Rising food prices:
Policy options and World Bank response

This note is being distributed for information as background to the discussion of recent market developments at the Development Committee meeting. It was prepared by PREM, ARD and DEC, drawing from work across the Bank. Questions/comments should be addressed to Ana Revenga, PRMPR (ext. 89850).
1. Context

1.1 Rising food prices: trends and determinants

The rising trend in international food prices continued, and even accelerated, in 2008. U.S. wheat export prices rose from $375/ton in January to $440/ton in March, and Thai rice export prices increased from $365/ton to $562/ton. This came on top of a 181 percent increase in global wheat prices over the 36 months leading up to February 2008, and a 83 percent increase in overall global food prices over the same period (see Figure 1).

Increased bio-fuel production has contributed to the rise in food prices. Concerns over oil prices, energy security and climate change have prompted governments to take a more proactive stance towards encouraging production and use of bio-fuels.1 This has led to increased demand for bio-fuel raw materials, such as wheat, soy, maize and palm oil, and increased competition for cropland. Almost all of the increase in global maize production from 2004 to 2007 (the period when grain prices rose sharply) went for bio-fuels production in the U.S., while existing stocks were depleted by an increase in global consumption for other uses.2 Other developments, such as droughts in Australia and poor crops in the E.U. and Ukraine in 2006 and 2007, were largely offset by good crops and increased exports in other countries and would not, on their own, have had a significant impact on prices. Only a relatively small share of the increase in food production prices (around 15%) is due directly to higher energy and fertilizer costs.3

The observed increase in food prices is not a temporary phenomenon, but likely to persist in the medium term. Food crop prices are expected to remain high in 2008 and 2009 and then begin to decline as supply and demand respond to high prices; however, they are likely to remain well above the 2004 levels through 2015 for most food crops (Table 1). Forecasts of other major organizations (FAO, OECD, and USDA) that regularly monitor and project commodity prices are broadly consistent with these projections. Predictions of high food price in the medium run are further strengthened when we factor in the impact of policies aimed at achieving energy security and reduced carbon dioxide emissions, which may present strong trade-offs with food security objectives (see Section 3 below).

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1 Numerous countries have set standards or targets for use of bio-fuels. The E.U. has set a goal of 5.75 percent of motor fuel use from bio-fuels by 2010. The U.S. has mandated the use of 28.4 billion liters of bio-fuels for transportation by 2012. Brazil will require that all diesel oil contain 2 percent bio-diesel by 2008 and 5 percent by 2013, and Thailand will require 10 percent ethanol in all gasoline starting in 2007. India mandates a 5 percent ethanol blend in nine states, and China is requiring a 10 percent ethanol blend in five provinces.

2 From 2004 to 2007, global maize production increased 51 million tons, biofuel use in the U.S. increased 50 million tons and global consumption for all other uses increased 33 million tons, which caused global stocks to decline by 30 million tons (Mitchell 2008).

Table 1. Index of projected real food crop prices, 2004=100.

<table>
<thead>
<tr>
<th>Real Prices</th>
<th>2007</th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2015</th>
</tr>
</thead>
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<tr>
<td>Maize</td>
<td>141</td>
<td>179</td>
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</tr>
<tr>
<td>Wheat</td>
<td>157</td>
<td>219</td>
<td>211</td>
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<td>157</td>
</tr>
<tr>
<td>Rice</td>
<td>132</td>
<td>201</td>
<td>207</td>
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<tr>
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<td>127</td>
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<tr>
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</tr>
<tr>
<td>Sugar</td>
<td>135</td>
<td>169</td>
<td>180</td>
<td>190</td>
<td>185</td>
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</tbody>
</table>

Source: DECPG.

1.2 Impact on countries and households

Rising global food prices are contributing to high food inflation in many countries. The pass-through of rising global prices does not translate into an immediate and proportionate rise in domestic price levels, due to various factors such as a weakening dollar, domestic infrastructure and price stabilization policies. While the extent of global price transmission varies, over the past year there have been significant surges in domestic food price inflation in countries such as Sri Lanka (34%), Costa Rica (21%), and Egypt (13.5%). In many countries and regions, food price inflation is higher than aggregate inflation and contributing to underlying inflationary pressures. For example, in Europe and Central Asia overall inflation in 2007 averaged 10%, food inflation 15% and bread and cereals inflation 23%.

The terms-of-trade effects of these higher food prices have generally been mitigated by rising non-food commodity prices, although these averages mask significant balance of payments impacts for certain countries. When all primary commodity price changes are considered, the terms-of-trade impacts become large and positive for resource rich countries as exports of oil and other commodities more than compensate for higher food prices. Countries with the largest negative terms-of-trade impact include Lesotho, Eritrea and Gambia.

The distributional impacts of rising food prices can be serious even in countries where the balance of payments has not been adversely affected. While some households benefit from higher prices, others are hurt by them, depending on whether they are net producers or consumers of the food staple and the extent to which wages adjust to higher food price inflation. In general poor people, especially in urban areas, suffer due to rising food prices. Using a sample of household data for eight low income countries, a recent paper analyzes the impacts of higher prices of key staple foods on poverty, taking into account direct impacts from changes in commodity prices, and impacts through changes in wage rates for unskilled labor. The results show that, in six of the eight countries considered, price increases for staple foods were associated with a significant rise in poverty. Averaging across these eight countries, the increase in food prices between 2005 and 2007 is estimated to have increased poverty by 3 percentage points. A recent assessment in Indonesia shows that over three-fourths of the poor are net rice buyers, and an increase in the relative rice price by 10 percent will result in an additional two million poor people (or 1% of the population). Analysis using an alternative price index weighted according to the consumption patterns of the poor in Latin America suggests that in most countries of the region, the effective inflation rate faced by the poor is higher than the official rate by 3 percentage points.

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For many countries and regions where progress in reducing poverty has been slow, the negative poverty impact of rising food prices risks undermining the poverty gains of the last 5 to 10 years, at least in the short term. For example, in the case of Yemen, estimates show that the doubling of wheat prices over the last year could reverse all gains in poverty reduction achieved between 1998 and 2005. Over the long term, the impact on poverty of higher food and other commodity prices is less clear and depends partly on how overall economic growth responds to increased wealth accumulation and investment by net food-selling rural households.

2. What can governments do?

Policy interventions can be divided into three broad classes: (i) interventions to ensure household food security by strengthening targeted safety nets; (ii) interventions to lower domestic food prices through short-run trade policy measures or administrative action, and (iii) interventions to enhance longer-term food supply. Within all three categories of policies there are ‘first best’ or preferred options that are more effective and equitable, and introduce fewer distortions. Annex I summarizes the main policy options and ranks them according to the extent to which they meet these and other desirable criteria.

2.1 Ensuring household food security via targeted safety nets

First best options to address food insecurity include targeted cash transfers to vulnerable groups. These support the purchasing power of the poor without distorting domestic incentives to produce more food, and without reducing the incomes of poor food sellers. Examples include cash or near-cash transfers7 that are conditional upon meeting a requirement (such as low income, location or occupation) or engaging in a mandated behavior (such as sending children to school). The scale, targeting efficiency and value of such transfer programs tend to be directly related to overall levels of development, given the administrative complexities and fiscal costs entailed. They are not always a feasible option in low-income countries with weak administrative capacities.

Various kinds of cash transfer programs are currently used in Brazil, China, Ethiopia, Egypt, Indonesia, Mexico, Mozambique, South Africa, Sri Lanka, and Tunisia. Several of these countries are adjusting current programs in response to the rise in food prices. For example, in Ethiopia, where food price inflation in February 2008 was 23 percent (year on year), the Government has raised the cash wage rate of the largest cash-for-work program by 33%.

A number of countries, including Bangladesh, Madagascar, Cambodia, and India, are using self-targeted8 food-for-work programs, while others, including Afghanistan and Angola, use emergency food aid distribution to ensure food security for vulnerable groups. The food-for-work program in Bangladesh has been expanded recently due to both natural disasters and the rise in food prices. While self-targeting reduces the costs involved in administrative targeting, the physical transfer of food is itself costly and can lead to leakages. Food aid can also have growing disincentive effects on local production if it becomes entrenched beyond the initial emergency or is not tied to a work requirement.

Still other countries, including Burkina Faso, Brazil, China, Kenya, Honduras, Mexico and Mozambique, make effective use of school feeding programs to improve the food intake of school-age children and their families. South Africa is expanding allocations to its school nutrition program to keep pace with the rate of food inflation.

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7 Food stamps are the most frequently used form of near-cash transfer.
8 Self-targeted programs are designed to minimize the incentives the non-poor may have in taking part in the program. This is typically achieved through a mix of rationing benefits (e.g. limiting quantities of food), physical requirements (e.g. manual work for food), and queuing.
On the downside, school-based programs do not typically address child malnutrition at its most critical point – when children are in their infancy.

Rising food prices also risk derailing recent gains in reducing malnutrition. Between 1990 and 2005, the share of children under five with moderate and severe stunting fell from 33.5 percent worldwide to 24.1%. While food prices are not the main driver of malnutrition, they do affect nutritional outcomes through their impact on real incomes and household purchasing behavior. In compensating for rising food prices, vulnerable households may substitute towards less food, or cheaper, but less nutritious, substitutes for current diets.

2.2 Ensuring household food security by lowering domestic food prices

First best options to lower domestic prices include reducing tariffs and other taxes on key staples. Many countries impose tariffs on food imports, both to encourage domestic production and boost domestic revenue. In times of sharply increasing prices, reductions in tariffs and taxes can provide some relief to consumers, albeit at a fiscal cost. The revenue loss from reducing tariffs can be significant and the fiscal implications of combining this with additional social protection expenditures may well require cutbacks in lower priority areas. Some twenty-four of fifty-eight countries sampled have recently reduced import duties and VAT in the wake of rising food inflation (see Figure 2). Others, such as the Philippines, continue to maintain high tariffs to protect domestic producers in—yet these high tariffs adversely affect the large majority of the poor, who are net consumers.

Several countries (mainly in the Middle East-North Africa region) have a long history of using bread or grain subsidies specifically targeted to the poor to cope with household food insecurity. Others have introduced consumer subsidies for staples following the recent rise in food prices. For example, the Government of Yemen is supplying wheat in select markets at subsidized rates following a sharp rise in food prices. In early 2008 the Government of Pakistan announced that it was reviving a ration card system to distribute subsidized wheat. The risk with such measures is that they can become entrenched, incurring high fiscal costs. Moreover, if consumer subsidies are met by measures to keep producer prices low, this can create disincentives for domestic food producers, and end up being counterproductive. The one exception is when price controls are explicitly introduced as a temporary measure and are widely felt to be justifiable in terms of a higher social goal. In such cases, the risks of entrenched will be minimized, as observed in recent interventions to limit price increases for staples during Ramadan in Morocco.

For countries that are grain exporters, there may be political pressures to ban or tax grain exports in high price years. Unfortunately, several countries have now implemented these types of measures. These policies tend to have a limited impact on domestic price levels and a significant negative effect on earnings for domestic producers and exporters. They can also lead to sharp price

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fluctuations in countries that depend on imports, proving harmful to the global system.

In the 1970s and 1980s, many countries implemented a grain buffer stock policy to physically carry over grain surpluses (domestic or imported) from low price years to high price years. In practice, this policy tended to entail high fiscal costs with difficult management and governance issues, while the benefits it yielded for household food security were unclear. Furthermore, world markets could be relied on to provide a steady supply of relatively cheap grain imports when needed. More recently, however, the stock-holding policies of several large producers—such as the U.S., E.U. and China—have changed, contributing to the present situation of very low global grain stocks and increased global price volatility. As a consequence, a number of developing countries, such as Indonesia, are considering reverting to this form of price management, particularly after experiencing the impact of export bans in key export countries.

2.3 Measures to stimulate a medium-term food grain supply response

While higher grain prices are clearly a burden to poor net purchasers of food, they also present an opportunity to stimulate food grain production and enhance the contribution of agriculture to medium-term growth. For example, higher prices weaken the rationale for costly floor prices or import tariffs for grain, and may facilitate the implementation of politically difficult trade reforms. Higher grain prices can also help to reverse a generally declining trend in government, private sector and donor investment in the agricultural sector. Agricultural producers such as Brazil, Malaysia and Thailand have made significant progress in agricultural commercialization in recent years, and have increasingly undertaken investments in research and extension necessary to promote increased agricultural productivity and reduced agricultural risk.

However, some of the short-run policy options discussed above may limit the scope for longer-term solutions. For example, policy responses that seek to control markets through mandated grain prices, export restrictions, forcible procurement, or direct government involvement in marketing activities are likely to lower the food supply response over the medium term. In contrast, alternative measures such as the piloting of market-based risk management tools in Malawi, and the improvement of publicly accessible market information systems in India and Mali, are all likely to mobilize significant new resources in the private sector to cut marketing costs and improve efficiency of grain markets over the medium term.

For many low-income countries, transport and logistics costs are a key component of food prices and are generally far higher than OECD benchmarks of around 9 percent. While countries can do little to reduce ocean shipping costs (which for high volume, relatively low value goods such as grains and edible oils represent a significant part of the final price), they can act to lower the overall cost of domestic distribution. The importance of strengthening inland transport links in mitigating price spikes was recently underscored in Congo Republic. Improvements in transport capacity stemmed the rise in food price inflation that was experienced in 2006, and further investments in transport links with Brazzaville are expected to be an important part of controlling price spikes. Investments in basic transport infrastructure have a proven record in reducing prices, particularly in remote locations in countries such as Nepal. Moreover, improvements in customs facilitation, logistics performance, and efficient grain storage can also have significant benefits for consumers, while generating a favorable supply response.

2.4 Measures to handle the ‘spillover’ effects of the above-mentioned policy responses

Many of the policy responses discussed in the previous two sections have significant fiscal implications. In the case of Ethiopia, for example, the total additional costs of combined measures to raise the wage on the cash-for-work program, lift the VAT on food grains, and distribute wheat to the urban poor at a subsidized price, are likely to exceed 1% of GDP. The macroeconomic consequences of higher spending depend largely on how
they will be financed. Where additional budgetary costs are financed via higher domestic borrowing, this may lead to higher overall inflation. An alternative is to transfer costs to non-poor taxpayers, which may or may not be feasible depending on country-specific revenue-raising capacities and political economy considerations. Diverting resources from other social sector spending or from other core public investments to finance short-term responses may have medium and long-run opportunity costs. On the other hand, addressing food security priorities may provide an opportunity to reduce lower priority expenditures and reallocate these resources. Given the potentially important economic and political costs of not addressing food security, a temporary increase in budget deficits may be warranted.

Not all countries have the same capacity to accommodate and execute additional safety net and food policy spending. Using comparable data from the World Bank’s Country Policy and Institutional Assessment indicators, developing countries can be classified into four categories, depending on the extent of fiscal and balance of payments imbalances: (1) those in which initially weak public finances and fiscal management capacity has been further undermined by adverse terms-of-trade shocks (e.g. Burundi, Eritrea, Grenada, Haiti, Jamaica, and Nepal); (2) those in which somewhat stronger initial positions have been weakened by the terms-of-trade shocks (e.g. Burkina Faso, Ethiopia, and Honduras) and/or compounded by political crises (e.g. Kenya and Pakistan); (3) those in which there is weak fiscal capacity to effectively execute the additional food policy spending even in the face of favorable terms-of-trade movements (e.g. Mongolia and Zambia); and (4) those with stronger initial fiscal and balance of payment indicators, in which there is greater scope for mitigating the adverse impact of rising food prices (e.g. Indonesia, Mexico, and Tunisia).

The design of public policies to address rising food prices is conditioned by political economy factors. The strength of different interest groups is a critical factor in influencing policy choices and determining what solutions are feasible. Even in cases where countries are net suppliers of food to world markets, governments may face strong incentives to put in place protective measures. Sound policy choices will seek to implement those solutions which are economically most efficient, yet reflective of political economy considerations and in line with the country’s fiscal space and institutional capacity. In some cases, first or even second best policies may not be feasible or may involve difficult political choices. In general, government policy choices are likely to be better accepted and understood if accompanied by a transparent and effective communications strategy on the causes of high food prices and accompanying policy measures.

3. How can the World Bank and donors help?

The Bank is well-positioned to help countries identify the appropriate mix and sequencing of short and medium-term policies needed to support vulnerable groups, while allowing for broader adjustments to the structural increases in food prices. Core elements of the Bank’s response will include policy advice, financial support and global leadership.

3.1 Support for rapid policy responses

At present, the greatest demand for Bank engagement is to help countries evaluate the economic and social implications of rising food prices, as well as the available policy responses. Since many governments are faced with political economy pressures to implement sub-optimal, and even counterproductive, policies, the Bank can provide analytical inputs to highlight the least distortionary courses of action and help countries forge an effective, integrated response. Increased financial support may also be appropriate in a number of country contexts.
**Just-in-time policy advice to address immediate concerns.** There is strong demand for Bank advice on the design and expansion of safety net programs and food market interventions to help protect vulnerable groups. In Indonesia, the World Bank’s work has played a significant role in informing discussion of the impact of rice prices on poverty and on the usefulness of various policy instruments, for example cash transfers.\(^{10}\) In Egypt, the Bank helped bring together Mexican officials with experience of conditional cash transfer programs to share with Government officials. In Ethiopia, wage rate analysis carried out by the Bank was the basis of adjusting the cash transfer element of the country’s largest safety net program.

There has also been demand for advice on market interventions to smooth supply and lower food prices. An intensified dialogue on food stocks (which addresses optimal stock amounts, fiscal trade-offs, and implementation challenges) is being held in several countries, including Indonesia and Burkina Faso. In the Philippines, the Bank is advising the Government on the best strategy for reducing rice import tariffs. A high level forum is being organized in Morocco to discuss various reform options of the fuel and food subsidy programs.

Several countries have sought policy advice from the Bank to cope with the macroeconomic implications of rising food prices. Several policy notes have been prepared for partner countries on the causes of high food price inflation (e.g. Bangladesh and China) and options to manage rising inflation rates (e.g. Morocco). At the request of a number of Latin American Central Banks, the World Bank is organizing a workshop in Peru in May 2008 to discuss the use of inflation targeting. Several governments are asking for information on global trends and prospects to better understand the structural nature of the rise in food prices, as well as for information on responses adopted by other countries. Bank staff will be meeting with the Ministers of Finance of Central American countries to share Bank knowledge on food price trends and policies.

**Meeting short-run financing needs.** The immediate fiscal impacts of rising food prices vary across countries, as many food importers have been compensated by rising commodity export prices. It is still too early to assess the extent to which countries will turn to the Bank to contribute to emerging financing gaps. However, a few countries are actively considering increasing the size of forthcoming Development Policy Loans (e.g. Burkina Faso’s PRSC 7).

In the short run, the World Bank could scale up financing in existing programs and ongoing investment projects for safety net and agricultural programs. In Latin America, where many countries have comprehensive safety nets providing support to vulnerable groups, the Bank stands ready to scale up financial support to many of these programs. Additional Bank support can help expand and improve existing programs by providing: technical assistance to improve targeting and coverage, programmatic financing for strengthening social protection systems, and contingent financing for budgetary flexibility in the face of large-scale shocks.\(^{11}\) In Jamaica, the Bank is currently preparing a social protection project, which could be expanded to increase its coverage (Box 1). In other cases, existing lending programs are being modified to improve the efficiency of safety net programs. For instance, in the Middle East-North Africa region, a number of DPLs are supporting the reform of food subsidies.

While most of its agricultural projects are geared towards medium-term policy and institutional reforms to increase productivity, the Bank also designs interventions to boost short-term food staple production, storage and distribution. For instance, an additional $15 million supplemental credit for an existing agricultural project is being prepared in Burundi in order to finance the distribution of crop inputs for the forthcoming agricultural season.

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\(^{10}\) ‘Recent developments in food policy in Indonesia’ (February 2008) East Asia and Pacific Region mimeo.

In helping countries meet short-term financing needs, the Bank is collaborating closely with the IMF, and other donors, including the World Food Program (WFP), which has significant expertise in food availability assessments and responding to short-term crisis needs. Close collaboration with the WFP, the EU, bilaterals and other development partners is particularly important in countries where lead donors are not able to expand support or are cutting back food distribution programs (e.g. Mozambique).

### 3.2 Support for medium-term agenda

An important role for the Bank is to help governments interpret and contextualize the medium-term implications of rising food prices for their national development strategy and investment programs. In doing so, the Bank needs to work closely with other donors to build a shared dialogue and coordinated financial response. While it may be premature for countries to have a clear roadmap, analytical work to better understand the economic, poverty and social implications of rising food prices can contribute to the design of flexible, country-specific strategies. This implies expanding Bank diagnostics and support in critical areas, including: agricultural constraints; distributional analysis of food price increases and safety net programs; rural investment climate assessments; and public expenditure reviews. Flexibility will be crucial, since the Bank may need to adjust its CAS programs, including the lending pipeline and possible front-loading of lending programs.

In general, a balanced medium-term response to the structural increase in food prices calls for expanded investments in agriculture, as well as improved instruments for risk management, involving social safety nets and other risk management instruments. Expanded investments in agriculture should focus on raising agricultural productivity and not only on food self-sufficiency or food security. The latter is best achieved through international trade, efficient domestic markets, and well designed safety nets. Key issues for the Bank in these two areas are briefly outlined below.

**Making agriculture a priority.** In 1980, 30 percent of annual World Bank lending went to agricultural projects, but this declined to 12 percent in 2007. The overall proportion of all Official Development Assistance going to agriculture is currently only 4 percent. Falling and stable world real cereal prices in the 1980s and 1990s contributed to a sense of complacency with respect to agricultural issues in developing countries from the late

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**Box 1: Potential scaling up of the World Bank’s social protection support in Jamaica**

Jamaica has a range of safety net programs to protect the vulnerable, including self-targeted public works, school feeding, conditional cash transfers and programs targeting the elderly, poor and disabled. Of these various programs, the Program for Advancement Through Health and Education (PATH), a **conditional cash transfer program**, presents the most promising opportunities for scaling up, given its strong institutional capacity and robust targeting mechanisms.

At the beginning of 2008, the Government approved a 9 percent increase in the PATH’s benefit level, to help offset the impacts of inflation. To respond to the food price shock, the PATH could deliver additional cash transfers to poor households to offset the risk of worsening nutrition outcomes, reduced health take-up, and elevated school dropout rates. The additional transfer should be temporary and clearly separated from the core CCT program.

The Bank is in the final stages of preparing a social protection project which will provide performance-based financial support to the PATH. This project could be expanded to increase the number of poor households covered if the Government so requests.

Source: Rising Global Food Prices: Latin America and Caribbean Country Action Plans
1970s until recently. Rising food prices, as well as a heightened concern to accelerate growth among the many agriculture-dependent Sub-Saharan African countries, has led to renewed attention on this sector. The Bank has recently committed itself to doubling lending for agriculture in Africa, from an average of $450 million per year, during the IDA 14 period, to US$800 million per year in FY10.

The recent WDR on Agriculture identified four key elements for a comprehensive approach to agricultural growth, which will guide the Bank’s renewed focus on this sector. They include: (i) improving producer incentives (including the removal of subsidies which benefit richer farmers more); (ii) providing quality core public goods – science, infrastructure and human capital; and (iii) stronger institutions to support an attractive rural investment climate for men and women, including more access to rural financial institutions and risk management instruments, improved property rights, and greater opportunities for collective action by farmers; and (iv) ensuring sustainable use of natural resources.

Expanding and improving access to safety nets and risk management instruments. Improving the quality of and access to safety nets will be a priority for protecting vulnerable households in the face of continued uncertainties in global food markets – at least for the foreseeable future. The Bank can help countries build stronger and more flexible safety nets to cope with shocks, with clear targeting and programmatic frameworks that can be quickly scaled up to protect vulnerable households. In addition, expanding programs to ensure basic nutrition, particularly for infants, and improved access to health and education systems will also help minimize the likelihood that income shocks reduce demand and damage human capital accumulation. Finally, the Bank is also investing to help develop modern risk management systems such as crops and disaster insurance.

3.3 Support for an international agenda

The impacts of the recent surge in food prices are reverberating across key dimensions of the development agenda, including poverty alleviation, macroeconomic stability, investment incentives and energy security/climate change policies. Because it is capable of weaving together the economic, poverty, social, agricultural and environmental perspectives, the Bank is well-placed to catalyze global action and influence the international agenda. Three such issues where the Bank can seek to improve global outcomes are discussed below, many of which are of direct consequence for middle-income countries.

First, the Bank is working closely with countries and other donors to minimize the adoption of policies with negative spillover effects for others. High levels of trade tariffs and subsidies create major negative externalities. Agricultural tariffs and subsidies in developed countries cost developing countries annually the equivalent of about five times the current levels of overseas development assistance to agriculture. Export bans also bring about negative externalities, particularly for countries that are heavily dependent upon imports. They can create price spikes in importing countries and political pressure for domestic food self-sufficiency.

Second, the Bank’s climate change agenda seeks to inform the global debate on bio-fuels through analysis, monitoring and balancing of competing needs for energy and food security. Concerns over increasing energy use, climate change, and carbon dioxide emissions from fossil fuels make switching to low-carbon fuels a high policy priority at both the global and country levels. Bio-fuels are a potential low-carbon energy source, although whether bio-fuels offer carbon savings depends on how they are produced. Second-generation bio-fuels produced from waste products, in particular, can avoid land use change and some of the emissions associated with current bio-fuel programs, and may hence offer significant environmental and social

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13 Converting rainforests, peatlands, savannas, or grasslands to produce food-based bio-fuels in Brazil, Southeast Asia, and the United States creates a ‘bio-fuel carbon debt’ by releasing 17 to 420 times more (CO\textsubscript{2}) than the annual greenhouse gas (GHG) reductions these bio-fuels provide by displacing fossil fuels.
benefits. These benefits, however, have to be weighed against the potential costs of rising food prices. According to a recent IFPRI study, most scenarios of increased use of bio-fuels imply substantial trade-offs with food prices. These trade-offs are dampened, although not eliminated, when technological advances in bio-fuel and crop production are considered. Trade-offs between energy security, climate change and food security objectives need to be carefully monitored and integrated into both food and bio-fuel policy actions.

Third, the increase in food prices creates an opportunity for the global community to refocus on investments in agriculture and social protection. The structural shift in food prices creates an opportunity for the Bank and other donors to work with partner countries to build the political coalitions and mobilize the necessary financial support to reverse a perennial problem of under-investment in agriculture and to build better safety nets to help the poor cope with their endemic high levels of risk.

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14 IFPRI, IMPACT results (2006).
## ANNEX I

### POLICY EFFECTIVENESS SUMMARY

<table>
<thead>
<tr>
<th>Safety Net Programs</th>
<th>Targeted to Vulnerable Groups</th>
<th>Preserves Incentives (e.g. Labor / Production)</th>
<th>Costs Limited within National Borders</th>
<th>Easy to Implement / Introduce</th>
<th>Limited Management / Governance Concerns</th>
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<td>Feeding / nutrition programs</td>
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<th>Policies to Reduce Domestic Food Prices</th>
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<td>Reducing import tariffs and VAT</td>
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<td>Producer price controls</td>
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