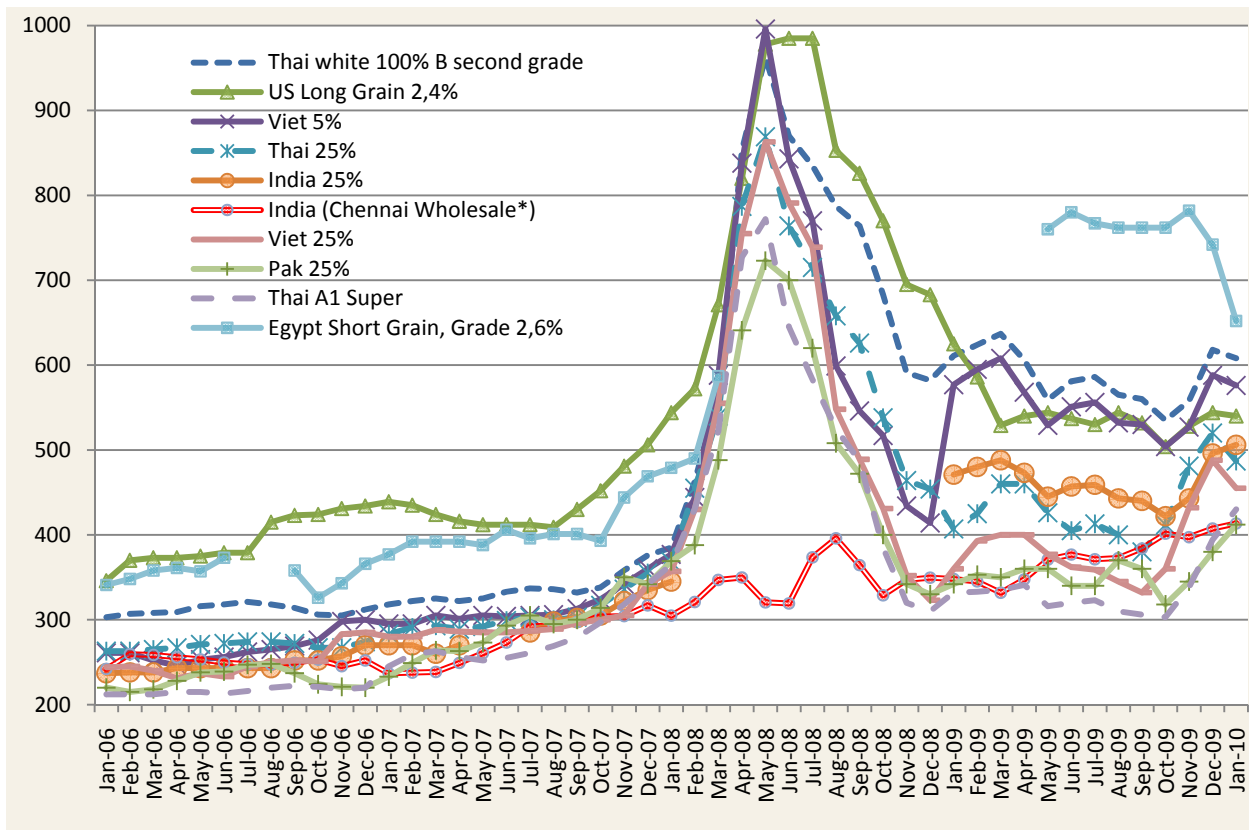
Figure A1.2 International export & Sierra Leone import prices for rice, and their margins



Source: Thai prices from FAO ESC. Sierra Leone prices from Sierra Leone Statistics; Converted to US dollars using exchange rate data from IMF.

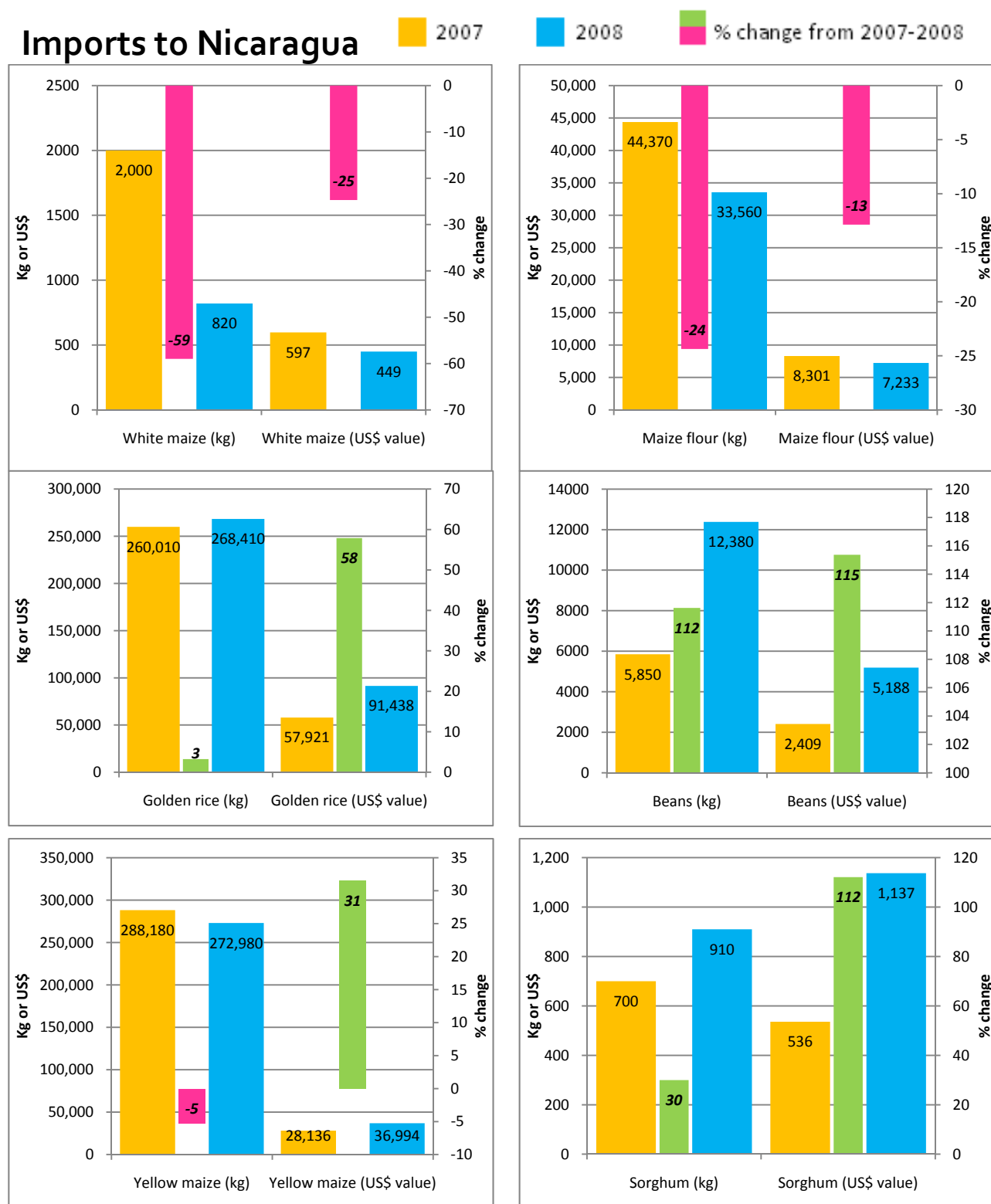
Notes: Margins imputed by subtraction. The margin between Sierra Leonean imports and the more expensive (100%B) variety of Thai export rice grew about 25% on average from the period before the sharp international spike (Jan 06 to Mar 08) to the period after (Oct 08 to Jul 09). The margin between Sierra Leonean imports and the cheaper variety (A1 Super) grew about 102% on average over the same two periods. This may reflect, rather than a ratcheting-up of prices, a carry-over of higher transport prices from the previous period. i.e., prices in October may appear high because they reflect shipments purchased a few months earlier at high shipping rates. It is difficult to know for sure because we don't have the CIF landed cost at Freetown data. Variations in shipping rates may also play a role, as might uneasiness in international rice market trade. To some extent this discussion of margins depends on the source of imports – in 2008, Sierra Leone imported a significant volume of Indian rice, and India's prices didn't spike. See the figure below for a comparison of major export rice price varieties in and around the low to medium quality varieties.

Figure A1.3 Key export prices for rice across the globe



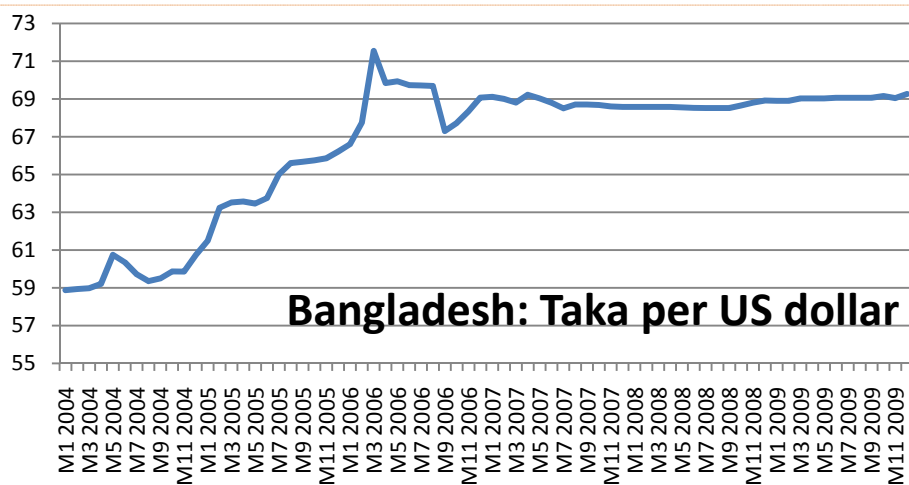
Sources: These prices are from FAO rice market monitor, except for the Chennai prices which are from FAO GIEWS national prices database. **Note:** *Chennai prices are not labelled as export prices, but Chennai's location as a port, combined with the general view that prices to Indian consumers remained flat over the period of the international spike, mean it is possible the Chennai rice price series presented here partially reflects export prices.

Figure A1.5 Maize, Rice, Beans, and Sorghum imports to Nicaragua in 2007 compared to 2008

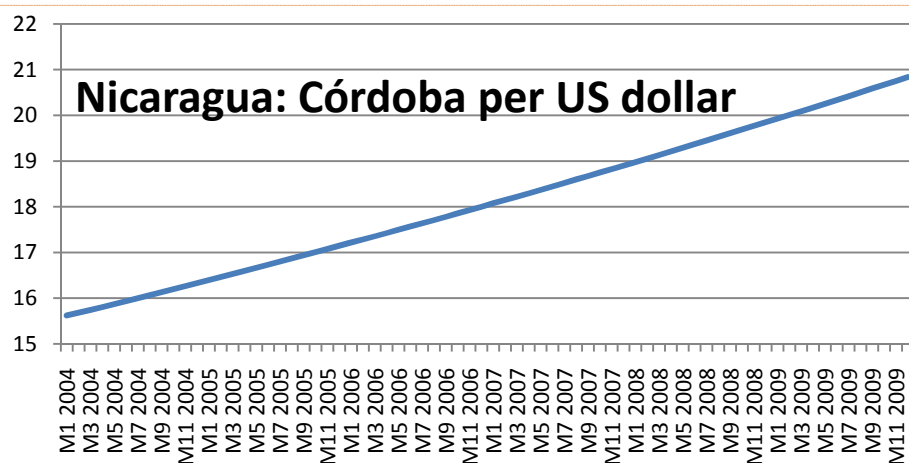


Source: Constructed with data from MAGFOR: <http://www.magfor.gob.ni/descargas/estadis/Diciembre2008.pdf>

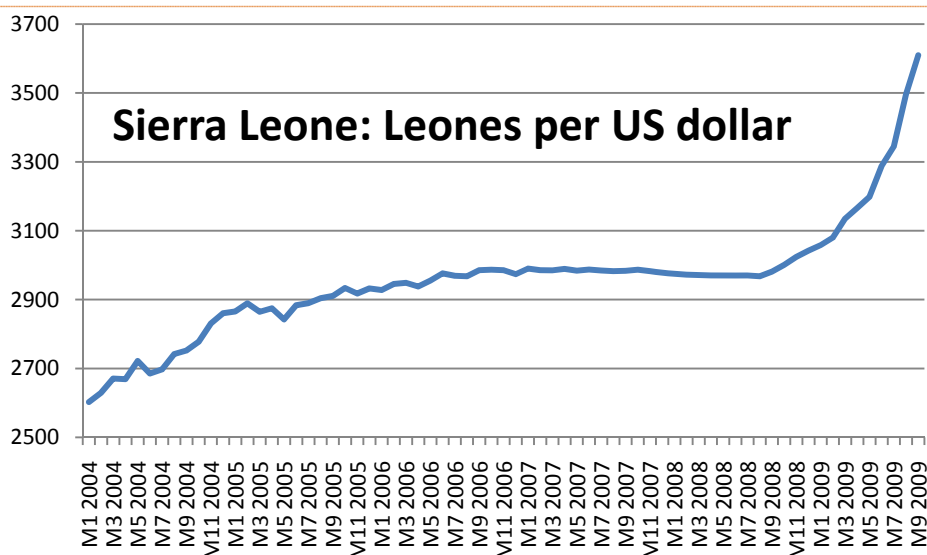
Table A1.1 Exchange rates—Local currencies per US dollar



Exchange rate appears to have remained relatively stable over the last few years, including during the time of the international food/ fuel/ financial crisis



Exchange rate appears to have been steadily increasing for last several years at about 0.86 Cordoba/ US\$/ year

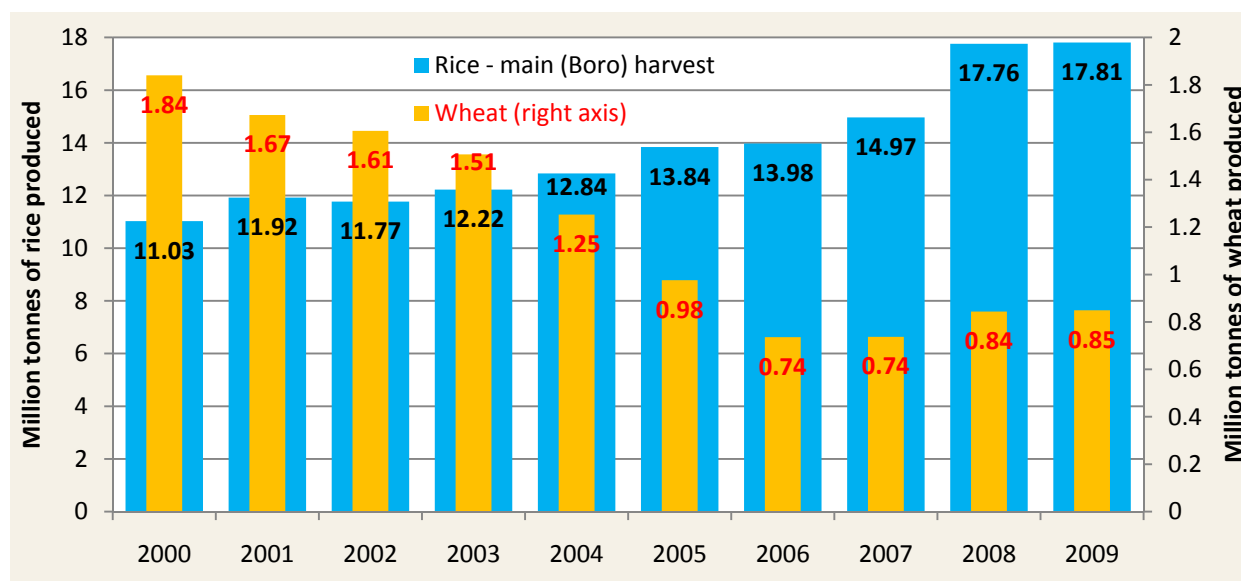


From August 2008 to September 2009, exchange rate increased 22%, exacerbating local price rises.

Source: IMF

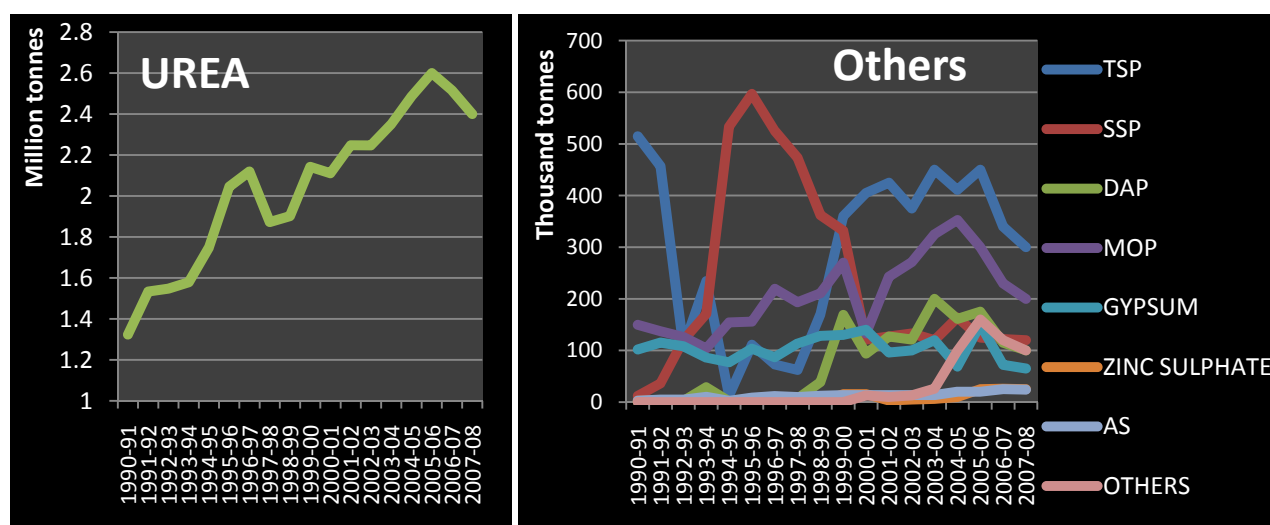
A2 More detail related to agricultural production response

Figure A2.1 Rice and wheat harvests in Bangladesh over the last decade



Source: Data from Rahman 2010. Note: Wheat is displayed on the right hand axis, at a ratio of 9:1 compared to the axis for rice

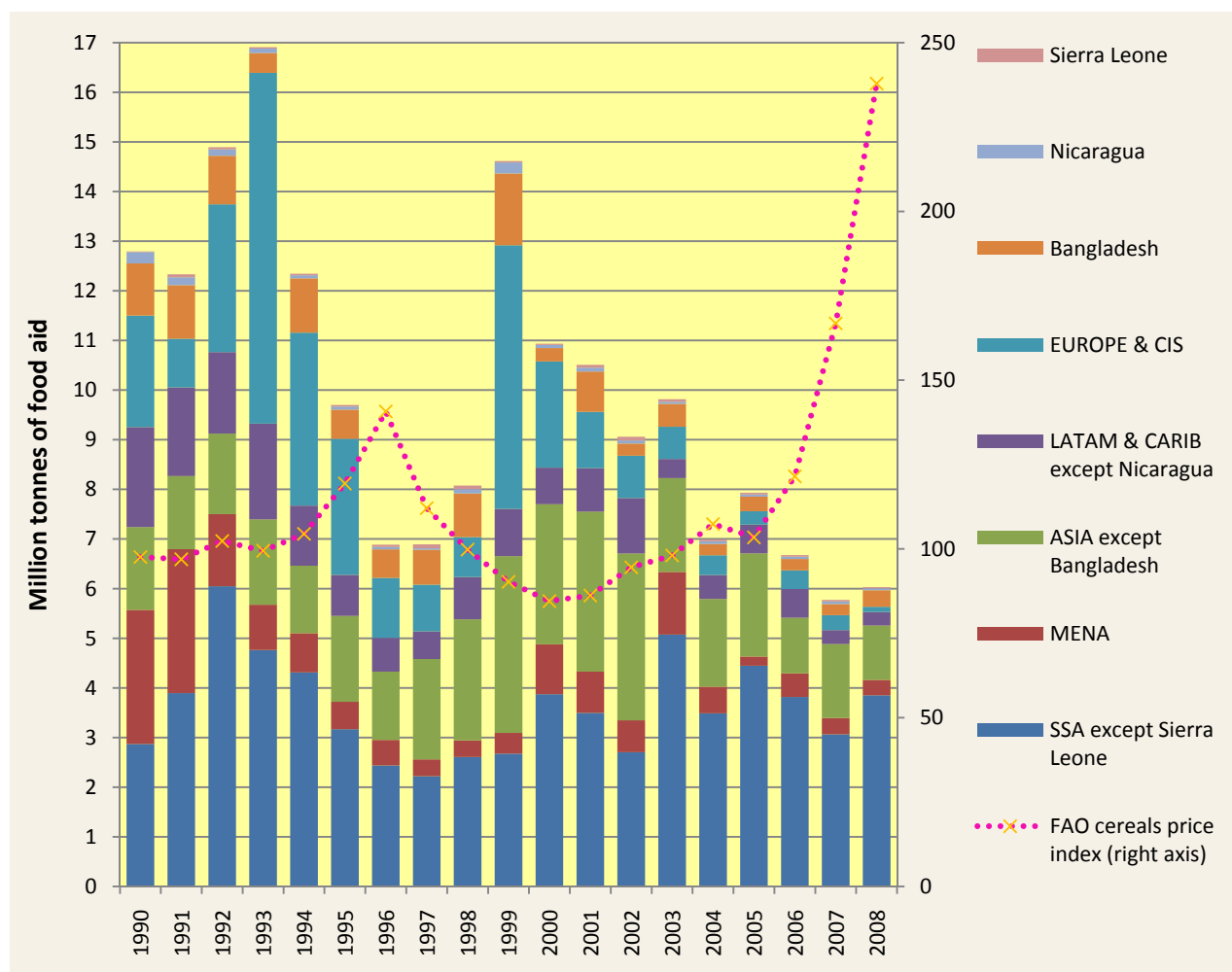
Figure A2.2 Fertiliser use in Bangladesh since 1990



Source: Rahman 2010 Annex 8. Original source: Fertilizer Distribution, Subsidy, Marketing, Promotion and Agronomic use Efficiency Scenario in Bangladesh, Ahmed Kafiluddin, Bangladesh Fertilizer Association (BFA), Bangladesh. Notes: Urea is a key source of nitrogen. TSP = Triple Super Phosphate. SSP = Single Super Phosphate. DAP = Diammonium Phosphates. MOP = Muriate of Potash. Gypsum = Calcium Sulphate. AS = Ammonium Sulphate

A3 More detail related to safety nets

Figure A3.1 Global food aid recipients 1990 – 2008



Source: WFP FAIS

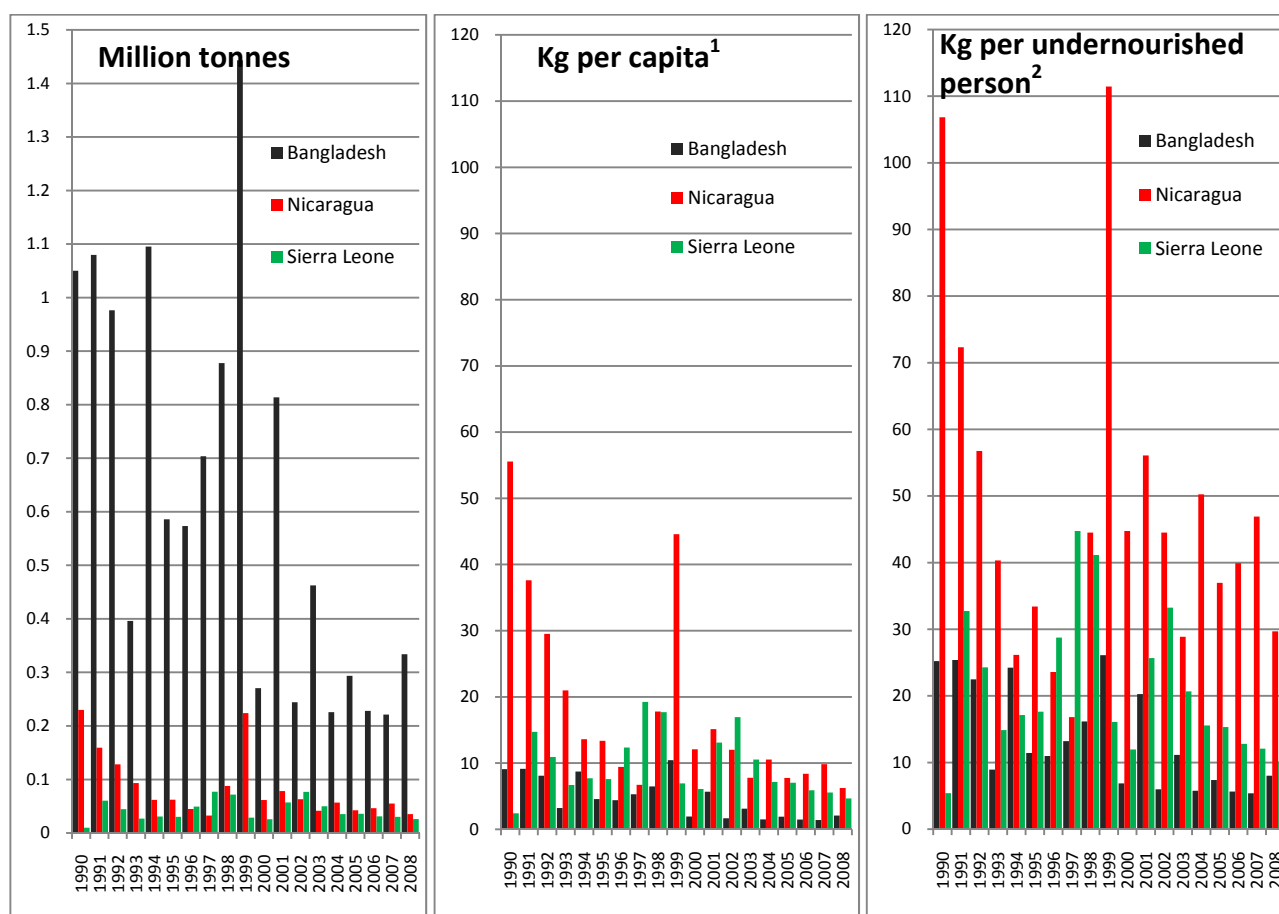
The figure above shows the case study countries receipt of food aid (at the top of the columns) —an aggregate of all kinds of food, measured in tonnes) since 1990, put into a global context.

Considering the general pro-cyclicity of food aid deliveries (higher deliveries tend to correlate with lower prices), the slight increase in 2008 on 2007 is an encouraging break from trend. Still, the increase in deliveries globally in 2008 compared to 2007, (globally and in the case study countries) was relatively minor.

There is a caveat of course about the **type** of food delivered, and the **targeting**, which means a simple measure of tonnes of food may not capture important changes — Improvements or otherwise — over time (i.e. a kg of nutritious deliveries like milk powder or peanut butter would be expected to have higher positive impacts on recipients than say a kg of bulgur wheat.)

Globally, food aid deliveries were slightly up in 2008 on their 2007 levels. The following set of figures shows the picture more clearly for the case study countries.

Figure A3.2 Food aid to Bangladesh, Nicaragua, and Sierra Leone 1990 – 2008



Source: Data on food aid tonnage from WFP FAIS (Food Aid Information System). Population and estimates of undernourishment from FAOSTAT.

Notes: WFP FAIS information states: “Data on global food aid deliveries in metric tons are from the database of the International Food Aid Information System (INTERFAIS), which was developed by WFP as a contribution to a coordinated international response to food aid shortages. INTERFAIS is a dynamic system, which involves the interaction of all users, represented by donor governments, international organizations, non-governmental organizations, recipient countries and WFP field offices. They are sharing information and data on food aid transactions. All information is cross-checked before being disseminated. The comprehensive and integrated database allows the monitoring of food aid allocations and shipments for the purpose of improving food aid management, coordination, reporting and statistical analysis. The database is updated on a continuing basis. Therefore, data can change as allocation plans and delivery schedules are subject to modifications. Data since 1988 is available.”

1 Imputed by dividing by population. Annual levels of consumption (measured in kg per person per year obviously differ by commodity and country, but as a general indicator, global average consumption of cereal products (excluding for beer) as reported by FAO is about 150kg per person per year. **2** Based on FAO estimates in table below – years without estimates were assumed the same as preceding years’ estimates. For this reason, owing to sharp price increases in 2007/08, it is likely that the availability of food aid per undernourished person in the far right graph is overestimated in the years 2007 and 2008. These are estimates rather than accurate measures—for example, the spike in food aid to Bangladesh in 1999 was probably in response to a local disaster such as floods, which would have temporarily increased the food insecure (especially those with food insecurity resulting from an emergency that are particularly targeted by WFP) in a way that wouldn’t be captured by the FAO statistics.

Undernourishment prevalence trends

	1990-1992	1995-1997	2000-2002	2004-2006
Bangladesh	36	40	28	26
Nicaragua	52	40	27	21
Sierra Leone	45	43	51	46

Figure A3.3 Food aid expressed in capacity to meet nutritional requirements (total number of people), Bangladesh

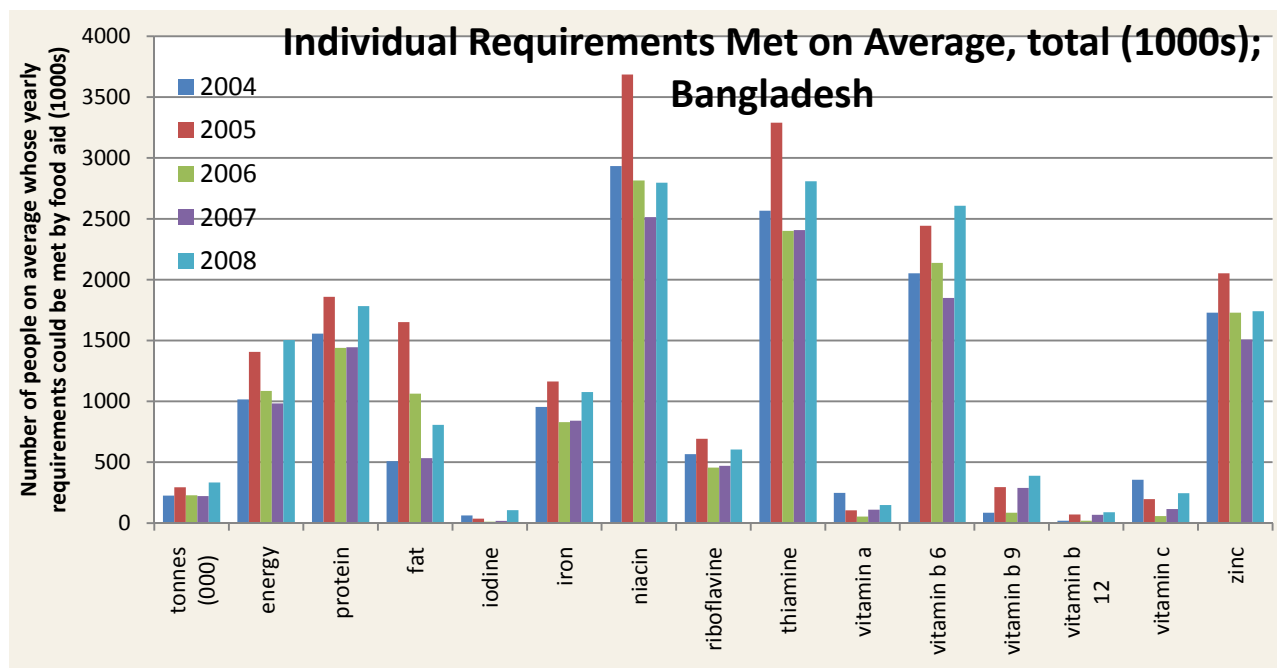


Figure A3.4 Food aid expressed in capacity to meet nutritional requirements (total number of people), Nicaragua

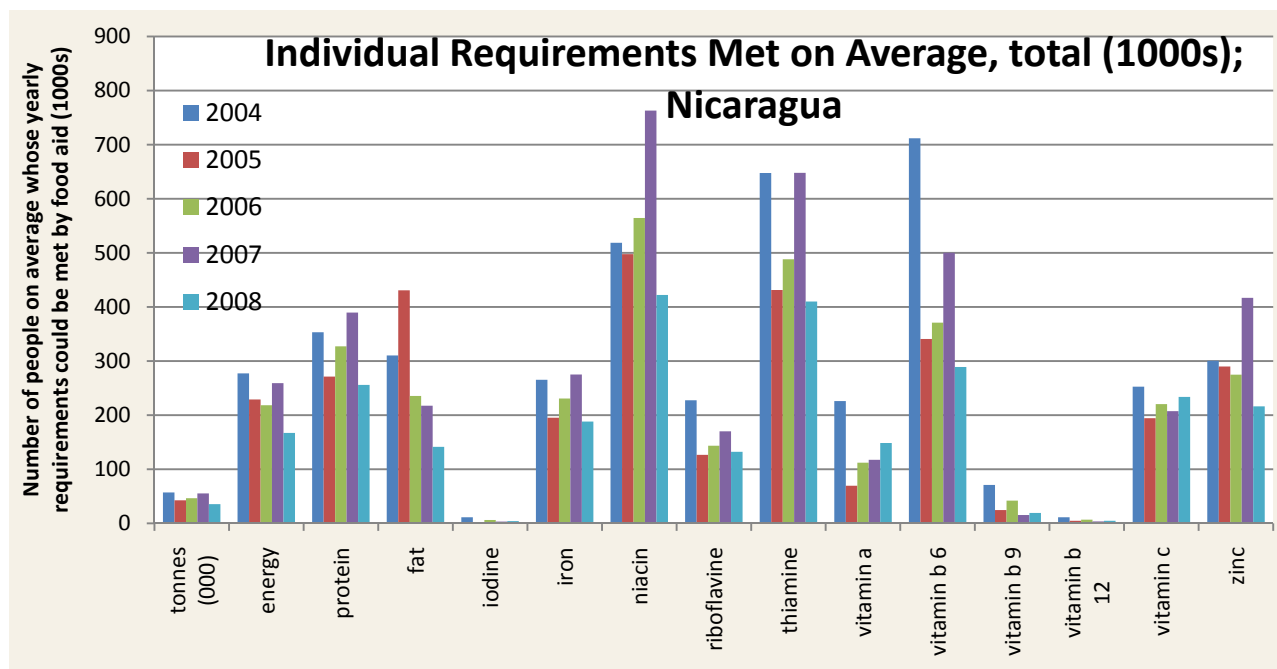


Figure A3.5 Food aid expressed in capacity to meet nutritional requirements (total number of people), Sierra Leone

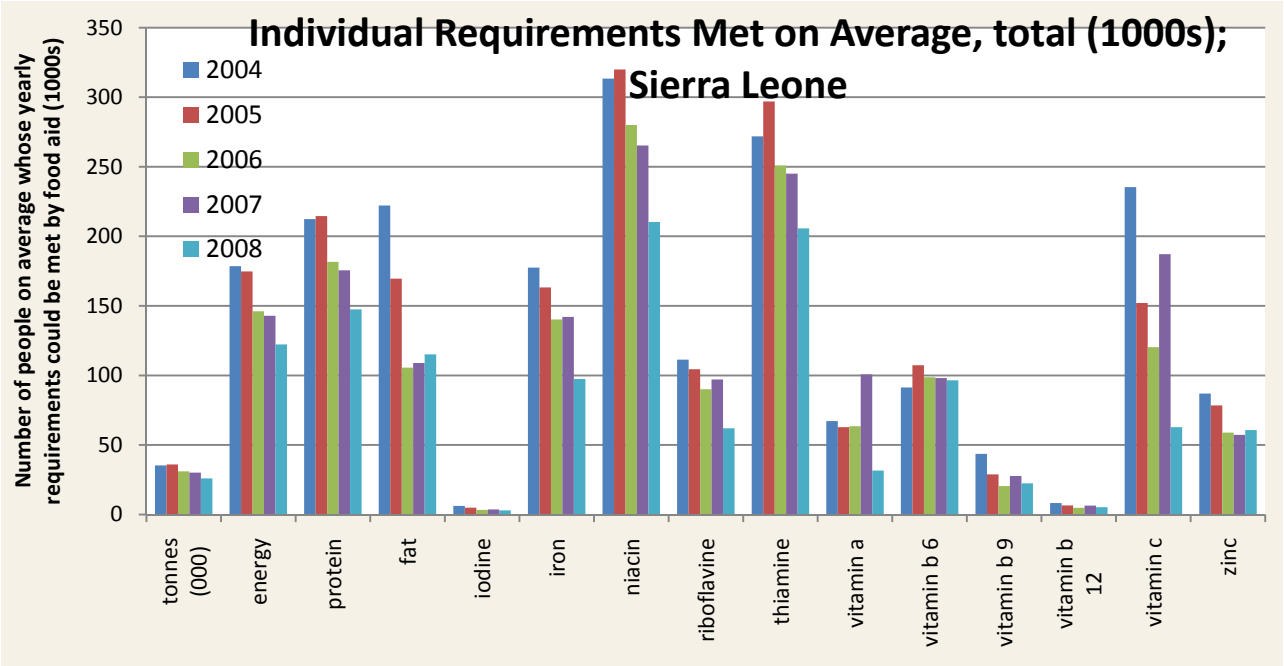


Table A3.1: Budget shares of households in different transfer programmes, Bangladesh

Budget item	IGVGD	FSVGD	FFA	RMP	Control	All
Monthly per capita total expenditure (taka)	824	823	725	862	624	762
Monthly per capita food expenditure (taka)	499	528	455	532	396	477
Monthly per capita non food expenditure (taka)	325	295	270	330	228	286
Budget share of expenditures (%)						
Food	63	66.2	65.2	64	65.1	64.7
<i>Food subtotals (% of food budget)</i>						
<i>Rice</i>	<i>45.5</i>	<i>42.9</i>	<i>52.4</i>	<i>44.5</i>	<i>52.7</i>	<i>47.9</i>
<i>Atta</i>	<i>3.9</i>	<i>5.8</i>	<i>0.7</i>	<i>0.8</i>	<i>0.5</i>	<i>2.2</i>
<i>Other cereals</i>	<i>0.2</i>	<i>0.8</i>	<i>0.4</i>	<i>0.4</i>	<i>0.3</i>	<i>0.4</i>
<i>Pulses</i>	<i>2.6</i>	<i>2.3</i>	<i>1.6</i>	<i>2.5</i>	<i>1.7</i>	<i>2.1</i>
<i>Oils</i>	<i>3.3</i>	<i>3.2</i>	<i>3</i>	<i>3.5</i>	<i>3.4</i>	<i>3.3</i>
<i>Potatoes</i>	<i>3.2</i>	<i>3.7</i>	<i>3.3</i>	<i>3.7</i>	<i>3.6</i>	<i>3.5</i>
<i>Leafy vegetables</i>	<i>2.1</i>	<i>2.1</i>	<i>3.1</i>	<i>2.7</i>	<i>3.3</i>	<i>2.7</i>
<i>Other vegetables</i>	<i>6.5</i>	<i>6.6</i>	<i>6.9</i>	<i>7.7</i>	<i>7.5</i>	<i>7.1</i>
<i>Meats</i>	<i>2.6</i>	<i>4.6</i>	<i>2.6</i>	<i>3</i>	<i>1.9</i>	<i>2.9</i>
<i>Fish</i>	<i>1</i>	<i>1.3</i>	<i>0.9</i>	<i>1</i>	<i>0.7</i>	<i>1</i>
<i>Eggs</i>	<i>5.8</i>	<i>6.3</i>	<i>6.6</i>	<i>7.1</i>	<i>5.2</i>	<i>6.1</i>
<i>Milk and milk products</i>	<i>2.2</i>	<i>2.2</i>	<i>1.3</i>	<i>1.9</i>	<i>1.2</i>	<i>1.7</i>
<i>Fruits</i>	<i>6.9</i>	<i>6.4</i>	<i>6.2</i>	<i>7.5</i>	<i>5.2</i>	<i>6.4</i>
<i>Spices</i>	<i>5.4</i>	<i>5</i>	<i>5.4</i>	<i>5.5</i>	<i>5.7</i>	<i>5.4</i>
<i>Sugar and gur</i>	<i>1</i>	<i>1.4</i>	<i>0.6</i>	<i>1.2</i>	<i>0.7</i>	<i>1</i>
<i>Beverages</i>	<i>2</i>	<i>1.8</i>	<i>1</i>	<i>1.2</i>	<i>1.1</i>	<i>1.4</i>
<i>Prepared food (eaten outside home)</i>	<i>5.9</i>	<i>3.6</i>	<i>4.1</i>	<i>5.6</i>	<i>5.5</i>	<i>5</i>
Non-food						
Fuel	11.3	10.6	12.2	11.6	13.7	12
Clothing and footwear	4.3	4.5	4.4	4.4	4.3	4.4
Drugs and medicines	6.2	3.9	5.7	4.8	4.5	5
Other medical expenses (fees, lab, tests, etc.)	0.5	0.3	0.8	0.6	0.6	0.6
Education	1.1	1.1	0.6	1	0.7	0.9
Personal care and cleaning	2.7	2.5	2.5	2.9	2.8	2.7
Transport	2.6	1.9	1.7	2.3	1.7	2
Communication	0.2	0.2	0.1	0.2	0.1	0.2
Entertainment	0	0	0	0	0	0
Furniture and appliances	0.5	0.5	0.4	0.6	0.3	0.5
Utilities	0.4	0.2	0.1	0.2	0.1	0.2
Family events (birthday, wedding, funeral, etc.)	1.3	2.3	1.3	2	1.3	1.6
Tobacco	1.1	1.1	1	0.6	1	1
Betel leaves and betel nuts	1.5	1.2	1.3	1.7	1.6	1.5
Pocket money given to children	0.9	0.8	0.6	0.8	0.5	0.7
Other non-food	2.2	2.6	2.1	2.3	1.5	2.1
Total	100	100	100	100	100	100

Source: Adapted from Ahmed et al, 2007, Tables 4.3 and 4.4. (Original source IFPRI 2006 Household Survey)

Note: Given the relatively small budget expenditure on education, it is likely there are other opportunity costs involved in sending children to school for very poor families—such as losing carers or labourers.