Agriculture and Food Security Group
A Post-Bali Food Security Agenda

Bali, December 2013

Co-convened with
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A Post-Bali Food Security Agenda
Prepared by Stefan Tangermann, Theme Leader of the Agriculture and Food Security group

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The scourge of hunger has once again made its way onto agendas across the world. Although several individual factors contributed to the recent crises that brought this issue to the fore, many believe that government policies, such as on biofuels or export restrictions, may have been detrimental. Decision makers may exert limited control over weather variability or resource scarcity but better policies, on trade and agriculture, are firmly within their grasp.

Under these circumstances, an expert group on Agriculture Trade, Food Security and Sustainable Development was created as part of the e15initiative. The e15initiative, organised by the International Centre for Trade and Sustainable Development (ICTSD), was established to explore a handful of practical, specific changes that could bring the WTO in line with the realities of the modern economy. It aims to facilitate thinking away from immediate WTO negotiating concerns and toward the medium and long term future of the multilateral trading system.

As a joint effort of ICTSD and the International Food & Agricultural Trade Policy Council (IPC) the expert group on Agriculture Trade, Food Security and Sustainable Development was assembled of 24 leading experts from a variety of global institutions. The working group was tasked with exploring all facets of the challenges that face the global agricultural and food trading system in the 21st century and the implications for sustainable development. Their objective is to develop concrete policy options the multilateral trading system could employ to positively impact agriculture trade and improve food security, especially for the poorest global citizens.

Preliminary policy options are presented in this paper. The details that follow emerged from a process organized by ICTSD and IPC that took place over the course of several months in 2013. Four think pieces, one issue paper, and one background paper were written by the group derived from group discussions and expert input.

Stefan Tangermann, theme leader of the expert group, Professor Emeritus at the University of Göttingen, and author of the paper brings together the solutions they derived and delivers them as concise considerations for policy makers.

These policy options aim to provide decision makers with concrete ideas to consider, debate and act upon so as to better the multilateral trading system in the area of agricultural trade and food security.

Further information about individual groups, experts, and latest developments can be found at www.e15initiative.org
The present report, resulting from deliberations of an expert group brought together by ICTSD and IPC as part of the E15 initiative, considers new challenges facing the global food trading system in the 21st century, and identifies options for how policies and international trade rules can respond to this new reality. It is not specifically addressed toward the ongoing negotiations of the Doha Round, nor is there any attempt to re-define the mandate for those negotiations.

The new challenges include a shift from demand constrained to supply constrained global food markets; massive use of agricultural commodities for biofuel production; heightened price volatility on increasingly tight markets; impacts of climate change on agricultural output and government policies responding to them; a rapidly growing number of RTAs; agricultural policy changes, mostly in the direction of more market orientation, though in a number of emerging countries farm support has begun to rise.

Against this background, improving food security in poor countries must be a top priority for the international community. Focusing on this priority can also demonstrate what international trade, and the regime governing it, can constructively do for developing countries. At the same time work must continue towards strengthening competitive markets, reducing trade barriers and minimizing policy-induced distortions. The report presents policy options that respond to these priorities. Several of them can be pursued in the short term, while others may need more time.

A primary candidate for an early agreement, to be reaped in the short term, is a resolve to establish a new instrument of financial solidarity, whereby all developed and emerging countries make financial support available, in proportion to their overall trade distorting domestic support (OTDS), for projects to improve food security in poor countries.

Other options for the short term are creating more transparency on export taxes and restrictions; exclusion from export restrictions of shipments destined to serve as food aid to countries in an emergency; more transparency regarding government support to biofuels; improved monitoring and surveillance under the AoA; strengthened support to the Standards and Trade Development Facility. Options for the medium term are the binding of export taxes; clarification and amendment of green box rules; improved transparency regarding SPS measures; and strengthened rules for treatment of agriculture in RTAs.

Options for the longer term include new incentives for compliance with monitoring requirements under the Agreement on Agriculture; establishment of disciplines on support for biofuels; and clarification of the conditions under which the WTO permits border measures designed to prevent carbon leakage and equivalent impacts. Outside the WTO the international community should work towards improved market transparency; support for emergency reserves; assistance for strengthened social safety nets; and measures that foster agricultural productivity.

In terms of process, the Bali WTO Ministerial could establish a work programme in which policy options such as those discussed in this report, including work towards a new instrument of financial solidarity, can be considered.
EXECUTIVE SUMMARY

Today’s global food system is vastly different from what it was in 2001 when the Doha Round was launched. Against this background, the International Centre for Trade and Sustainable Development (ICTSD) has tasked, as part of its E15 initiative, an expert group to explore the challenges facing the global food trading system in the 21st century, and to identify options for how policies and international trade rules can respond to this new reality. For this purpose, the International Food and Agriculture Policy Council (IPC) joined forces with ICTSD. The expert group, whose members are listed in Annex A, has discussed issues, prospects and policy options. A number of background papers and think pieces, listed in Annex B, were commissioned, and they supported the deliberations of the expert group and the preparation of this report.

The report, though related to the international trade regime, is not specifically addressed to the ongoing negotiations of the Doha Round, nor is there any attempt to re-define the mandate for those negotiations.

In the 21st century, the global food system faces several new challenges. After a long period of demand constrained conditions on international markets for agricultural products, markets have turned to become supply constrained. Large scale use of agricultural commodities as feedstocks for the production of bioenergy is a new phenomenon, contributing to the tightening of markets.

Climate change is posing new issues for the future of global agriculture, in particular in tropical countries. It also amplifies the already pronounced volatility on agricultural markets, causing problems in particular for poor food consumers. Governments are increasingly looking for ways of responding to climate change and other environmental issues, and trade policy is one of the domains where solutions are sought.

Experience with implementing the WTO Agreement on Agriculture (AoA) has pointed at a number of issues and loopholes that require attention. In most of the rapidly growing number of RTAs, agriculture is less than fully integrated. Agricultural policies kept changing in major developed countries, towards more market oriented approaches. At the same time, agricultural policy support in a number of emerging countries has begun to rise.

While policy options for adapting the AoA to the new challenges are considered, there is no doubt that further progress is needed on all three existing pillars of the AoA, i.e. market access, domestic support and export competition.

International trade rules should be symmetric for importing and exporting countries. Disciplines should, hence, apply to exporting countries who discriminate in favour of domestic users by withholding supplies from those in the rest of the world. More transparency regarding export restrictions would benefit the smooth functioning of markets. A procedure should be established to identify whether an exporting country actually has reason to adopt an export restriction in order “to prevent or relieve critical shortages of foodstuffs”. It would be desirable to exclude from any restrictions the shipments destined to serve as food aid to countries in an emergency. Export taxes should be bound, in the same way as tariffs are.

There is a clear need to create more transparency regarding the types and levels of government support to biofuels, and to establish commitments on support to biofuels, aiming at constraints on the burden that is placed on food consumers.

Notifications of green box measures should provide more detail on implementation of the policy measures concerned, so that their potential trade impact can be more effectively assessed. As far as public stockholding for food security purposes is concerned, it is doubtful whether it helps rational policy pursuit if a direct link is established between this consumer-oriented policy and support for certain groups of producers. In the longer term it may make sense, in the green box, to distinguish between the provision of public goods and income support to farmers, leaving the former unconstrained while introducing a cap on the latter.

Smallholders are best supported by domestic measures that contribute to a positive enabling environment (such as infrastructure, market institutions, communication, education, extension, research, property titles etc.).

Monitoring and surveillance of agricultural policies should be strengthened through provisions such as those suggested in the draft Modalities of December 2008, even before conclusion of the Doha Round. New incentives for compliance could be created if the assumption of ineligibility for benefits (such as excluding green box measures from reduction commitments) was introduced until eligibility has been affirmed based on notifications.

The functioning of the SPS Agreement would benefit from a more effective notification system and new incentives to make more ample use of international standards. Developing countries should receive more assistance through a strengthened Standards and Trade Development Facility. The relationship between private and public standards should be clarified.

When it comes to preparing WTO rules for the future, it is desirable to clarify the conditions under which the WTO permits the use of border measures designed to prevent trade from undermining the effectiveness (and political acceptability) of domestic policies regarding climate change and the environment, i.e. to avoid ‘carbon leakage’ and equivalent impacts.
Regarding the treatment of agriculture in RTAs, it would make sense to clarify and strengthen the “substantially all the trade” rule, and to encourage the ‘WTO plus’ approach.

There are several policy options for international co-operation to improve food security. Improved market transparency, for example through support for the new internationally co-ordinated agricultural market information system (AMIS), can help to reduce difficulties in obtaining access to supplies.

International assistance for the creation of emergency reserves and for the establishment as well as implementation of social safety nets improves the capacity of poor countries to deal with episodes of surging food prices.

The international community should consider creating a new instrument of financial solidarity that establishes a relationship between what governments in well-off countries do for their farmers on the one hand, and assistance to agriculture and food security in poor countries on the other. All developed and emerging countries would provide financial support for measures aimed at improving food security and fostering agricultural development in developing countries where food insecurity is prevalent. Contributions would be made in proportion to the magnitude of their overall trade-distorting domestic support (OTDS). This innovative approach would constitute a direct response, in the context of trade, to one of the biggest challenges that have emerged in the world’s food and agriculture sector in recent years.

Pursuing policy options to foster higher agricultural productivity, specifically in the least developed countries, is a particularly promising approach to improving living conditions in rural areas, reducing poverty, and improving food security. The international community should increase investments in agricultural innovation systems.

Priorities and next steps: In response to the challenges of the 21st century, the international community must now place a priority focus on improving food security in poor countries. Doing so will demonstrate what international trade, and the regime governing it, can constructively do for developing countries. At the same time work must continue towards strengthening competitive markets, reducing trade barriers and minimizing policy-induced distortions. The policy options discussed in the present report respond to these priorities. Several of them can be pursued in the short term, while others may need more time.

A primary candidate for an early agreement, to be reaped in the short term, would be a resolve to establish a new instrument of financial solidarity, whereby all developed and emerging countries make financial support available, in proportion to their overall trade distorting domestic support (OTDS), for projects to improve food security in poor countries. This option merits priority attention as it responds, in a most direct way, to the most pressing challenge in the global food system that has emerged since the beginning of the century.

Other options that can be pursued in the short term are creating more transparency on export taxes and restrictions; exclusion from export restrictions of shipments destined to serve as food aid to countries in an emergency; more transparency regarding government support to biofuels; improved monitoring and surveillance under the AoA; strengthened support to the Standards and Trade Development Facility.

Options that may require more time, and that hence are candidates for the medium term, are the binding of export taxes; clarification and amendment of green box rules; improved transparency regarding SPS measures; and strengthened rules for treatment of agriculture in RTAs.

Options for the longer term include new incentives for compliance with monitoring requirements under the AoA; establishment of disciplines on support for biofuels; and clarification of the conditions under which the WTO permits border measures designed to prevent carbon leakage and equivalent impacts. Outside the WTO the international community should work towards improved market transparency; support for emergency reserves; assistance for strengthened social safety nets; and measures that foster agricultural productivity.

In terms of process, the Bali WTO Ministerial could establish a work programme in which policy options such as those discussed in this report, including work towards a new instrument of financial solidarity, can be considered.
WHAT THIS REPORT IS ABOUT

Today’s global food system is vastly different from what it was in 2001 when the Doha Round was launched. Recent food price spikes have brought food security concerns to the forefront of the policy agenda. While the debate about the origins of these market developments continues, the linkages between price volatility and national as well as international policies have come into the spotlight. As global agriculture has moved from supply driven to demand driven markets, growing concerns are expressed regarding the world’s capacity to feed its still rapidly growing population. Climate change may further aggravate the situation, specifically in those less well-off parts of the world where food security is already a major concern. In more affluent countries, more and more attention is paid to the impact of agriculture on the environment. In the trade arena, regional agreements spread while multilateral progress in the Doha Round is difficult to achieve.

Against this background, the International Centre for Trade and Sustainable Development (ICTSD) has tasked, as part of its E15 initiative, an expert group to explore the many challenges facing the global food trading system in the 21st century and their implications for sustainable development, and to identify options for how policies and international trade rules can respond to this new reality. For this purpose, the International Food and Agriculture Policy Council (IPC) joined forces with ICTSD. The expert group, whose members are listed in Annex A, has discussed issues, prospects and policy options in a number of meetings. A number of background papers and think pieces, listed in Annex B, were commissioned, and they supported the deliberations of the expert group and the preparation of this report, a draft of which was also discussed by the expert group. While a serious attempt was made to take perspectives of all members of the expert group into account, it was not possible to do equal justice to the whole variety of different views expressed by members of the group. The present report should, therefore, not be considered to represent full consensus, and the author alone is to be held responsible for the content of this report. The authors is, though, grateful for the many constructive comments on earlier drafts received from members of the expert group.

The focus of the E15 exercise, and consequently of this report, is international trade and the multilateral system underpinning it. National policies, directed at shaping domestic food and agriculture sectors, will also have to adapt to the changing conditions of the 21st century and may actually have to carry the largest part of the burden. However, given its focus on international trade and multilateral policies, this report will consider national measures at best in passing. The focus is on considering policy options that could respond to issues that have become increasingly relevant in the past decade or so. This report, and the deliberations behind it, though related to the international trade regime, are not specifically addressed toward the ongoing negotiations of the Doha Round, nor is there any attempt to re-define the mandate for those negotiations.

Food security is an issue of primary importance for developing countries. At the same time, the untapped potential of world agriculture is particularly promising in developing countries. Mobilizing it requires better integration of their farmers, above all smallholders, into markets. A number of developing and emerging countries are increasingly successful food exporters. However, rapid growth of incomes and population in most developing countries means that as a group they are likely to require increasing food imports. International trade in food and agricultural products is, for all such reasons, of vital importance to developing countries, as are the multilateral rules governing it. The present report will, therefore, pay particular attention to issues relevant for developing countries.

The report begins with a look at the new challenges the global food and agriculture system is facing in the 21st century (Section 2). On that basis it then considers trade policy options for the future in two areas, i.e. the WTO agreements on agriculture and sanitary and phytosanitary measures (Section 3), and more general WTO rules of particular importance for food and agriculture (Section 4). The report also discusses briefly international co-operation to improve food security (Section 5) and how to foster agricultural productivity (Section 6). It concludes with suggestions for priorities and next steps (Section 7).

To keep the report brief and readable references have been kept to a minimum. The background papers and think pieces produced for this E15 expert group, from which this report draws freely, contain full references. Readers interested in more detail and references to the literature are encouraged to consult these supporting documents.
NEW CHALLENGES

As the world changes, policies are continuously faced with new challenges. Policies for agriculture and food security are no exception, and they keep changing all the time. At the national level, the rhythm of policy adjustments is often dictated by parliamentary elections or specific sunset clauses. At the international level, major negotiating rounds provide opportunities for policy revisions. As far as multilateral trade negotiations are concerned, the launch of the Doha Round in 2001 provided an opportunity to set an agenda for adapting the fundamental rules of the WTO to the needs of the time. Unfortunately, 12 years of negotiations have not yet brought closure to the Doha Round.

And while the negotiations dragged on, the world has continued to change, some would say with accelerated pace. In the area of food and agriculture, a number of developments have taken place since the beginning of this century that have contributed to changing the landscape in which international and in particular trade policies for the sector must operate. Some of these developments pose challenges which were not yet equally relevant at the time of launching the Doha Round, and which may require policy responses at the international level. Some of the more prominent ‘new’ challenges will be briefly considered here.

FROM DEMAND CONSTRAINED TO SUPPLY CONSTRAINED FOOD MARKETS

In the last five years, global food markets were hit by a succession of extreme price peaks. While markets for agricultural products always exhibit marked volatility, the magnitude and frequency of the price spikes experienced in 2007/8 and again in 2010/11 and 2012 were such that they drew significant political attention, up to the highest level of governments. The precise extent to which recent price peaks, in particular for cereals, have aggravated global food insecurity is still the subject of empirical research. But there cannot be much doubt that extreme spikes in food prices have negative implications for the world’s food and agricultural system.

The debate about the exact constellation of factors that caused increased volatility on global food markets in recent years still continues. But there is a growing consensus that perhaps this is not just a passing episode of turbulence, but that it coincides with, or is even indicative of, a shift in the longer term trend of global markets for agricultural products. Historically, markets in agriculture were characterized by a secular decline of real (i.e. inflation adjusted) prices. Even though global demand for food and agricultural raw materials expanded rapidly, driven by growth of both population and incomes, productivity of global agriculture increased even more rapidly. Contrary to Malthusian views, global food markets proved to be demand constrained, and consequently prices in real terms exhibited a declining trend. As a result, farmers tended to suffer from their own productive performance, while consumers benefitted. In rich countries, pressure on farm incomes led agricultural policy makers to engage in extensive support programmes, which though added to supply growth and thus depressed prices on international markets even further.

There are indications that we may currently be experiencing an upward shift in the price trend. Market projections generated by different institutions vary in detail, but they are largely consistent in suggesting that the world appears to have embarked on a new and higher level of prices for agricultural commodities and food. For illustration, Figure 1 sets the world market price of wheat in real terms, as projected for the coming ten years by OECD and FAO, against its development since 1971. It also includes trend lines for the two periods before and since the start of the recent episode of large volatility (2007), suggesting that market conditions have changed noticeably: real prices have increased markedly from the lows in the 1990s, although they are clearly lower than in the 1970s and are not projected to return to those levels.

This change could, to coin a phrase, be described as a shift from demand constrained to supply constrained markets in food and agriculture. Agricultural markets will continue to exhibit significant volatility (as discussed below), and there may well be episodes of declining and low prices. However, it appears that overall there is a relatively high probability that the price level on international markets for food and agricultural products in the years to come will be higher than in the past.

Research continues on the relative contributions of various factors to causing this shift in market conditions. Accelerating income growth in many developing and emerging countries, coupled with ongoing urbanization, spurs expansion of market demand for food. It also stimulates a change in diets, towards a growing weight of livestock products, adding to demand for crops as animal feed. At the same time the world’s capacity to expand agricultural
production may be less than in past decades. There are limits to the land base that can be used for agriculture, and even though the arable area has not yet been completely exhausted, further expansion comes at increasing cost, in particular in terms of infrastructure and environmental sustainability. Growth of global food production, which in the past came much more from yield increases than from area expansion, will therefore have to be based even more on raising yields in future. In this context it is somewhat worrying that growth rates of cereal yields, with the possible exception of maize, have been declining over the past five decades or so. Raising them again will face a number of constraints, including the increasingly limited availability of water.

Prices of agricultural commodities have also been driven up by the rise in prices of oil and other energy sources since the beginning of the century. Agriculture, and the industries supplying it with inputs and processing its products, are energy intensive. Rising energy prices, therefore, drive up production costs and hence prices of agricultural and food products. In addition to the direct effect of energy prices, there is also an impact on demand for agricultural commodities in the production of bioenergy, discussed below.

This shift from demand constrained to supply constrained markets for food and agricultural products, of course, has a significant impact on the relative positions of producers and consumers. Depressed prices on international markets exerted adjustment pressure on farmers in rich countries and reduced incentives for agricultural development in less well-off countries, while they diminished somewhat the burden on poor food consumers. The traditional constellation in agricultural negotiations under the GATT and the WTO, i.e. to work towards limiting protection and support provided to farmers, must be seen in this light. While the Doha Round is still facing a considerable amount of unfinished business of this sort, the higher price level to which markets appear to have shifted now means that equal weight also needs to be given to considering approaches that can be used to protect food consumers against price peaks.

In that same context, it is also highly relevant to consider the growing role of developing countries in agricultural trade. The share of non-LDC developing countries (defined on the basis of economic criteria) in world imports of agricultural products rose from 26% in 2000 to 41% in 2011, and is close to 60% now for cereals. In global agricultural exports, the share of non-LDC developing countries increased from 34% to 45%. Even for meat and fish products, where non-LDC developing countries accounted for only 16% of world imports in 2000, this share reached 34% in 2011. These trends mean that developing countries’ markets cannot be considered peripheral anymore. As for manufactured products, they are now central: they represent a significant part of world trade, and an overwhelming share of its growth.

### BIO-ENERGY

Currently, a significant share of crop production in some parts of the world is used as feedstock for the production of biofuels. About 65% of vegetable oil output in the EU, 50% of sugarcane in Brazil, and 40% of maize in the U.S. go into biofuels. Use of crops for biofuel production is projected to grow further. Market projections issued by OECD and FAO (2012) expect that in 2021 a share no less than 14% of global coarse grain production and 34% of global sugarcane production may be used to produce ethanol, and that 16% of global vegetable oil output will be converted into biodiesel. In addition, some other crops are also used as feedstocks, and other forms of renewable energy (e.g. biogas) are also produced from agricultural products. The mass use of agricultural commodities, including those that could also be used as food, to generate energy is a relatively
new phenomenon which was virtually non-existent when this century began. The only exception is Brazil where conversion of sugarcane into ethanol began in the 1970s.

To a very large extent, the production of bioenergy depends heavily on government support provided in various forms, including subsidies, tax credits and quantitative mandates. Brazil is, again, an exception as ethanol production from Brazilian sugarcane is commercially viable unless the price of sugar is very high. The motives for providing government support to bioenergy are manifold, but most prominent are three aims: to reduce greenhouse gas emissions; to decrease dependence on imports of fossil fuels; and to support jobs and profits in agriculture and the conversion industry. The extent to which these aims can be achieved is the subject of hot debates. There is little doubt that the large-scale introduction of bio-based fuels into energy markets in North America and Europe (and some other countries) would not have taken place in the absence of government support, estimated to be in the order of US$ 20 billion per year globally. However, at high energy prices, some biofuel production outside Brazil is also commercially viable (at least in depreciated factories), though the extent to which this is the case is also debated.

About 65% of vegetable oil output in the EU, 50% of sugarcane in Brazil, and 40% of maize in the U.S. go into biofuels. Use of crops for biofuel production is projected to grow further.

The rapid expansion of the use of agricultural commodities as feedstocks for the production of bioenergy has been blamed by several authors as one of the major factors behind the food price peaks in recent years. The jury is still out on how large that impact was. However, there can be little doubt that international market prices of the agricultural commodities that are primarily used as feedstocks would be lower in the absence of biofuels support, though estimates of the precise extent to which this would be the case differ from study to study.

In any case, the appearance of biofuels has established a new causal link between energy prices and prices of agricultural commodities. The higher the price of fossil energy, the stronger may be the tendency for governments to support the production of biofuels, and the larger the share of global biofuel production that is commercially viable even in the absence of government support. The closer correlation between prices for fossil energy and food prices that has been observed in recent years is a novel phenomenon that poses new challenges for global food security, challenges that could become even more acute if energy prices were to rise further.

LARGE-SCALE LAND ACQUISITIONS

The growing tightness of international markets for food and agricultural commodities, and the price spikes that have occurred in recent years, have contributed to intensifying the search for new sources of food supplies, in particular among import-dependent nations. Foreign direct investment (FDI) in agriculture, including large-scale land acquisitions of unprecedented orders of magnitude have been among the responses. This is not the place to discuss the complex issues involved, nor the regulatory responses required, at both national and international level, to make sure that the potential benefits from such activities are shared among all stakeholders in a fair manner. It is important to ensure, through an appropriate institutional and legal framework, that FDI in agriculture and land acquisitions by foreign investors, be they governments or private agents, contribute positively to sustainable development in the host country, and do not undermine efforts to eradicate poverty and improve food security.

To the extent that FDI in agriculture aims not only at commercial profits but also at securing food supplies in the investor country, specific perspectives regarding international trade flows are involved. Relatively little is known in that context about any special trade arrangements that may have been agreed between investor and host countries. It would appear important to ensure that any special arrangements do not deviate from the multilateral trade rules in a way that could potentially pose a threat to food security in the host country.

MARKET VOLATILITY

Markets for agricultural commodities have always exhibited volatility, for two fundamental reasons. First, the supply of agricultural products depends on natural factors outside human control (such as weather and pests) and varies from year to year. Second, in markets for food and agricultural products, neither supply nor demand respond strongly to price changes. Thus, price has to vary a lot in order to re-establish market balance once a natural shock has upset this. In addition there is a tendency for some agricultural products to exhibit cyclical price swings (e.g. the ‘hog cycle’ phenomenon).

On international markets, the inherent tendency for agricultural and food markets to be volatile is even more pronounced. Global markets for many agricultural products tend to be ‘thin’, with international trade sometimes amounting to no more than single-digit percentages of global output. The ‘thinness’ of global markets for agricultural and food products is further aggravated by a tendency for governments to insulate domestic markets from international price swings. What can be marked changes in global output from year to year must therefore, to the extent that it is not compensated by stock changes, be buffered by a world market that is small relative to the overall volume of global output – with the consequence that price swings can become rather large.
While a significant degree of variability has, thus, always characterized markets for food and agricultural products, experience shows that once in a while there is a bout of extreme volatility on international markets. Typically that extreme volatility is asymmetric in nature, with upward price spikes much larger than downward price declines. Apart from purely arithmetic reasons (prices can never fall by more than 100%, but rise much more percentagewise), this phenomenon is closely related to the storability of many agricultural commodities. When prices fall, agents tend to put commodities into storage, but when prices rise a point can be reached where stocks are virtually depleted and no additional supplies can come on the market. In recent decades, the world has seen one episode of such extreme upward price explosions in the 1970s, and again in the period since 2007.

The most recent episode of extreme volatility differs in part from the experience in the early 1970s in the sense that it is characterized by a number of successive price spikes following each other in rather short intervals. A number of factors have been indentified that may have contributed to each individual event of repeated volatility in recent years, ranging from extreme weather events, developments in markets for other commodities, in particular energy, to new forms of financial investment in commodity exchanges, currency developments and rapid expansion of feedstock use for biofuels, and ad hoc export restrictions. Some of these factors have resulted in low stock-to-use ratios for several key commodities, which reduced the buffering capacity of markets and hence amplified price explosions.

Whether all or most of these factors will continue to impact markets for food and agricultural products in the years to come is difficult to say. It does, though, appear that extreme weather events have become more likely as a consequence of ongoing climate change. That factor alone may mean that markets may continue to exhibit a marked degree of volatility in the future, even larger than the ‘traditional’ volatility that has always plagued agricultural markets. Also, recent food price peaks have served to attract new attention to the phenomenon of food market volatility, and to demonstrate how important it is to develop appropriate and effective responses to it, and to the deplorable social consequences it can have.

**CLIMATE CHANGE**

The challenges posed by climate change are not new, but the major implications for agriculture have become considerably clearer in the last ten years or so. Compared to other sectors, agriculture is unusual in that it can contribute both to increasing and decreasing the concentration of atmospheric greenhouse gases (GHGs). It generates GHG emissions through crop and animal production. Agricultural production is a major source of GHG emissions, directly accounting for an estimated 10-12 per cent of the global total. If the clearance of uncultivated land for agriculture is taken into account the contribution is substantially higher. Moreover, the food and agricultural industry is a major user of energy in the production of inputs, the processing of commodities, and the use of transportation, all of which also generate significant GHG emissions. On the other hand, agriculture (and forestry) can also recycle or remove carbon from the atmosphere for significant periods of time through sequestration. It can also produce commodities that can potentially help to reduce overall GHG emissions by substituting for fossil fuels. For all these reasons, adjustments in agronomic practices and in agriculture’s product mix can make a major contribution to mitigating climate change, and global agriculture is likely to be called upon to do so increasingly in the future.

At the same time agriculture and food production are, because of their dependence on natural conditions, particularly susceptible to the impact of climate change. How precisely agricultural production will be affected by changing climate is still a matter of debate, and will probably remain so for quite some time, given the complexities of both forecasting climate change and understanding the impact of climatic conditions on agricultural production. However, there appears to be growing consensus on two major implications. First, extreme weather events such as droughts, floods and storms are projected to become more frequent. As a result, year-to-year variability of agricultural output at any particular location (though not necessarily at the global level) is expected to increase. Second, the impact of climate change on agricultural production is likely to exhibit marked spatial differentiation. While growing conditions in temperate zones are expected to improve (higher temperature, longer growing seasons), output potential in tropical territories is likely to be negatively affected (more heat, more drought, shorter growing seasons at appropriate temperature), though there may also be marked localized variations in the impact of climate change. As most developing countries happen to be located where agricultural output is projected to suffer from climate change, the trend for the developing countries in the aggregate to become more and more dependent on food (in particular cereal) imports from richer countries is likely to be further enhanced through climate change. In addition to such overall changes in the volume of agricultural production, production patterns in terms of product composition are also likely to change. While there may be a political temptation in many countries to resist such modifications of agricultural production in response to climate change it should be clear that they will reflect evolving patterns of comparative advantage, and that attempts at resisting them would come at potentially high cost.

While there is broad consensus on the general direction of such spatial differentiation, opinions still differ widely on how climate change may affect specific geographical areas and the global volume of agricultural output. Yet, it appears that a growing number of analyses arrive at the conclusion that the agricultural output potential of the globe overall may decline slightly. This would further add to the tendency for food markets to move in the direction of being demand, rather than supply driven.
The challenges posed by climate change for the trading system are at least fourfold. First, trade is a powerful means of bridging spatial differences, both in the short run (resulting from extreme weather events) and in the longer term (caused by differential impacts on output potential). The more freely that trade can flow the more it can fulfil this balancing function. Second, as governments seek to support both the mitigation potential and the adaptation capacity of their domestic farming industries there may be a tendency for them to resort to policies that have the potential of interfering with trade. Third, the apparent need for policy responses to the implications of climate change, and the complexity of the matter, can easily be used as pretexts for protectionist measures. Fourth, for all these reasons it is obvious that international agreements are urgently needed to face these global challenges – but it also becomes increasingly clear how difficult they are to reach.

ENVIRONMENTAL ISSUES

The relationship between agriculture and the environment poses challenges that are somewhat similar to those resulting from climate change. Agriculture can both cause environmental damage and contribute to improving environmental conditions. In both regards, increasing attention has been paid in recent years to the relationships between agriculture and the environment.

Growing intensification of agricultural production in large parts of the world has intensified pressure on the environment, biodiversity and other natural resources, including the water. In some parts of the world, concerns have been increasingly expressed, by farmers, governments and NGOs, regarding the resulting damage, and some negative impacts have begun to be redressed. At the same time, it is increasingly recognized, in particular in the more affluent parts of the world, that agriculture has genuinely contributed to shaping valued features of the country-side and that farming activities can, if properly practiced, help to preserve positive aspects of the environment. Environmental policies in agriculture have, therefore, received growing attention.

However, some policy measures used to address the environmental implications of agricultural production have the potential to interfere with international trade. For example, where governments support certain agricultural practices that are assumed to be beneficial for biodiversity, the disposal of the agricultural output produced may be deemed to cause difficulties for producers in third countries. Also, when a government imposes more demanding animal welfare standards on domestic producers, there is a temptation to make sure that imports originating from countries with less demanding standards do not outcompete the ‘well-behaved’ domestic farmers. For such reasons, environmental issues, including in agriculture, have the potential to cause growing tensions in the international trading system, and it will be important to examine solutions that allow for a fair balance between environmental sustainability and non-discriminatory trade rules.

EXPERIENCES WITH IMPLEMENTING THE AGREEMENT ON AGRICULTURE

The Agreement on Agriculture (AoA) concluded in the Uruguay Round (UR) established a wholly new legal framework for agricultural trade policies of WTO Members. Problematic import barriers such as variable levies and quantitative restrictions, which used to play an important role in agriculture, had to be converted into tariffs. There are now firm limits to the most trade distorting forms of domestic support. And export subsidization that used to plague markets for agricultural commodities has been disciplined through quantified constraints. While the AoA has fundamentally changed the rules of the game, its quantified constraints were not very demanding and, hence, left considerable room for continuing ‘old’ policies. This may be one reason why compliance with the new rules has generally been reasonably good, as evidenced by the relatively limited number of disputes over core AoA rules brought in the WTO. Squeezing water out of the quantitative constraints under the AoA and making further headway towards allowing market forces rather than government interference to determine trade flows in agriculture is a major aim of the Doha Round.

Experience with implementing the AoA has, though, also pointed at a number of issues and loopholes that require attention. Some have to do with the definition of rules in the Agreement, others with the way governments have chosen to deal with them.

An example of the former category is the AoA definition of market price support, based on fixed external reference prices, some of which are by now far out of line with actual market conditions; in the same context, the definition of the "eligible quantity" of production has left too much room for interpretation. Another example is the definition of domestic support measures exempt from reduction commitments (‘green box’). Subsidies notified under the green box have increased significantly since the AoA was concluded, both in absolute terms and as a percentage of overall domestic support. Movement in the direction of less trade distorting policies, as signalled by the growing share of support placed in the green box, is a desirable trend – as long as support overall does not expand. However, the increasing weight

Note that there is another EU5 expert group dealing with measures to address climate change and the trade system.
of the green box makes it more and more important to look at concerns that have been raised regarding both the general requirement for such measures (“that they have no, or at most minimal, trade-distorting effects or effects on production”) and the specific criteria for individual categories of green box policies. Also, new measures have been introduced, and notified under the green box, that were not yet known when the green box was created.

When it comes to governments’ dealings with AoA rules, a number of deficiencies in the notification process stand out. To be sure, notification requirements introduced under the AoA have greatly improved international transparency of agricultural policies. However, several desiderata remain. In particular, the value of notifications is seriously compromised by frequent late submissions. A pressing issue in green box notifications is the fact that countries are not required to justify the allocation of reported measures to the twelve individual categories of green box policies, based on the specific details of the respective measures.

REGIONAL TRADE AGREEMENTS

The multiplication of preferential trade regimes has become a defining feature of international trade. From 123 regional trade agreements (RTAs) notified to the WTO in 1995, the figure now is 546 (January 2013, counting goods and service separately) of which 354 are in force. New agreements have proliferated, particularly since the mid-2000s, with the Asia-Pacific region taking centre stage in the last few years. While RTAs tended to be effectively regional until the early 2000s, this is not the case anymore, and agreements between partners on different continents have become customary.

A significant share of total world trade is now conducted among members of such preferential arrangements. In agriculture and food, that share is approaching 40%, even larger than in manufactures. Tariff concessions are often significant under RTAs. One study finds that in a sample of 74 RTAs, when tariff concessions are fully phased in the preferential margin is close to ten percentage points. On average over the agreements considered and other things being equal, RTAs were estimated to increase agricultural and food exports between signatories by 32 to 48% when they are fully phased in. Trade impacts are larger on average for agreements between developing countries, and generally speaking for agreements granting higher preferential margins, in particular when the partner’s initial market share is low.

Such impacts are sizeable enough to exert a deep influence upon trade patterns. But the most significant changes may still be coming: recent announcements include negotiations of “mega-regional” (for instance between the EU and the US, or between the EU and Japan) and “minilateral” (like the Trans-Pacific Partnership, now likely to include Japan, and the Regional Comprehensive Economic Partnership, also known as ASEAN-

plus-six) trade agreements which, by their size, would change the broad picture radically. RTAs are often perceived as an alternative to the poor progress in the multilateral arena. RTAs are also driven by a variety of factors which include economic, political and security considerations. Negotiating access to large markets is sometimes seen as easier to engineer at the regional or bilateral level. For large countries, RTAs are a way to overcome the lack of consensus on some particular non-market issues in the WTO, or as vehicles for promoting deeper integration of their economies. In the case of the EU and the US, RTAs are used to promote common rules on investment, competition, trade in services, environment and sometimes labour standards. In agriculture, the main focus is on tariff liberalisation and on several beyond-the-border areas, such as patents, sanitary and phytosanitary measures, animal welfare standards, or mutual recognition of appellations of origins, leading to provisions beyond those agreed under the WTO. In addition to RTAs, there have been some significant changes in non-reciprocal preferential regimes (referred to as Preferential Trade Agreements -PTAs-, in the WTO taxonomy), with potentially significant consequences for WTO negotiations, in particular for those on Special and Differential Treatment. In some cases, non-reciprocal concessions have been reformed so as to make them compatible with WTO rules. Developed countries have also reformed their GSP regimes in different ways. Those countries that signed an RTA have in general been removed from the list of GSP beneficiaries, and some others have been ‘graduated’ or excluded from the preferences either because they were considered as reaching a level of development that no longer justified tariff concessions, or because they had become aggressive competitors for local producers. This increased focus of GSP regimes on ‘those countries most in need’ is indicative of the new perceived status of emerging countries.

CHANGES IN POLICY REGIMES IN MAJOR COUNTRIES

In agriculture, disciplines and commitments applicable in the WTO have not been modified since the Uruguay Round period. However, actual policies kept changing in many countries, sometimes significantly. As far as border protection is concerned, bound tariffs have not changed substantially since the end of the implementation period of the Agreement on Agriculture (end-2000 for developed countries, end-2004 for developing countries), except for new WTO Members. In contrast, applied protection has declined steadily. For the world as whole,
applied MFN duties were cut from an average of 24.6% in 2001 to 18.7% in 2010, and applied duties (including preferential tariffs) from 15.8% to 13.8%. The cut in MFN applied duties was especially steep for countries classified as developing in the WTO, from an average of 31.1% to 23.2%. This is hardly more than a third of their average bound duties (61.3%), and applied tariffs are yet significantly lower (19.8% in 2010). This fact has a crucial importance: it means that any realistic cut in developing countries’ bound duties is unlikely to alter significantly the applied tariff protection. With an average MFN applied rate for agricultural products of less than a third of the bound rate (39.4% vs. 136.1%), India epitomizes this situation, but the issue is similar in nature for Mercosur, where it equally (and more importantly) also concerns non-agricultural products.

Another consequence is that a considerable increase in protectionism is technically possible without infringing current WTO rules: MFN applied duties can be raised up to the level of bound duties, and contingent protection can be used in a variety of ways. While the average applied tariff worldwide in agriculture is around 14 percent, if all WTO Members were to raise their applied tariffs to the maximum (the bound tariffs, except where an RTA applies), average protection would reach 28 percent, i.e. double the current level.

In parallel with declining border protection, measured gaps between domestic and international market prices have decreased in many countries since the mid-1990s. In most developed countries, domestic support as reflected in notifications to the WTO has also declined, at least relative to the value of agricultural production. More significant, in a number of developed countries the structure of support has undergone marked change, with the share of support notified under the green box growing while the share of support outside the green box has declined. The same cannot be said for developing countries and emerging economies. In a number of them, support levels overall have grown, with no significant shift in the structure of support towards less trade distorting forms such as those covered under the green box. At the same time, use of export subsidies by developed countries has declined significantly. Export subsidies granted by the EU, which accounted for around 90% of global expenditure on formal export subsidies in the early 2000s, have almost disappeared, with a planned budget of less than €140 million in 2012 (against more than €10 billion per year in the early 1990s). One could argue that in recent years with high agricultural prices, export restrictions imposed by a number of countries have had a greater influence on market conditions than export subsidies paid by entities such as the EU.

Domestic support notified to the WTO is based on legal concepts and does not necessarily reflect developments in actual support levels as measured by economic analysis. This is particularly the case for market price support, where the WTO definition uses fixed external reference prices, rather than taking the difference between actual domestic and international market prices. Yet, a look at actual support rates as estimated by OECD, expressing the joint effect of border protection and domestic support, confirms the trend of a decline in support rates among major developed countries, while support in major emerging countries has tended to rise (see Figure 2). It is important to take this divergence in support trends between developed and emerging countries into account when assessing the overall global picture of agricultural policy developments.

Depending on future policy trends and outcomes of WTO negotiations it is conceivable that the centre of gravity in agricultural policy support may shift more and more to developing and emerging economies. For example, one study found that application of the parameters suggested in the Doha draft Modalities of December 2008 could mean that allowances (after reduction commitments) for Overall Trade-Distorting Support, including in particular de minimis allowances, might be such that all developing countries taken together could provide 73% of agricultural support in the world, while 27% of all allowed support would remain for developed countries.

![FIGURE 2: Producer Support Estimates 1995-97 and 2010-12, Percent of Gross Farm Receipts](source: OECD (2013).)

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POLICY OPTIONS:

ADAPTING THE WTO AGREEMENT ON AGRICULTURE AND THE SPS AGREEMENT TO THE NEW CHALLENGES

The WTO provisions with the most direct bearing on food and agriculture are those established by the AoA and the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). Obviously, in the Doha negotiations these provisions – in particular those of the AoA – are in the spotlight, and adapting any of them is a politically sensitive matter.

TRADITIONAL ITEMS ON THE NEGOTIATING TABLE OF THE DOHA ROUND

Experiences with the negotiations over the last ten years or so have shown how difficult it is to make progress. This report deliberately does not focus on the 'traditional' items on the negotiating table, such as cuts in tariffs and subsidies, but instead considers options for policies which address the challenges that have emerged since the Doha Round began. However, that focus should not be taken to suggest that the items already on the negotiating table of the Doha Round, covered by the agreed mandate for the negotiations, have become less important. On the contrary, the challenging developments in the world's agriculture and food economy since the beginning of the century have made it more vital that agricultural trade can effectively perform its crucial function of building bridges between countries in deficit and countries in surplus, and that international markets for food and agricultural products can operate efficiently so as to ensure that the world's increasingly scarce resources are used in an optimal way for providing adequate food supplies for a growing and more demanding population. Further progress is needed on all three existing pillars of the AoA.

As far as market access is concerned, a further reduction of tariffs will facilitate integration of domestic markets with international trade and the transmission of price signals. It will thereby contribute to dampening the volatility of international markets that has caused so much concern in recent years. Given that in many countries there is a significant gap between bound and applied tariffs for agricultural products, cuts of tariff bindings will also improve transparency and reliability of trading conditions, in many cases without requiring significant changes in actual policies. The same can be said regarding improvements in the administration of tariff rate quotas (TRQ). There is general recognition of the need to provide scope for protecting fragile domestic markets against sudden upsurges of imports, though the specific parameters for safeguards are still controversial.

Tighter disciplines for domestic support will help to guard against unfair competition and inefficient use of productive resources. At the same time they are needed to make sure that subsidies are not used to negate the intended benefits of tariff cuts. Within the overall area of domestic support, loopholes should be closed that could be used to circumvent the more demanding disciplines on certain types of support. At the same time, there is continued need to provide sufficient scope for policies that aim at providing public goods and improving the conditions for development and economic growth. Agreement on further reductions of both tariffs and domestic support should be facilitated by the changes in market conditions that have occurred in the recent past: with the higher prices now prevailing on international markets for food and agricultural products, the political objections to reducing high tariffs and subsidies should be less pronounced than in the past.

Subsidies distorting export competition have always drawn harsh criticism, and quite rightly so as they constitute a particularly unfair form of competition for markets, setting governments against governments instead of allowing the most cost-effective producers to prevail. The significant decline in export subsidies over the last ten years or so should now make it relatively easy to push for an end of this harmful practice. This is an opportunity to approximate rules for agriculture with manufacturing where export subsidies have been prohibited for decades. At the same time several governments have come to understand that state trading enterprises can create more problems than they solve, and this should facilitate progress in disciplining them more effectively at the multilateral level.

The Doha negotiations on all of these three pillars, and on the huge amount of detailed rules and parameters under them, have
already made much progress, as evidenced by the large amount of agreed matter embodied in the draft Modalities of December 2008. It is worth the best of efforts on the side of all WTO Members to bring these negotiations to a successful conclusion in the near future, in balance with negotiations on all other items covered by the Doha mandate.

Coming to terms with the items already on the negotiating table is even more important as the challenges that have arisen since the Doha Round began also require attention. Policy options that can be considered in that context are discussed in the remainder of this section and in the following sections.

RULES FOR EXPORT TAXES AND RESTRICTIONS

During the long period when global markets in food and agriculture were demand constrained, the need to protect food consumers against policy-driven market fluctuations was not considered a priority issue. In trade negotiations, attention focused on disciplining import barriers and subsidies. Export barriers did figure to some extent in the GATT/WTO, but disciplines were relatively weak and not necessarily taken very seriously in the practice of trade policy making. As the world appears to have embarked on a trend towards a more supply constrained global food market, much more attention is now being paid to export barriers, and quite rightly so. When markets exhibited increased volatility in recent years, a number of major food exporters implemented various forms of export taxes, restrictions and bans. Most observers agree that these export barriers, often introduced rashly and in an ad hoc manner, have contributed significantly to driving international market prices to extreme peaks. In response, calls for introducing more stringent disciplines on export barriers have been voiced in various fora, including the WTO.

Much can be said for the argument that international trade rules should be symmetric, imposing discipline not only on importing countries and exporters who subsidize, to protect competing producers in other parts of the world against depressed prices and shrinking markets, but that disciplines should also apply to exporting countries who discriminate in favour of domestic users by withholding supplies from those in the rest of the world. From this perspective it is welcome that the Doha negotiations have already looked at rules regarding prohibitions and restrictions on food exports. Establishing symmetry between rules for importing and exporting countries should help moving the negotiations forward. It has to be recognized that (as quantitative studies show) other trade measures such as tariff reductions, expansion of import quotas and anticipatory buying by large importers contributed as well to the recent price spikes. However, export disciplines need particular attention. Disciplines on export restrictions should also be of interest to exporting countries considering that an agreement on this topic would provide assurances to importers that may otherwise be tempted to self-insure against potential trade disruptions through increased domestic protection and subsidies.

The Doha draft Modalities of December 2008 include suggestions for making the notification of, and consultations on, export restrictions more effective. The draft text provides for notification within 90 days of the application of an export restriction, including the reasons for such a measure, and periodic reporting to the Committee on Agriculture of the status of the restriction. Such restrictions would "not normally be longer than 12 months" unless an extension were agreed by "affected importing Members". Such requirements, which would not directly impose changes in actual policies, could well be considered as an element of an early agreement. More up-to-date information on export restrictions would benefit the smooth functioning of the markets for food and agricultural products. Such improved transparency will be particularly helpful if it is combined with better information on stock levels, such as that which may emerge through the Agricultural Market Information System (AMIS) in which main producing, importing and exporting countries co-operate with assistance from a secretariat formed by FAO and other international organizations. An option would be to require notification of any new export constraints, including changes in export taxes, to the Rapid Response Forum established under AMIS.

Another option would be to establish a procedure that would serve to identify whether an exporting country is actually in a situation where it has reason to adopt an export restriction in order “to prevent or relieve critical shortages of foodstuffs” as stipulated in GATT Art. XI. As this option would not necessarily require modification to either the GATT or the AoA it could also be considered independently of a conclusion of the Doha negotiations overall.

A step requiring the adoption of new legal language would be to move in the direction of the commitment undertaken by the G20 Agriculture Ministerial 2011 in Paris, i.e. to exclude from any restrictions the shipments destined to serve as food aid to countries in an emergency. In spite of the G20 commitment to bring this option to the WTO it did not make its way there. If multilateral agreement cannot be found to adopt a provision along these lines, it could become the basis for a plurilateral arrangement of the ‘willing’, open to future accession by other countries.

Establishing symmetry between rules for importing and exporting countries should help moving the negotiations forward.
A more demanding option would be to include export taxes explicitly in any new rules on barriers to food exports. Though it can be argued that export taxes are, under certain conditions, covered by GATT and AoA provisions on export restrictions, specific rules could help to make sure that export taxes are not used to circumvent disciplines on export restrictions. A possibility to be considered would be to bind rates of export taxes on food (and possibly other products), in much the same way as tariffs are bound. This option could also include the possibility of introducing export tax rate quotas that would mirror the tariff rate quotas used so frequently in agriculture. Quotas could be based on past exports (either a fixed average using a base period or, preferably, a moving average). The in-quota tax could be the average export tax applied in recent years, at no more than an agreed maximum rate. To avoid lengthy negotiations, the above-quota rate of export tax could be constrained to twice the in-quota rate. An approach like this, if combined with effective disciplines on quantitative export restrictions, could greatly enhance transparency and predictability of international food trade in times of scarcity.

**PROVISIONS FOR SUPPORT TO BIOENERGY**

As in the case of barriers to food exports, government support for the production and use of biofuels was not considered much of an issue for international trade relations as long as markets were demand constrained and prices were depressed. After all, when a number of countries began to channel agricultural products into the production of energy this was considered to ease competitive pressure on farmers in the rest of the world. Yet, when global food prices began to rise, placing a growing burden on consumers, support to biofuels appeared in a new light. Not surprisingly it turned out that international trade rules, developed at times when biofuels were virtually non-existent, were not designed to impose effective disciplines on the harm that biofuel support could inflict on food consumers. Hence there are good reasons to consider options for dealing with biofuel support in the WTO.

A first and rather fundamental option would be to create more transparency regarding the types and levels of government support to biofuels. In the WTO, some subsidies to biofuels are notified, either under the Agreement on Subsidies and Countervailing Measures (ASCM) or under the AoA or in both contexts. However, it appears that notifications are far from comprehensive, and where they occur they do not provide sufficient detail to allow an analysis of their trade implications. Transparency would be greatly improved if clear rules were developed as to how and where support to biofuels has to be notified, and which forms of support are to be covered. As far as transparency as such is concerned it should not matter too much whether notifications come under the heading of the ASCM or the AoA.

Considerably more demanding would be an option that aims at establishing effective and comprehensive disciplines on the magnitude and use of support to biofuels. Without doubt this would require some innovation in legal approaches, for example regarding the definition of what constitutes an agricultural product covered by the AoA, and also regarding the treatment of measures such as use mandates as a form of subsidy. Given the close relationship between biofuels and the food and agriculture sector, it might make sense to consider the option of adapting existing rules such that biofuel support falls under the realm of the AoA. Introducing disciplines for support to biofuels under the AoA would be well in line with the suggestion to establish constraints on product-specific support as foreseen in the December 2008 draft Modalities.

Yet, if the intention were to place effective constraints on the extent to which biofuels support can distort markets, with a particular view on implications for food consumers, then a wholly new approach would have to be developed.

**WEERE NOT DESIGNED TO IMPPOSE EFFECTIVE DISCIPLINES ON THE HARM THAT BIOFUEL SUPPORT COULD INFlict ON FOOD CONSUMERS**

Including support to biofuels under the AoA commitments on trade distorting domestic support would not only require the definition of new base commitments, it would also not fall into line with the nature of existing AoA commitments since in many cases support to biofuels benefits not only domestic farmers but producers in the rest of the world as well. One option that could be considered is to introduce a wholly new category of commitments, specifically covering support to biofuels, aiming at constraints on the burden that is placed on food consumers, rather than the benefits to farmers.

**GREEN BOX RULES**

The creation of the green box was a particularly innovative achievement of the AoA, and it has arguably been a major factor providing incentives to reform agricultural policies in several countries, in the direction of more decoupled forms of support to farmers. Yet, the criteria to be met by policies so they can be brought under the shelter of the green box are also among the most hotly debated elements of the AoA, and have figured prominently in the Doha negotiations. In the Framework Agreement of 2004 (also known as the July package), reaffirmed by the Hong Kong WTO Ministerial, a review and clarification of the green box was mandated. The subject matter is so complex, both economically and legally,
that it cannot be discussed here in the detail that might be desirable. A few brief comments must suffice.

The core of the green box, and the justification for exempting the respective policies from reduction commitments, is “the fundamental requirement that they have no, or at most minimal, trade-distorting effects or effects on production” and the criterion that “the support in question should not have the effect of providing price support to producers”. It is tempting to suggest that options should be explored that might strengthen these stipulations. However, the question of whether a given measure has more than a minimal effect on trade and production is an empirical issue that cannot, in general, be assessed ex ante, but only ex post, and even then economic analysis has the great difficulty in providing results that are sufficiently unequivocal to establish a basis for legally binding commitments. Another option is to reconsider the relationship between that fundamental requirement and the policy-specific criteria to be met by the individual categories of measures included in the green box, with a view to shifting the burden of effective definition more towards sharpened policy-specific criteria.

The draft Modalities of 2008 contain a number of suggested refinements to policy-specific criteria, typically derived from experiences made with implementing the green box since the Uruguay Round. One of the suggested changes that appears quite important is that the basis of certain payments should be a “fixed and unchanging historical base period”. An option that could be considered is to seek early agreement on such modifications, most of which would appear to do no more than clarify the criteria for future policy pursuit, without requiring changes in existing programmes.

Other elements suggested in the draft Modalities would provide somewhat broader scope for measures that are particularly relevant for certain groups of countries. An example of the latter kind is the suggested implementation of public stockholding for food security purposes in developing countries such that acquisition of stocks provides support to low-income or resource-poor farmers. The holding of food stocks, if targeted to emergency situations and poor food consumers, is certainly an important option for food security policies in developing countries, which is the reason why this element was included in the green box. Whether it is helpful for the rational pursuit of an overall set of well-designed policies to establish a direct link between this consumer-oriented policy and support for certain groups of producers is a different matter which may require more thinking.

At a different level, it would appear sensible to improve transparency and help monitoring policy development, by requiring that notifications provide more detail on implementation of the measures to be covered by the green box, so that their potential trade impact can be more effectively assessed, and their green box status can be challenged if necessary.

A more fundamental question is whether the green box criteria should be amended such that governments are more effectively guided in the direction of policies that can be genuinely considered to provide public goods, and in particular strengthen sustainable development. Views continue to differ on whether incentives for ‘good policies’ are well placed in rules for international trade, or whether the sole purpose of the multilateral trade regime is to minimize interference with interests of other countries. It would appear highly desirable to clarify this fundamental issue and hence whether the primary aim of updating the green box rules should remain to clarify and sharpen the policy-specific criteria such that trade impacts are avoided as much as possible, or whether a broader approach should be developed that supports policies which aim to support sustainable development, environmental improvement and responses to climate change. It will remain a challenge to identify an acceptable balance between legitimate interests in pursuing policies that provide desirable public goods on the one hand, and the avoidance of trade impacts as far as feasible on the other hand. Two examples may illustrate the nature of that challenge.

First, some environmental and climate change related programmes may require production of certain outputs so as to achieve their aims, e.g. regarding biodiversity or climate change mitigation. The question then is whether the output produced under such programmes should be considered to be in conflict with the requirement that they have no, or at most minimal, effects on trade. Second, in the context of food security policies, where governments of developing countries consider making foodstuffs available to poor consumers at prices below those at which they were acquired, an agreement has to be found as to whether any potential trade implications are to be considered acceptable. In both cases a political decision is required in the WTO regarding the priority to be assigned to the public goods provided versus any potential trade implications.

Incidentally, a potential reverse trade impact may also be relevant. Many environmental programmes may have a negative impact on output, set-aside of agricultural land being the most obvious case. In times of rising food prices such policies may place a burden on poor food consumers. The issue then is whether multilateral disciplines should be placed on such policies, and whether the green box is the appropriate home for any such provision.
Finally, it may actually be time to consider one significant departure from a fundamental element of the philosophy underlying the green box. The green box was created to leave space for certain benign policies, without quantitative constraints. The economic logic was that there are policies whose trade impact is so small that there is no need to be concerned about potential negative implications for trading partners. Two reasons may justify re-consideration of that philosophy. First, research has shown that even the most apparently ‘decoupled’ policies still tend to have some trade impact. Second, given the large sums that are spent on green box policies in some parts of the world, even a small trade impact per dollar may no longer be small if multiplied by a large number of dollars. With these two considerations in mind, the question is increasingly asked whether constraints on the overall amount of support spent under the green box should not be introduced, in order to guard against excessive use of the policy space provided by the green box.

In considering that question it would appear sensible to make a distinction between two rather different broad categories of policies covered by the green box. On the one hand there are measures that aim at providing public goods, such as environmental improvement, mitigation of climate change, improvement of infrastructure or training and extension. On the other hand there are measures primarily aiming at providing income support to farmers. The rationale for including public good provision in the green box, and hence for not constraining expenditure on such measures, is that governments need to have the opportunity to do their job – normally only governments can provide public goods. Even though it cannot be completely excluded that some limited production and trade impacts may result from these policies, as discussed above, there would appear to be a good reason to continue to exempt such measures from international expenditure discipline, as long as they respect the relevant policy specific criteria.

Farm income support, on the other hand, is a different matter. It may have a role to play as an ingredient of policy reform, where the income impacts of cuts in other, more market and trade distorting measures are compensated through more decoupled forms of support. Ideally, such compensation should be time-limited, providing farmers with breathing space for them to adjust to a changed policy environment. It is hard to argue that specific farm income support (as opposed to general social protection regimes) should be provided on a permanent basis. Hence there may be a point in considering whether at some point a constraint should be introduced on that type of green box support.

It would not appear sensible to make any such constraints subject to demanding reduction commitments because that would eliminate the whole rationale underlying the green box. Indeed, it may be sufficient to make sure that spending on the programmes concerned cannot increase without limit. Some form of a constraint on green box subsidies targeting farm income support may both allay concerns about further ‘box shifting’ and improve the balance between countries where governments have good access to fiscal revenues and those where that is not the case.

**PROVISIONS FOR SMALLHOLDERS AND THEIR ACCESS TO MARKETS**

While governments may be well advised not to impose a particular view of a ‘desirable’ farm size structure on Paying particular attention to the development needs of smallholders in least-developed countries is, therefore, a priority for policies aimed at fostering growth in agriculture as well as overcoming poverty and food insecurity. Their agricultural sectors, there is no doubt that in many developing countries, particularly the poorest countries, smallholders will for quite some time form the core of agriculture. At the same time one must keep in mind that there is widespread poverty, and hence food insecurity, in rural areas of low income developing countries, not least among smallholders.

**Many smallholders in low income countries are still only marginally integrated into markets that might be affected by tariff cuts.**

While this is generally accepted, there is less agreement when it comes to translating this priority into international rules for trade policy. In particular, views differ regarding the most effective balance between border protection and domestic support. Smallholders, often operating at the margin of survival, have a limited capacity to absorb shocks, which argues for sparing them sudden changes in market conditions. In concrete terms this can be interpreted as speaking in favour of allowing more time for reductions in border protection, and providing space for buffering extreme volatility in international markets.

Many smallholders in low income countries are still only marginally integrated into markets that might be affected by tariff cuts. One also needs to take into account the fact that many smallholders are net food consumers (producing less than their families’ needs) and therefore lose rather than benefit from high food prices. At the same time, general protection and subsidies of the type that are disciplined under the AoA tend to favour larger farmers, tilting competition against smaller producers. This argues for emphasising domestic developmental measures in support of smallholders. Based on practical experience and empirical research the insight has gained ground that provision of public goods that create a positive enabling environment is the most effective way of supporting the development of agriculture, including smallholders. Improvement of infrastructure in its many dimensions, including transport, market institutions and communication, helps them gain access to markets, including international trade. Health services, water supply and sewage, agricultural research
and development, education, extension services and other investments in ‘human capital’ improve the capacity of farmers and their families to make full use of their potential, to raise agricultural productivity and to enhance farm profitability. Land registration and effective property titles underpin incentives to invest. And there are many more such elements of the enabling environment around agriculture that can foster the development of agriculture and rural areas more generally. Leaving sufficient scope for such measures, including in the green box, would appear to be an appropriate way of supporting efforts by developing country governments to improve the lot of smallholders and agriculture overall.

TRANSPARENCY PROVISIONS

Transparency is essential to the smooth functioning of a trade system. In the food and agriculture sector, transparency has improved markedly since the Uruguay Round, as a result of the notification requirements embedded in the AoA and the monitoring activities conducted by the Committee on Agriculture. However, as noted above, further significant improvements are desirable.

The importance of improving the monitoring and surveillance of agricultural trade policies has been recognized in the Doha Round. The draft Modalities document of December 2008 contains suggestions for a markedly extended and strengthened set of provisions that could govern the way Members notify their policies in future and how the Agriculture Committee monitors compliance with commitments (Annex M of the draft Modalities, suggesting a revised Article 18 of the AoA). The many amendments proposed include requirements to notify: the administration of tariff quota commitments and imports entering under them; use of special safeguard measures, triggers and remedies; details of policy measures claimed to qualify for the green box (and the blue box and certain support measures in developing countries); and export prohibitions and restrictions. The proposed text also includes provisions for a strengthened surveillance process and for assistance to developing countries.

The need to improve transparency in the area of agricultural trade and policy has been widely recognized. The opportunity for making some constructive changes has led to the negotiation of revised provisions in the AoA as part of the Doha Round. As the eventual fate of the Round is still in doubt there is a case for taking up some of these issues as a part of an early agreement.

The most immediate improvement to transparency would follow from the adoption of the proposals in Annex M of the Doha Draft Modalities. Though negotiated as a part of a package, there would seem to be no reason why it should not stand alone. The proposal does not involve changes in national regulations and would not seem to favour any country over others. It would merely replace the somewhat vague provisions in the current AoA with requirements that are more detailed. As foreseen in the draft Modalities, resources could be made available for those developing countries that face difficulties in preparing notifications, though there could be a side-benefit to those countries of having to describe policy measures in an agreed format.

A similar action that would require little in the way of a formal negotiation would be to expand somewhat the amount of information included in the Trade Policy Reviews. This would seem to be preferable to initiating a separate review for agricultural policy as was suggested by the G-20 in 2007.

More radical would be the introduction of new incentives for compliance with monitoring requirements and respect of deadlines. These could take the form of assumptions of eligibility for benefits (such as excluding green box and Development Programs from AMS) until eligibility has been affirmed. This would certainly require more than just a simple monitoring decision and change the legal interpretation of the obligations to notify. It would in effect reverse the current assumption of ‘compliant unless successfully challenged’. But it would also introduce the potentially useful concept that a specific ‘benefit’ claimed by a Member has to be backed up with evidence of eligibility.

SPS MATTERS

As tariffs applied in agricultural trade have declined in recent decades, non-tariff measures have gained in importance – some would argue as a substitute for tariff protection.

As tariffs applied in agricultural trade have declined in recent decades (see above, Section 2), non-tariff measures (NTM) have gained in importance – some would argue as a (partial) substitute for tariff protection. In trade with agricultural and food products, sanitary and phytosanitary measures are the most prominent NTM. Their use is regulated through the SPS Agreement. The Doha mandate does not foresee negotiations to modify the SPS Agreement, but requests work on implementation issues, including those related to the SPS Agreement. There are indeed a number of implementation issues, including some that go beyond those considered explicitly in the Doha context, that could, if dealt with successfully, improve the functioning of the SPS Agreement.

Among these issues is a more effective notification system that would improve transparency, among others through the provision of more detailed information on the measures notified. Also, when an import approval request is refused on SPS grounds, more timely and substantive responses to the request would help to find ways of overcoming difficulties.
One of the key aims of the SPS Agreement is greater harmonization of health and safety standards. A major improvement in this regard would be more ample use of international standards in countries’ SPS regimes, as advocated by the SPS Agreement. So far, use of international standards is fairly limited, with substantial variation across countries, products and regulatory objectives. Developed countries have tended to use international standards less than developing countries. Better, more comprehensive and more accurate information on the extent to which individual countries have adopted international standards, and publication of that information, might pave the way towards more intensive use of international standards. That objective might also be served if countries would, in their notifications of SPS measures to the WTO, have to explain conclusively why they do not apply international standards when that is the case. More and better information on the relationship between standards applied by individual countries and existing international standards would facilitate efforts of exporting countries, in particular developing countries, to meet SPS standards and thus gain access to markets in importing countries. More analysis of the extent to which application of international standards affects trade flows would also be useful. Where international standards do not exist, as is the case for many products and SPS issues, development of standards by the respective international organisations is highly desirable.

Because of capacity constraints, developing countries face particular difficulties in establishing effective SPS regimes. Assistance to build the capacity to implement international SPS standard, guidelines and recommendations is urgently needed, not only for trade-related issues but also to improve the quality of domestically produced food in developing countries and to protect their productive capacity from pests and diseases. It is desirable to support and strengthen the Standards and Trade Development Facility, a partnership including FAO, the World Organisation for Animal Health, the World Bank, the World Health Organisation, and the WTO.

The fact that public international standards do not yet exist in many cases, and that their development often takes a long time, may be one of the reasons why private standards have become a major element in international food trade. Other reasons for the rapid spread of private standards are benefits for the procurement and marketing efforts of the companies using them. While private standards may also improve transparency for consumers, their proliferation can make life difficult for producers in exporting countries, above all those in developing countries. That is particularly the case where multiple standards co-exist that require different product specifications. It would be useful to clarify the relationship between private standards and public standards. In the WTO, the legal status of private standards remains vague and should be clarified. For national governments, there are issues regarding the priority to be given to public versus private standards, depending on the products and regulatory objectives involved.

**Policy Options:**

**Preparing WTO Rules for the Future**

Matters relating to agriculture and food have a rather special status in the WTO. On the one hand there is the specific Agreement on Agriculture, establishing rules and commitments that apply only to agriculture, even though the subject matter covered (market access, subsidies and export competition) is of a general nature and therefore regulated for non-agricultural goods in other parts of the WTO’s rulebook. On the other hand all general provisions of the WTO also apply to agricultural and food products (except where the AoA overrides them). This dichotomy is likely to continue for some time as it will take quite a while to progress from the GATT’s relatively loose way of treating agriculture to a full inclusion of agricultural and food products into the provisions for all other goods. The particular importance of agricultural products for livelihoods in developing countries, and of food as a basic necessity for everybody, mean that there will probably always be some specific provisions for food and agriculture in the WTO framework, even if one day there would no longer be a need for a separate Agreement on Agriculture.

At the same time, some of the general rules, applying with equal force to agriculture, have particular significance for the food and agriculture sector, and may require specific attention when preparing for the new challenges facing the sector. In
that context, this report will consider only two sets of issues, i.e. matters relating to climate change and the environment, and issues pertaining to RTAs. Both sets of issues are discussed extensively by other E15 expert groups, thus a few brief observations from the specific perspective of food and agriculture must suffice here.

**THE WTO AND POLICIES ADDRESSING CLIMATE CHANGE AND ENVIRONMENT**

Growing concerns about climate change and the environment have led many governments to design policies that lead farmers, and sometimes also consumers, in the direction of engaging in practices that are more friendly to climate and the environment, and developing approaches that make agricultural production more resilient to the impacts of climate change. Where subsidies are involved, they are governed by the respective rules in the AoA, in particular those in the green box as discussed above. Where these policies come in the form of domestic taxes and regulations, they are as such unlikely to cause tensions in the trading system as they do not impose a burden on foreign producers. However, there is likely to be a growing tendency to underpin restrictive domestic policies (taxes, regulations) through measures that operate at the border. As far as climate-related policies are concerned, the inclination to complement restrictive domestic measures by trade-related instruments is primarily motivated by fears of ‘carbon leakage’ (production shifts to countries where GHG emission standards are less demanding). In policies addressing the environment or animal welfare, equivalent concerns play a role. In any case, where policies operating at the border come into play, general WTO rules are relevant.

Political pressures to complement restrictive domestic measures by border policies tend to be particularly pronounced in the agricultural sector, above all in developed countries. Through a long history of protective agricultural policies, farmers are used to being supported. Once restrictive measures are imposed on them, such as taxes or requirements to engage in practices that are friendly to climate, the environment or animals, they complain about the negative impact on their international competitiveness. Pointing to the ‘carbon leakage’ phenomenon is an argument readily used to argue for keeping non-complying products out of the domestic market – and that argument carries some weight as it is fundamentally to the point.

Two categories of policy measures applied at the border are particularly relevant in this context. Border tax adjustments can be considered to offset a cost disadvantage of domestic producers resulting from measures relating to climate or the environment. Alternatively, standards imposed on domestic producers for such purposes could be extended to imported products. In both cases, current WTO rules, and their interpretation in dispute cases, leave some ambiguity that makes it difficult to design appropriate policy measures in this domain that are safe from legal challenge in disputes. Border tax adjustments are consistent with WTO rules, but their implementation can cause problems and could be challenged on the basis of a violation of the non-discrimination principle of the GATT, both relative to domestic producers and regarding equal treatment of foreign suppliers. In both cases, the legal issue of ‘like’ products can cause headaches. When it comes to climate and environmental policies, what is relevant is typically not the characteristic of the product traded, but the nature of emissions during its production. This raises the issue of whether differential treatment based on processes and production methods (PPM) is permitted, and, if so, under what conditions. Difficult empirical issues may also be involved in estimating cost differences. Moreover, where the domestic measure is a regulation rather than a tax, it is not necessarily clear whether provisions for border tax adjustment are applicable at all. Thus, the requirements for an actual application of border tax adjustments are difficult to judge.

Application of domestic standards related to the protection of climate and the environment raises similar issues. It also brings into play the exceptions of GATT...
Article XX, which may allow the application of otherwise not permissible border measures under certain conditions, and which has been cited in a number of disputes on environmental policies. This GATT provision could potentially also underpin the introduction of border tax adjustments. Another issue results if cap-and-trade regimes were to be applied broadly in agriculture. Is the free allocation of emission permits to domestic producers a subsidy? Does that depend on the generosity of the allocations?

In short, the growing importance attributed to agricultural policies related to climate change and protection of the environment makes it desirable to clarify the conditions under which the WTO permits the use of border measures designed to prevent trade from undermining the effectiveness (and political acceptability) of domestic policies in this domain, i.e. to avoid ‘carbon leakage’ and equivalent impacts.

DEALING WITH AGRICULTURE IN REGIONAL TRADE AGREEMENTS

The continuing proliferation of regional trade agreements (RTAs), the resulting implications for the multilateral trade system, and policy options that might help building stronger bridges between the WTO and RTAs are the subject of a different E15 expert group. The present report can, therefore, limit itself to a few brief comments from the specific perspective of food and agriculture.

In nearly all negotiations on the establishment of an RTA, agriculture causes problems because of the political sensitivity of the sector. The GATT requirement that import barriers within an RTA should be eliminated on "substantially all the trade" has not been taken literally in the food and agriculture sector, where sensitive goods were often either completely excluded from liberalization or, now more typical, subject to limited tariff cuts, often complemented by tariff rate quotas. Yet, even in agriculture, countries have shown willingness in RTA negotiations to engage in tariff reductions beyond what they were prepared to agree in multilateral negotiations. As far as export subsidies are concerned, many RTAs go beyond the reduction commitments under the AoA, in some cases to the point of requiring elimination of all export subsidies in bilateral trade. Domestic support in agriculture, on the other hand, is typically not specifically constrained in RTAs.

In a growing number of RTAs, even the provisions relating to agriculture have the character of ‘WTO plus’ arrangements. For example, in a number of cases the use of export taxes and restrictions in bilateral trade is restricted more stringently than under the WTO. Also, many RTAs go beyond the WTO’s SPS Agreement and contain commitments and procedures that are intended to overcome bilateral issues in trade with food and agricultural products more effectively than the multilateral rules.

By their very nature, RTAs undermine the principle of non-discrimination that is so fundamental to the multilateral trade regime. While trade within an RTA may be enhanced, trade with third countries can be diverted. However, empirical analyses tend to show that in agriculture the trade creation effect has often been more substantial than trade diversion. In terms of political dynamics, market opening within an RTA can act as a training ground for more intensive integration into international trade – an implication that might be of particular relevance for developing countries whose food and agricultural sectors are still at an early stage of market development. RTAs among neighbouring countries can also contribute to reducing price volatility and improving food security if they effectively establish closer market links between regions that have a deficit and those that have a surplus in food – a situation that is particularly relevant in Africa.

In the Doha negotiations, where RTA issues are dealt with by the Negotiating Group on Rules, not much progress has so far been made in this area. From the perspective of food and agriculture, two elements could be considered. First, it would make sense to clarify and strengthen the "substantially all the trade" rule, so as to provide more effective guidance to negotiations on the food and agriculture chapter of future RTAs. Second, encouragement of the ‘WTO plus’ approach might, in an indirect but potentially effective way, support the future development of rules for multilateral trade, not the least in the domain of SPS matters.
Trade is a powerful engine to improve food security. In a direct way it serves to supply deficit countries with the food needed. As developing countries on aggregate exhibit a growing demand for food imports, they will have a strong interest in making sure that food trade can flow freely to them. In an indirect way trade can improve food security by promoting economic growth, the creation of jobs and the rising incomes needed to reduce poverty. However, in addition to fostering a well functioning and fair trading regime, the international community can also engage in other activities that can improve food security. Some of them will be considered here.

Creating More Market Transparency

Global food security is under serious stress when the tide of market developments suddenly turns, prices explode and importing countries face unexpected difficulties obtaining access to supplies. Market transparency, by allowing governments and private agents to prepare for changing market conditions, can greatly help to avoid such situations. Following the experiences with recent food price spikes, the international community is engaged in efforts to improve information on market developments. As initiated by the 2011 Agricultural Ministerial of the G20, a new international agricultural market information system (AMIS) for major food crops has been created and is in the process of developing its procedures and approaches. Housed in the FAO’s headquarters in Rome, it is supported by a number of international organizations. This is a highly welcome development that is worthy of full support from all sides.

The effective functioning of AMIS depends critically on the willingness and capacity of all nations to supply the system with comprehensive, timely and accurate data. Of particular importance are data on stockholding, both public and private. Statistics on stockholding a notoriously deficient in many countries, or are not being made available publicly. Governments must get their act together and provide this crucial data, including information on stock levels on farms and in commercial firms. The private sector needs to understand that it has a serious responsibility to provide adequate data. A firm commitment by as many countries as possible to co-operate closely with AMIS and to make all necessary data fully available could make an important contribution to strengthening global food security through improved transparency. The Rapid Response Forum, consisting of Senior Officials from countries participating in AMIS, offers the opportunity to exchange information on critical market developments and discuss appropriate policy responses.

Support for Emergency Reserves

Attempts at taming volatility on global food markets through internationally agreed buffer stocks or similar arrangements have failed miserably in the past. Large-scale national stock policies are equally ineffective in dampening price fluctuations on domestic markets, and their cost-benefit ratio is highly doubtful. Targeted humanitarian emergency stocks of food, though, are a different matter. Their purpose is, as implicit in the term ‘emergency’, not to achieve greater price stability on markets, but to guard against a breakdown of physical supplies and the resulting serious threat to food security. Supplies can break down physically for a number of reasons, including warfare, natural catastrophes, interruption of transport channels, or export bans imposed by traditional suppliers. In situations of this sort, economic hedges such as futures contracts don’t help. The only effective remedy to guard against a breakdown of physical supplies is stockholding, preferably not too far away from where the food is needed.

The size of such emergency stocks can be limited as alternative sources of supplies can typically be mustered after a while. Also, not all of the population in the region concerned has to be catered for as some pipeline supplies will normally still be available, though they will tend to come on the market only at rapidly surging prices. It is the poor who suffer extremely in a situation like that, and they should be the target population for emergency reserves. Depending on conditions in the territory concerned, emergency stocks may be most effective either at the national or at the regional level.

Designing, setting up and maintaining emergency reserves is costly. Also, systems must be created and implemented that serve to distribute food from the reserve promptly, efficiently and in a fair manner to the needy. All this is costly. The
international community can help to improve food security in times of crisis by supporting the establishment of emergency humanitarian food reserves.

**INTERNATIONAL SUPPORT FOR SOCIAL SAFETY NETS**

Risk management has always been an important issue for farmers, particularly in times of ample supplies and depressed prices of agricultural commodities. As food markets show more evident signs of scarcity, risk management for consumers must be given more attention. For high-income families, this is not too much of an issue as for them food expenditure is only a fraction of their overall budget. The livelihood of poor families, though, who may spend 70% or more of their income on food, is seriously threatened when food prices suddenly explode. Managing that risk should be considered one of the most important elements of any strategy to improve global food security. Social safety nets are an effective approach to managing risks for vulnerable people, including the risk of rocketing food prices. They serve to make purchasing power available to those in need. Several variants of design have been used and tested, and overall experiences are positive. It is a difficult, but manageable task to develop an appropriate mechanism, to achieve careful targeting of the needy, to avoid distortions of incentives, and to secure effective implementation. The many practical experiences gained in various parts of the world provide useful guidance. Where the focus is on managing risks of food security, several alternative approaches can be considered. A policy of global food stamps is one, worthy of particular attention.

Establishing and financing social safety nets, including the institutional and physical infrastructure required for their successful operation, is a demanding task for governments of developing countries, and funding the operation of a safety net in a potentially extended period where protection against exploding food prices is needed may well be beyond a government’s capacity. International assistance for both the design and the funding of social safety nets can make a helpful contribution to improving food security.

**FINANCIAL SOLIDARITY**

In response to traumatic experiences of recent years, the international community has resolved to intensify efforts to improve food security in poor countries. Several avenues for progress in this direction are being explored, and some are already in the process of being implemented, including some elements of the nature discussed in this report. Several countries have pledged to make financial contributions to underpin the measures considered. Indeed, implementing projects such as emergency reserves or social safety nets requires substantial financial investments, as does support for overcoming rural poverty through strengthened agricultural developments, in particular among smallholders. Mitigation of, and adaptation to, climate change requires additional resources that many developing countries find difficult to muster. What is needed now is a framework that secures sustainability of such efforts.

Experiences of the past, when a somewhat similar situation with extremely high food prices on international markets in the early 1970s caused grave concerns regarding world food security, must not be repeated. At that time, all manner of initiatives were launched, and larger funds for development assistance to agriculture were made available. The share of agriculture (and forestry and fisheries) in total Official Development Assistance (ODA), which had been in the order of magnitude of 7% before, reached a peak of around 20% in the early 1980s. However, when the situation on world food markets calmed down again, the international community moved on to other issues, and the share of agriculture in ODA declined, to less than 5% in the early 2000s (see Figure 3). It would be a tragedy if this time around the resolve to do more for agriculture and food security in poor countries were again to fade away as time goes on.

It is also advisable to make sure that funds made available in response to recent experiences are additional to development assistance already planned. There is a tendency to engage in multiple earmarking of a given financial flow. Thus it would be desirable to create a new financial instrument that is clearly separate from other forms of development assistance and that is related to the trade issues discussed in this report.

One option that could possibly achieve this might be the creation of a new instrument that would be an expression of financial solidarity, establishing a relationship between what governments in well-off countries do for their farmers on the one hand, and assistance to agriculture and food security in poor countries on the other hand. This instrument would come in the form of an agreement that all developed and emerging countries provide a given amount of financial support for measures aimed at improving food security and fostering agricultural development in developing countries that are in particular need of such support. The agreement would have three major elements, i.e. (i) allocation of the financial contributions to donor countries; (ii) definition of the group of recipient countries; and (iii) choice of a mechanism through which funds are disbursed.

(i) In order to express solidarity with what is done for farmers in the donor countries, financial contributions would be allocated to donor countries in proportion to the magnitude of their domestic support to agriculture. An appropriate indicator of that would be the level of overall trade-distorting domestic support (OTDS) currently provided.
The percentage of OTDS to be contributed to the new instrument would have to be agreed in negotiations. Currently, total ODA to agriculture is in the order of magnitude of USD 9 billion. OTDS currently provided to agriculture in all developed and emerging countries is probably in the order of magnitude of USD 200 billion. Thus, contributions of 1% of OTDS in each donor country could provide new funds for support to agriculture and food security in the target countries that would allow to expand ODA to agriculture by around one quarter.

(ii) Recipients in particular need are countries with low levels of income that have difficulties with providing their poverty-stricken population with sufficient food, and hence where food insecurity is prevalent. A list of such countries would have to be established in the course of the negotiations, based on agreed quantifiable criteria.

(iii) As the WTO is not geared to implementing development projects, a different institution would have to be chosen for disbursing the funds under this solidarity instrument, based on relevant experience and track record. Projects to be financed could be identified in accordance with a set of guidelines to be agreed in the context of establishing this new instrument. Measures that contribute to improving food security should receive priority attention.

An instrument of such financial solidarity with countries in need of improving food security would be a rather innovative approach. It would constitute a direct response to one of the biggest challenges that have emerged in the world’s food and agriculture sector in recent years.

In the Doha negotiations on agriculture, use of the concept of OTDS is being considered as an element of domestic support commitments, as reflected in the Draft Modalities of December 2008. OTDS would comprise all domestic support outside the green box (and except support for agricultural and rural development in developing countries as defined in AoA Art. 6.2). OTDS commitments would become applicable only once the Doha negotiations are concluded, but there is no reason why the concept as such could not already be used as a statistical yardstick before the end of the Doha Round.
Fostering higher agricultural productivity, specifically in the least developed countries, is a particularly promising approach to improving living conditions in rural areas, reducing poverty, and improving food security. At the same time it is the most adequate response to the shift from a demand constrained to a supply constrained situation in global agriculture, and to concerns regarding the world’s capacity to feed a growing population. If truly focused on strengthening productivity (rather than artificially supporting output expansion) it is also a way to improve global food security without generating trade distortions. A top priority for the international community should, therefore, be to increase investments in agricultural innovation systems (AIS), with a particular focus on developing countries and in particular smallholder agriculture in the least developed countries.

More can and should be done to strengthen international, regional and national systems of research and development in agriculture as well as extension services, education of farmers and their families, and training activities. More emphasis should be placed on developing technologies well adapted to local conditions, including so-called orphan crops that have received insufficient attention by both public and private research and development. Governments, including those in developing countries, should encourage private investments in research and technology development, including through targeted financial incentives, well-designed public-private partnerships and innovative financing mechanisms for venture capital. Governments of both developed and developing countries as well as international organisations should be encouraged to provide more and reliable financial support to research and innovation, in particular where the private sector is not sufficiently active. Cross-border technology transfer can be enhanced and address transnational issues, including transboundary diseases, climate change and water scarcity. The system of the Consultative Group on International Agricultural Research (CGIAR), with its manifold research centres, has examined and revised its approach recently. It has great potential to engage in research and development, in partnership with national and regional research systems.

Well functioning input markets, including for yield-enhancing inputs such as fertilizers, are an important requirement for providing farmers with access to improved production technologies. Subsidies for such inputs may, as a temporary measure, facilitate adoption of farming systems that increase productivity, but if used on a longer-term basis they are likely to lead to distortions and over-intensification, with consequent negative environmental implications.

A top priority for the international community should, therefore, be to increase investments in agricultural innovation systems (AIS), with a particular focus on developing countries and in particular smallholder agriculture in the least developed countries.

It is therefore important to place the focus on the removal of barriers to the adoption of productivity-enhancing technologies, rather than on the use of input subsidies by developing countries. Secure rights over key production resources, in particular land and water, are a prerequisite for effective incentives to engage in productivity improvement.
CONCLUSIONS:
PRIORITIES AND NEXT STEPS

The present document, looking at new challenges and options for international policy in the field of food and agriculture, has originated from discussions among members of an expert group brought together under the E15 initiative of the International Centre for Trade and Sustainable Development (ICTSD), which joined forces with the International Food and Agriculture Policy Council (IPC) for work on food and agriculture. Members of the expert group are listed in Annex A. Discussions in the expert group and drafting of the present document have greatly benefited from a number of background reports and think pieces, listed in Annex B. The main purpose of work in the expert group was to suggest policy options that can respond to new challenges in the area of food and agriculture that were not yet prominent in the minds of negotiators when the Doha round was launched in 2001. The intention is not to interfere with the ongoing negotiations, nor to suggest modifications of the Doha mandate. The idea is, rather, to consider policy options that may be helpful in responding to new challenges that have become increasingly relevant in the past decade or so, with emphasis on policies targeting trade as well as equitable and sustainable development.

NEW CHALLENGES

A succession of price peaks on international food markets in recent years has highlighted a number of critical factors that have gained growing importance in global agriculture. After a long period of demand constrained conditions on international markets for agricultural products, it appears that markets have turned to become supply constrained. Large scale use of agricultural commodities as feedstocks for the production of bioenergy is a new phenomenon, contributing to the tightening of markets. Tighter markets have induced investors as well as governments of some import-dependent countries to look for new sources of food supplies and to engage in foreign direct investment, including large-scale land acquisitions. Climate change is not only posing new issues for the future of global agriculture, in particular in tropical countries, it is already affecting markets as a growing frequency of extreme weather events intensifies the already pronounced volatility on agricultural markets, as observed so noticeably in recent years. Governments are increasingly looking for ways of responding to climate change and other environmental issues, and trade policy is one of the domains where solutions are sought. A long standing trend towards engagement in bilateral trade deals has accelerated and resulted in a rapidly growing number of RTAs, and in most of them agriculture is less than fully integrated. While all these developments are going on, agricultural policies kept changing in major developed countries, in part in response to the Uruguay Round AoA, but also in line with an evolving paradigm of the primacy of more market oriented approaches. At the same time, agricultural policy support in a number of emerging countries has begun to rise.

PRIORITIES

Priorities for policy orientation are shaped by the most pressing challenges of the time. The changing conditions on agricultural markets since the turn of the century have brought the need to focus on food security to the forefront. Hunger and malnutrition are by no means a new phenomenon. It has long been clear that eradication of poverty, and with it the fight against hunger, must be a top priority for the international community. Yet, the specific food security problems resulting from conditions on international markets for agricultural products have come sharply into focus as a result of the dramatic price peaks in recent years. The international community is now paying renewed attention to the issues surrounding food security – quite rightly so given the overwhelming importance of mitigating the human suffering caused by a lack of sufficient and reliable access to food. Against this background, placing a priority focus on food security is a must for the international community – and it can, at the same time, demonstrate what international trade, and the regime governing it, can constructively do for developing countries.

Placing a priority focus on food security is a must for the international community – and it can, at the same time, demonstrate what international trade, and the regime governing it, can constructively do for developing countries.

Closely related to that top priority is the emphasis that must be placed on agricultural development in developing and emerging countries. Fostering agricultural development on a sustainable basis, with a particular focus on smallholders in the least developed countries, has the double benefit of helping to reduce poverty with its core prevalence in rural areas, and at the same time contributing to raising global food supplies.
While focusing on these priorities there is no need to downplay the importance of improving efficiency through making the best, but also sustainable use of the world’s resources. A strategy of working towards well functioning markets, reducing trade barriers and minimizing policy-induced distortions as well as those resulting from non-competitive behaviour by private operators, can contribute to improving food security and fostering agricultural development as it helps to make food available at the lowest conceivable cost and because it points towards the most effective use of comparative advantages in each country’s agriculture. This is not to say that government policies have no important role to play. Markets and trade can only perform their decisive roles if framework conditions are set appropriately and if urgently needed public goods are made available.

The policy options discussed in this document have been formulated with these priorities in mind. They are presented here in three sets along a time line, i.e. short term, medium term and long term. Allocation of the policy options to these three time horizons is based on two criteria, i.e. urgency of the subject matter and anticipated time needed to consider, and find agreement on, the respective policy option.

**OPTIONS FOR THE SHORT TERM**

Primary candidates for an early agreement are provisions that governments consider to be urgent, that have already been identified as helpful steps forward in international fora, that do not affect the balance of rights and obligations across WTO Members, and that do not prejudice important elements of the final package of the Doha Round arrangements. Agreement on what to include in an early agreement should be the easier the less any modifications of existing policies are required. On that basis, some of the options suggested in this document qualify for agreement in the short term.

A most direct response to the serious challenge of improving world food security would be a resolve to establish a new instrument of financial solidarity, establishing a relationship between support to agriculture in developed and emerging countries on the one hand, and assistance to developing countries in urgent need of enhancing food security of their poor population on the other hand. Early agreement to work towards an approach of that nature would help to create an atmosphere that facilitates talks on other elements of the global regime for food and agriculture. Serious efforts to find agreement on the desirability of designing such an approach should, therefore, be considered a top priority.

The urgent aim of improving food security in times of high and volatile prices on international markets for agricultural products would be served if more transparency regarding export taxes and restrictions, as well as other trade measures that contributed to the price spike, could be achieved. The respective suggestions contained in the draft Modalities of December 2008, calling, among others, for notification within 90 days of the application of an export restriction, including the reasons for such measures, and periodic reporting to the Committee on Agriculture of the status of the restrictions, should become an element of an early agreement. They would not impose changes in existing policies, but would help importing countries to prepare for a situation of tightening markets. The same can be said for establishing a procedure that would serve to identify whether an exporting country is actually in a situation where it has reason to adopt an export restriction in order “to prevent or relieve critical shortages of foodstuffs” (GATT Art. XI).

Somewhat more demanding would be an agreement to exclude from any restrictions the shipments destined to serve as food aid to countries in an emergency. However, the importance of such an agreement for improved food security is so overwhelmingly obvious that it is worth an attempt at finding agreement in the short term. If multilateral agreement on that option cannot be found, it could become an option for a plurilateral arrangement of the ‘willing’, open to future accession by other countries.

Given the close relationship between the use of agricultural commodities for the production of biofuels on the one hand and food security on the other hand, it would also be desirable to create, as soon as possible, more transparency regarding the types and levels of government support to biofuels. Notification of the respective policies to the WTO, either under the ASCM or the AoA, would again not require any changes in existing policies, but help to gain a better understanding of their nature, and of their potential impact on food markets. Agreement on effective notification procedures is another candidate for an early agreement.

**OPTIONS FOR THE MEDIUM TERM**

More generally, improving transparency of existing policies is a benign approach that helps governments to respond constructively to current developments, without any need to change existing policies and without changing the balance of rights and obligations across countries. Another candidate for an early agreement is, therefore, early adoption of the suggestions for improved monitoring and surveillance contained in Annex M of the draft Modalities of December 2008 (proposing revisions of Article 18 of the AoA). In that context, and as foreseen in Annex M, it could be agreed to make additional resources available for those developing countries that have difficulties preparing the required notifications. In the same context it could be agreed to expand somewhat the information on agricultural policies in the Trade Policy Reviews.

Providing more resources to assist developing countries in implementing provisions of existing arrangements would, more generally, be a positive element of an early agreement.
Another concrete element along those lines is to help developing countries overcome any capacity constraints they face in establishing effective SPS regimes. In particular, assistance to build the capacity to implement international SPS standard, guidelines and recommendations is a desirable route towards better market integration, without interfering with the existing balance of rights and obligations. Resolve to increase support to the Standards and Trade Development Facility is a conceivable element of an early agreement.

In the medium term, policy options can be considered that require more preparation, in both conceptual and negotiating terms. That does not mean that discussion on these options cannot begin right away. However, as these options do not correspond to all criteria outlined above for candidates that might become part of an early agreement, it may well be the case that developing these options may require more time.

Policy options of that nature include the binding of export taxes as a high priority; clarification and amendment of green box rules (including those relating to smallholders in the least developed countries); improved transparency regarding SPS measures; and improvements regarding rules for treatment of agriculture in RTAs.

OPTIONS FOR THE LONGER TERM

While the Doha negotiations continue, thought can already be given to issues that have become increasingly relevant for trade rules under the WTO after the original mandate for the Doha negotiations was agreed. These items could become subjects of a new work programme. Such policy options have been allocated here to the longer term time horizon.

Among the options discussed in the present document, such a work programme should consider introducing new incentives for compliance with monitoring requirements and respect of deadlines such as ineligibility for benefits (e.g. exclusion of green box and Development Programs from constraints on domestic support) until eligibility has been affirmed; introduction, with high priority, of disciplines on support for biofuels; and clarification of the conditions under which the WTO permits border measures designed to prevent carbon leakage and equivalent impacts.

Some of the options considered in this document go beyond trade matters as traditionally dealt with in the WTO, and they might be better dealt with in other international fora. That is in particular the case for a number of measures aiming at more food security, such as improved market transparency; support for emergency reserves; and assistance for strengthened social safety nets. It also applies for the various measures that can foster agricultural productivity. The agricultural component of the G20 is working on these and related issues, supported by the relevant international organisations, including the WTO. It is important that consensus found in the G20 framework feeds directly into those international organizations that, based on their mandate and their operational capacities, can transform desirable policy options into concrete action.

PROCESS

In response to the extraordinary developments in the world’s food and agriculture economy over the last ten years or so, the international community has begun to pay more attention to food security and agricultural issues in developing countries. Action is being considered, and to some extent already implemented, in various fora. In the international trade arena, however, immediate response was complicated by the ongoing negotiations under the Doha agenda. In the interest of a thriving trade regime, and of well functioning markets for food and agricultural products, these negotiations should continue and come to a fruitful conclusion as soon as possible. Placing an explicit focus on food security can help to demonstrate that the international trade regime is sensitive to the needs and interests of the poorest countries. It is, therefore, desirable to reflect on ways in which policy options as those suggested in this report can be considered without retarding in any way the Doha negotiations.

The Bali WTO Ministerial should be used for charting a way forward. Of course one could, in principle, consider including any of the options discussed in this report, in particular those earmarked for the short term, on the agenda for Bali. However, it appears that finding agreement on the Bali agenda is already sufficiently complicated. Success at Bali on at least a minimum package of items is so important for progress in the Doha negotiations, and indeed for the future of the WTO, that the process of preparing for the Bali Ministerial should certainly not be burdened by further complications.

Yet, even though there may be little chance of including additional elements of substance in the agenda for Bali, it would be desirable to make an attempt in the Ministerial to find agreement on further process. At Bali a work programme could be established in which policy options such as those discussed in this report, including work towards a new instrument of financial solidarity, can be considered. Should deliberations under a work programme of this nature result in agreement on any given item before the Doha Round is concluded, that item should, if appropriate, be implemented right away. Alternatively it could be put on the shelf for later inclusion in the Doha agreement. Some elements of the work programme will, though, require more time for thinking and negotiation, and they may reach maturity only after the Doha round is concluded. That might in particular be the case for items as those earmarked here as policy options for the longer term.
Finding agreement on a work programme of this nature would send a positive signal, indicating that the international trade regime has the capacity of responding to acute challenges without diminishing efforts to come to grips with its important ongoing business. The new challenges in food security and agriculture that have emerged since the beginning of this century are worth a serious attempt at going beyond business as usual.

REFERENCES


ANNEX A:
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ANNEX B:
LIST OF BACKGROUND PAPERS


David BLANDFORD (2013) International trade disciplines and policy measures to address climate change mitigation and adaptation in agriculture, ICTSD think piece for the E15 Expert Group on Agriculture, Trade and Food Security Challenges


WHAT IS THE E15 INITIATIVE?

Initiated by ICTSD in 2011, the E15 Initiative is a partnership with the World Economic Forum to create a non-partisan, expert-led multi-stakeholder dialogue to explore options for strengthening the governance and functioning of the multilateral trade system.