


Agricultural Export Restrictions and the WTO

What Options do Policy-Makers Have for Promoting Food Security?

By **Giovanni Anania**
University of Calabria, Italy

ICTSD
International Centre for Trade and Sustainable Development

Issue Paper No. 50

Agricultural Export Restrictions and the WTO

What Options do Policy-Makers Have for Promoting Food Security?

By Giovanni Anania
University of Calabria, Italy

ICTSD

International Centre for Trade and Sustainable Development

Issue Paper 50

Published by

International Centre for Trade and Sustainable Development (ICTSD)
International Environment House 2
7 Chemin de Balexert, 1219 Geneva, Switzerland

Tel: +41 22 917 8492 Fax: +41 22 917 8093
E-mail: ictsd@ictsd.ch Internet: www.ictsd.org

Publisher and Director: Ricardo Meléndez-Ortiz
Programmes Director: Christophe Bellmann
Programme Team: Ammad Bahalim, Jonathan Hepburn

Acknowledgments

This paper has been produced under the ICTSD Programme on Agricultural Trade and Sustainable Development. ICTSD wishes gratefully to acknowledge the support of its core and thematic donors, including: the UK Department for International Development (DFID), the Swedish International Development Cooperation Agency (SIDA); the Netherlands Directorate-General of Development Cooperation (DGIS); the Ministry of Foreign Affairs of Denmark, Danida; the Ministry for Foreign Affairs of Finland; and the Ministry of Foreign Affairs of Norway.

ICTSD is grateful to all those who commented on earlier drafts of the paper, including Oscar Caccavale, Sergey Kiselev, Per Pinstrup Andersen and Peter Timmer.

For more information about ICTSD's Programme on Agricultural Trade and Sustainable Development, visit our website at http://ictsd.org/programmes/agriculture/

ICTSD welcomes feedback and comments on this document. These can be forwarded to Jonathan Hepburn at jhepburn [at] ictsd.ch

Citation: Anania, Giovanni; (2013); *Agricultural Export Restrictions and the WTO: What Options do Policy-Makers Have for Promoting Food Security?*; ICTSD Programme on Agricultural Trade and Sustainable Development; Issue Paper No. 50; International Centre for Trade and Sustainable Development, Geneva, Switzerland, www.ictsd.org.

ISSN 1817 356X

TABLE OF CONTENTS

FOREWORD iv

EXECUTIVE SUMMARY 1

1. INTRODUCTION 4

2. WHY USE EXPORT RESTRICTIONS? WHY NOT? 5

3. THE USE OF EXPORT RESTRICTIONS DURING THE 2007/2008 AND 2010/2011 FOOD PRICE SPIKES 11

4. EXPORT RESTRICTIONS AND WTO AGREEMENTS 16

5. THE NEGOTIATIONS SO FAR FOR A MULTILATERALLY-AGREED STRICTER DISCIPLINE OF EXPORT RESTRICTIONS 20

6. A MULTILATERAL AGREEMENT ON EXPORT RESTRICTIONS: WHAT ARE THE OPTIONS? 26

7. CONCLUSIONS 35

ENDNOTES 38

REFERENCES 42

FOREWORD

Recent episodes of higher and unusually volatile food prices have raised a number of concerns about the role of agricultural export restrictions in raising prices on world markets, in particular due to the impact that such measures may have on food insecure consumers in net food-importing developing countries. At the same time, a number of reasons have been invoked to justify the use of these measures, ranging from domestic food security and revenue collection through to a desire to support the development of particular national industries or economic sub-sectors. As we go to press, controversy is playing out at the WTO talks leading to the Bali Ministerial in connection with the design of food security schemes that, in one way or another, may trigger the use of export restrictions.

Despite persistent uncertainty over a number of important assumptions, analysis from the FAO and OECD suggests that food prices are likely to continue to experience an upward trend over the course of the coming decade, with climate change now confirmed by the IPCCC as a factor that will generate further instability in supply, and hence increase volatility. Furthermore, with stronger links between agricultural and energy markets due to biofuels, and farm productivity growth in developing countries continuing to lag behind population growth and urbanisation, we can expect to see continued debate over how trade policies and rules can respond to food security challenges in the years ahead.

In this paper, Professor Giovanni Anania seeks to provide policy-makers, negotiators and other policy actors with an impartial, evidence-based analysis of the likely trade, food security and development implications of various options for disciplining agricultural export restrictions. As such, we hope that this paper will represent a useful and timely contribution to the debate in this area.

Ricardo Meléndez-Ortiz
Chief Executive, ICTSD

EXECUTIVE SUMMARY

Countries intervening to restrict their exports is not among the main causes of food insecurity of the poor in the developing world. Nevertheless, export restrictions have proved to significantly contribute to exacerbating negative effects on food security when an unexpected, rapid increase of food staple prices occur and a food crisis develops.

Agricultural export restrictions are a policy area which remained 'under regulated' in the Uruguay Round agreement, current provisions are weak and largely ignored. It was not until the severe food price spike of 2007/08 that concerns about export restrictions gained visibility in on-going multilateral negotiations. As we can expect severe price spikes to occur again, having in place an improved, multilaterally agreed regulatory framework to reduce the negative effects of export restrictions on food security would certainly be useful. However, despite the widely shared concern that has emerged in recent years on the need to introduce more stringent WTO disciplines on export restrictions, so far no agreement has been reached.

The paper focuses on export restrictions in agriculture as an emergency measure in reaction to soaring international prices and on the negotiations to better discipline their use. The aim is to contribute to the on-going debate on the introduction of more effective, multilaterally agreed and enforced rules on export restrictions to avoid the additional problems they impose on poor consumers worldwide in the event of a dramatic price surge.

Countries intervening to restrict their exports is not among the main causes of food insecurity of the poor in the developing world. Nevertheless, export restrictions have proved to significantly contribute to exacerbating negative effects on food security when an unexpected, rapid increase of food staple prices occur and a food crisis develops.

Agricultural export restrictions are a policy area which remained 'under regulated' in the Uruguay Round agreement, current provisions are weak and largely ignored. It was not until the severe food price spike of 2007/08 that concerns about export restrictions gained visibility in on-going multilateral negotiations. As we can expect severe price spikes to occur again, having in place an improved, multilaterally agreed regulatory framework to reduce the negative effects of export restrictions on food security would certainly be useful. However, despite the widely shared concern that has emerged in recent years on the need to introduce more stringent WTO disciplines on export restrictions, so far no agreement has been reached.

The paper focuses on export restrictions in agriculture as an emergency measure in reaction to soaring international prices and on the negotiations to better discipline their use. The aim is to contribute to the on-going debate on the introduction of more effective, multilaterally agreed and enforced rules on export restrictions to avoid the additional problems they impose on poor consumers worldwide in the event of a dramatic price surge.

Section six, which constitutes the core of the paper, presents six alternative options for an agreement to modify current disciplines on the use, on a temporary basis, of export restrictions for agricultural goods in the event of suddenly and rapidly soaring international prices. The options are presented in increasing order of 'ambition' in terms of their capacity to limit the policy space currently available to exporting countries. The options are additive, in the sense that, in general, not only they are not mutually exclusive, but, quite the contrary, each of them should include the relevant provisions of the less ambitious ones.

(a) Exempting from the imposition of export restrictions food purchases by international organizations to be distributed as food aid.

Starting from the lowest level of ambition, the first option is an agreement to exempt from the imposition of export restrictions and export taxes food purchased by international organizations, to be distributed on a non-commercial basis for humanitarian purposes. Less restrictive disciplines would call for the prohibition to be imposed on extraordinary export taxes only, rather than on export taxes altogether, and for it to apply only to purchases made by selected international organizations, such as the World Food Program (WFP). Were this option to be implemented, its impact on volume traded and market prices would be marginal. However, the benefits in terms of the amount of food humanitarian organizations would be able to distribute under their relatively rigid financial constraints would be sizeable, as it would prevent the imposition of an additional cost on the purchase and distribution of food for humanitarian purposes when this is needed the most and hardest to access.

(b) Improving the enforceability of existing disciplines.

The second option considered does not modify current WTO disciplines, rather it aims at making them enforceable by clarifying some of the terms used, adopting a transparent, unambiguous language. Under this option export taxes would remain a policy instrument countries may use; only the conditions to allow the use of export restrictions different from a tax would be clarified. This is a necessary condition to make it legally possible to identify agricultural export restrictions different from an export tax contrary to Article XI of GATT 1994, and, subsequently, to challenge such restrictions within the WTO dispute settlement framework. Also the procedures to be followed to implement an export restriction, including consultation and notification obligations, would be strengthened. Implementation rules similar to those suggested under this option are included in several RTAs.

This option would be a significant step forward with respect to the existing discipline, as it would significantly improve the transparency and predictability of the use of export restrictions and, hence, reduce information asymmetries and transaction costs for traders and investors and the uncertainty about world markets as a source of food when this is most needed.

The impact of this option on the quantities traded and prices would be very small, as countries could always opt for an export tax instead of the now more transparent export restrictions. However, the higher institutional cost of introducing export restrictions may deter some countries from implementing export restrictions and reduce the probability of ‘panic’ policy reactions, such as the sudden introduction of an export ban.

(c) Limiting the impact of export taxes and restrictions on world markets, rather than imposing a discipline on export taxes and restrictions directly.

This option involves a completely different approach to disciplining export restrictions. Rather than tightening the discipline on export taxes and quantitative restrictions, it imposes a constraint on their effects on world markets. Current disciplines would be left unchanged (but for what is foreseen in options (a) and (b) above), but their use would be made conditional on exporting country- and product-specific constraints on the volume exported. In order to be allowed to use policies limiting exports, countries will have to maintain unchanged with respect to the recent past the share of domestic production of the specific product which is exported. This approach can be found in some of the initial negotiation proposals on agriculture post-Uruguay Round. Provisions similar to those considered here are included in the North America Free Trade Agreement (NAFTA) and in the

Canada-Costa Rica and Canada-Chile RTAs. This option would make it possible for the exporter to limit the increase in the domestic price, while allowing, at the same time, domestic producers to accrue at least some of the benefits deriving from higher international prices (depending on the policy instrument used). It also has the advantage that it would not need any negotiation of the details defining the exceptional circumstances under which a country could use export restrictions.

(d) Prohibiting the use of export restrictions, other than export taxes, on exports directed towards poor net food importing countries.

This option goes beyond strengthening the existing discipline on export restrictions as it involves making illegal the use of export restrictions on staple food exports directed towards those countries who will be more severely affected, i.e. poor net food importing countries. However, under this option too - as was the case under options (a) and (b) – the use of export taxes would remain unrestricted. The provisions should include the definition of the set of poor net food importing countries whose imports cannot be subject to export restrictions, and the list of the staple foods which would be subject to the prohibition.

(e) Introducing stricter disciplines for export restrictions as well as export taxes.

The ambition of this option lies in the stricter discipline it would impose on the use of export restrictions and on the fact that the same restrictions would now apply to export taxes. However, the provisions under this option would not go as far as imposing limitations on policies restricting exports analogous to those currently imposed on policies which restrict imports. Essentially under this option export restrictions and export taxes would be declared illegal and then exceptions defined under which this prohibition would not apply. The exceptions could relate to the countries that would be allowed to intervene to restrict their exports, the staple food products which cannot be subject to export restrictions and the trigger mechanism which would allow a country to restrict its exports. These exceptions need to be defined in a simple and transparent way, resulting in ‘automatic’ and easy to verify, legally enforceable rules. Export restrictions and taxes would now be treated equally. This approach is common to the vast majority of RTAs.

(f) Full symmetry in regulating import and export restrictions

The feasible option with the highest ambition is that of extending to export restrictions, mutatis mutandis, the provisions for import restrictions currently in place. These provisions should be integrated with those in options (a), (b), (c) and (e) above, as appropriate. Bindings for export taxes and the prohibition on introducing new ones are included in the accession protocols of some of the countries which became members of the WTO since the Uruguay Round as well as in many RTAs. If an agreement were to be found to conclude the Doha Round, this would certainly include revised disciplines for market access; in this case these new provisions would be those to be extended, *mutatis mutandis*, to export restrictions. The effectiveness of this option in expanding volumes traded and reducing price increases in the event of a price rise initially due to an exogenous shock should be expected to be substantial.

Section seven concludes the paper by discussing the likely degree of ambition of an agreement on export restrictions under three alternative scenarios: the conclusion of the Doha Round (‘single undertaking’), an ‘early harvest’ scenario, and a ‘stand alone’ agreement on export restrictions only.

1. INTRODUCTION

The Agreement on agriculture (AoA) which is part of the overall agreement which in 1994 concluded the Uruguay Round of WTO introduced constraints and reduction commitments for policies limiting agricultural imports, while leaving the use of policies limiting agricultural exports very weakly regulated. At a time characterized by low and declining prices in real terms this was not perceived as a major pressing matter. In fact, at the time it was difficult to conceive of any good reasons why a country would intervene to restrict its agricultural exports. When the downward trend halted and prices started to rise slowly, some of the importers pointed to the need to introduce more stringent WTO rules for export restrictions, but it was not until the severe food price spike of 2007/2008 that the issue gained visibility in the arena of multilateral negotiations. The reaction to the rapidly soaring international prices by countries intervening to reduce their exports to limit the transmission of the inflationary process to domestic prices has been identified as a main factor exacerbating the upward dynamic of prices in international markets. This further aggravated the already severe consequences of high prices for the food security of the poor in the developing world. In addition, a domino effect developed, with most countries subsequently intervening, exporters to reduce exports and importers to facilitate imports. These interventions partially offset each other, making it impossible for countries to reach the expected protection of domestic consumers they were trying to achieve. At this point many realized that a collectively coordinated action was perhaps a better solution for all.

However, despite a diffuse consensus on the need to introduce more stringent WTO disciplines of export restrictions, no agreement has been reached so far. From past experience we can expect severe price spikes to occur again. In such an event, having in place a multilaterally agreed improved regulatory framework to reduce the negative effects of export restrictions on food security would certainly be useful.

The paper focuses on export restrictions in agriculture as an emergency measure in reaction to soaring international prices and on the negotiations to introduce more effective multilaterally agreed and enforced rules on their use. The aim is to contribute to the on-going debate by discussing the options available to countries for a mutually acceptable solution to avoid the additional problems export restrictions impose on poor consumers worldwide in the event of a severe price surge.

The rest of the paper is structured in six sections. Section two discusses the possible reasons behind and the effects of restricting exports from an abstract point of view, for the country which imposes the restriction as well as for the importers and the other exporters, in the short and in the long run, with specific attention to the implications for food security. Section three deals with export restrictions during the severe food price spikes which occurred in 2007/2008 and 2010/2011; based on the extensive literature on this, the paper discusses the actual use of export limiting policies and their effects. Section four focuses on the current WTO disciplines regarding export restrictions, how they are dealt with in the accession protocols of countries that have become members since the conclusion of the Uruguay Round, and how export restrictions are treated in RTAs. Section five aims at identifying the reasons which have so far prevented an agreement by presenting the evolution of the negotiations for the introduction of a multilaterally agreed more stringent discipline of export restrictions since the start in 1999 of the post-Uruguay Round negotiations on agriculture in the WTO. Section six, which is the core of the paper, offers possible alternative options for a WTO agreement on agricultural export restrictions in the event of suddenly and rapidly soaring international prices. Six options are presented in increasing order of 'ambition', from enabling food purchases by international humanitarian organizations to be distributed on a non-commercial basis to be exempt from export restrictions, to introducing disciplines on export restrictions which mimic those in place for import restrictions. Section seven concludes.

2. WHY USE EXPORT RESTRICTIONS? WHY NOT?

There are many, quite different, goals a country may try to achieve by restricting its exports. Food security concerns may cause countries to restrict exports to prevent domestic food prices from rising, or to cap their increase, by limiting, or eliminating altogether, the transmission to domestic prices of an out-of-the-ordinary inflationary pressure in international markets. Other frequently pursued goals behind the use of export restrictions include: reducing price volatility in domestic markets (in this case the aim being to eliminate, or smooth, price swings at either end of the price distribution); securing fiscal revenue[1]; protecting a domestic processing industry by restricting exports of the raw product used ('infant industry protection' argument); counteracting importer tariff escalation practices by restricting exports of the relevant raw products; protecting the domestic environment; limiting the overexploitation of domestic exhaustible resources; protecting endangered species of its fauna and flora; controlling the trade of weapons and dangerous materials/substances. Even net importers may find it useful to prohibit exports to stabilize domestic prices, thereby obviating the risk of domestic production being exported to benefit from higher prices in neighbouring countries[2].

Both food price levels and volatility have important effects on food security. Countries can improve their food security by stabilizing domestic prices of staples important in the diet of the poor. While price volatility is part of the normal functioning of food markets, which are characterized by relatively inelastic demand functions, excessive variability translates into higher costs for all agents. By reacting in a rational way to the risk associated with extreme price volatility, producers will produce less, the sector will see less investments, and all supply-side economic agents active in the market (producers, traders) will stockpile larger than otherwise quantities, even more so if markets are characterized by distortions and do not function properly. Consumers also will be negatively affected by excessive price volatility: through higher costs resulting from holding larger than otherwise stocks, or, in the worst case scenario, from the inability of non-agricultural (net food buyer) households to access adequate quantities of food when price spikes occur and they did not have at the time of low prices the financial resources to accumulate stocks. As pointed out in the report by the 'High Level Panel of Experts on Food Security and Nutrition' *'Price volatility has a strong impact on food security because it affects household incomes and purchasing power. Simply put, it can transform vulnerable people into poor and hungry people. Price volatility also interacts with price levels to affect welfare and food security. The higher the price, the stronger the welfare consequences of volatility for consumers, while the contrary is true for producers.'* (HLPE, 2011: 9). The larger a country's share of low-income non-rural households, the more severe the consequences of price volatility on food security.

Any country with a significant share of its population being food insecure, or bearing a high risk of becoming so, faces a strong pressure to intervene to avoid the problems due to the rise in domestic food prices, as this would further limit access to food by the poorest segments of its non-rural population. Restricting exports is one of the policy instruments a country can use to address this concern. From a political economy point of view, for a country with a large segment of poor among its population intervening either to contain price increases or to limit their effects on the poor is a necessity. As clearly shown by the events at the time of the 2007-08 price spikes, these can easily induce significant social unrest (Arezki and Brückner, 2011; Berazneva and Lee, 2013; Demeke *et al.*, 2009); a rapid policy reaction is needed (and usually enacted) to reduce the risks of political instability, a primary target for all policy makers everywhere.

Well-functioning, undistorted markets would make the task of coping with price spikes and reducing their impact on food security less costly. When markets function well, food is available on the market even in times of shortage, although at high or very high prices (and access restricted to those who can afford it); however, when markets function poorly, it may be difficult for an importer to have access to the volume of food needed, at any price (Gilbert, 2012).

Most of the goals listed above lead to the use of export restrictions which extend over time. In the case of export restrictions meant to prevent an out-of-the-ordinary rise in international prices from being transmitted to domestic prices, export restrictions are typically needed and used as a short term measure, introduced in an emergency, to be lifted once international prices return to 'normal' levels.

A country aiming at restricting its exports has an array of policy instruments to choose from[3]. It can impose a tax on its exports or use a Non-Tax Export Restriction (NTER). Export taxes can be specific (a given sum per unit exported), *ad valorem* (a certain percentage of the value of the good being exported), or a mix of the two (a specific component plus an *ad valorem* one). NTERs include a large set of different policy instruments. Certain export taxes, because of their particular nature, are included among NTERs, such as a variable tax (it varies with the international price and is given by the difference between the international price and a fixed reference export price), a progressive tax (it increases as the price on international market increases, but in a discrete, not continuous, way, based on intervals of values for the international price), or a tax which decreases with the degree of processing of a specific raw material contained in the product (this is often referred to as a DET, a Differential Export Tax.[4] Other NTERs are minimum export prices (MEPs) (the competitiveness of exports is reduced by imposing a minimum constraint on the price to be paid by the importer at the exporter's border); export quotas (exports cannot exceed a certain volume); tax rate export quotas (TREQs) (increasing levels of taxation applied to imports falling into subsequent export quotas; these may include tax-free exports up to a given volume as well as the imposition of a prohibitive export tax when a given volume of exports is reached); export bans; export licensing (the volume exported is managed by the requirement that exports can occur only if the exporting firm has obtained a permit to do so released by a governmental agency); the limitation of the volume exported through the operations of a State Trading Enterprise (STE) which has been given the exclusive right to export; lower production taxes, or higher production subsidies, applied on goods sold in the domestic market.

In principle all these policy instruments can be equivalently used to obtain a given volume of exports, lower than otherwise. However, in practice, they are different in many respects: in the presence of an exogenous shock they yield different volumes of exports; they have different distributional effects; they are different in their transparency and in the administrative burden involved in their implementation. An export ban or a quota yield the set volume of exports and the desired domestic price regardless of what happens on the international market, as they perfectly insulate the former from the latter. In the event of soaring international prices, a specific export tax is less effective in restricting exports, and in protecting the domestic price, than an *ad valorem* one (the same increase in the international price with an *ad valorem* tax in place will generate a lower volume of exports and will allow a lower share of the price variability on the international market to be absorbed by the domestic one). Restricting exports through an STE or export licenses is much less transparent than imposing an export tax. Whenever restricting exports implies the issuing of export licenses, including those needed to implement a quota or a TREQ, this creates an incentive for rent seeking activities. The implementation of a MEP or of a variable export tax necessitates a much stronger institutional capacity by the public sector than that needed for collecting an export tax or imposing an export ban. When export licenses are distributed to exporters gratis, they capture the rents associated with the difference between international and domestic prices. If an export tax is imposed, or if licenses are auctioned or efficiently priced by the Government, rents become revenue for the country's public budget.

If the country deciding to restrict its exports is a 'large country' on the world market, i.e. its exports constitute a significant share of the volume of that product traded internationally, then its policy intervention will affect not only the domestic price but the international one as well. Restricting exports by a large exporter to limit the transmission to the domestic market of soaring international prices is a beggar-thy-neighbour type of policy. In fact, the effects for the world market will be of the opposite sign with respect to those on the domestic one: a 'large country' restricting its exports to limit or inhibit the increase of the domestic price resulting from a price increase on the international market will make the latter increase further.

As for import restrictions, also export restrictions can be applied in a discriminatory way by imposing different restrictions on exports directed to different countries, for example giving preferential treatment to partner countries belonging to the same RTA. As discussed in the next section, RTAs often include limitations on the use of export restrictions which are more severe than those multilaterally agreed in the WTO.[5] When a country has agreed not to impose restrictions, or to impose less severe restrictions, on its exports to a subset of importers part of a RTA it belongs to, the impact of its export restrictions on third countries is worsened. In fact, if the country has a specific policy goal, i.e. the domestic price not to exceed a given level, the policy instrument to be applied to exports to third countries will be set at a more restrictive level than would be the case if it were to be applied to exports to all destinations in a non-discriminatory way.

The policy instruments a country may use to restrict its exports and limit the increase in the domestic price are not equally trade distorting. The more the policy instrument is effective in insulating the domestic price from the international one, the more it will distort trade. In a globalized market the price volatility induced by a shock, wherever it occurs, will spread over all markets; a country intervening to reduce the transmission of this volatility to its domestic price will make the share of the volatility to be absorbed by others increase. In the event of soaring international prices, an export ban, a quota or a variable export tax, by perfectly insulating the domestic market from the international one, force all the price volatility to be borne by the other countries. When international prices experience inflationary pressure, an *ad valorem* export tax will cause a larger share of the upward volatility to be absorbed by foreign markets than a specific tax. Relatively less transparent instruments to reduce exports, such as those involving the issuing of export licenses, or activities by a STE, because of the additional significant indirect transaction costs imposed on traders, are more trade distorting than an export tax. These differences in the trade distorting effects of the different policy instruments a country can use to restrict its exports help explain the different treatment of export taxes and NTERs in WTO regulations. As discussed in section 4, under WTO rules the use of export taxes is basically left unrestricted, while NTERs can be used only under specific conditions.

Given the policy instrument used, the extent of the impact for the world market of a country intervening to restrict its exports depends on a number of factors, including the size of the country relative to the world market; the characteristics of world demand and supply of the specific product; whether the increase in the international price is product specific or not; the volume of the product traded internationally relative to world production. The smaller the share of the world market of the country restricting its exports, the smaller the impact on this market of its policy intervention.[6] The more inelastic to price changes the world net import demand of the specific product faced by the export restricting country, for example because of the limited possibilities of substituting it in consumption decisions, the larger the impact on the international price of the export restriction. The upward trend of per capita incomes of many consumers around the world will make, *ceteris paribus*, the aggregate demand for food less and less price elastic. This means that world prices volatility will increase, with more frequent, and potentially more severe price spikes, and more severe problems for those consumers whose incomes do not rise, or do not rise to the same extent. The larger the number of food staple products experiencing an increase of their international prices, the smaller the impact of the country intervening to reduce exports of one of them.

All countries may be assumed to consider intervening to avoid significant, rapid increases in domestic prices, exporters by restricting exports and importers by lowering import barriers, if any are in place, or by subsidizing imports, if they have the fiscal resources to do so, which in the case of developing countries is highly unlikely. The joint effect of exporting and importing countries individually reacting to rapidly rising international prices by restricting exports or facilitating imports, respectively, will be to significantly reduce the ability of the policy reaction by each country to yield the desired effect, as their policies will partially offset each other.[7] A shock-induced price increase on the international market induces a country to intervene to limit the transmission of the price increase on its domestic market; which leads to a further increase in the international price; which triggers a chain reaction as other countries intervene by restricting exports or facilitating imports; which makes the international price increase even further; which moves more countries to intervene to protect their domestic markets, and so on. This domino effect characterizes a 'prisoner's dilemma' situation, where most countries eventually find themselves far from where they were trying to get in terms of protecting domestic consumers. Both importers and exporters may find themselves better off in the long run if they all jointly decide to restrain themselves from intervening. The only solution to the 'prisoner's dilemma' trap is for countries not to resort to individual decisions, but to look instead for multilaterally agreed joint strategic action. This may be achieved in two ways: through a formal cooperation mechanism, with well-defined rules and binding commitments (such as in a WTO agreement), or through a gradual learning process by all sides through 'repeated games', i.e. after going through several crises, not a very appealing option. Improving on the largely non-cooperative behaviours observed during the recent food price crises is a challenge, but given the collective action problem involved in the use of policies meant to 'protect' domestic prices from soaring, an international agreement seems the most promising, if not the only feasible, long-term way forward (Timmer, 2011; Martin, 2012).

That said, there are a number of considerations to be taken into account when assessing the domestic impact of restricting exports in order to limit the transmission to the domestic market of an out-of-ordinary inflationary process on the international one.[8] If the measure, as is often the case, is an emergency one introduced on a temporary basis, its initial short term effect is an increase in consumption, while production will be less affected. This is so because production decisions have been taken before the introduction of the policy and production short term response to price changes is quite low. This is not the case however in the medium term, when producers and investors, learning from experience, take into account in their production and investment decisions the negative effect on their profits of the country's expected policy reactions to rapidly soaring prices.[9] This means that a country restricting its exports may expect its policy decision to result in the medium term in lower domestic production than otherwise, with a trade-off emerging between the short and medium term effects of that decision on its food security. Yet even the positive short term effects of a lower price on domestic consumption are not as obvious as it seems. In fact, a significant share of a country's poor households are those of farmers, who are likely to be net food sellers; by lowering domestic prices the country is preventing them from benefitting in full from the higher international prices and, as a result, from reducing by the maximum possible extent, under the circumstances, their food insecurity. The larger the share of the rural poor, the more problematic any assessment of the net implications of restricting exports for the country's food security (FAO, 2008a). In the short run the lower domestic price resulting from the export restriction will imply an income redistribution, with a transfer of wealth from domestic producers to domestic consumers, processing firms and farms using the product as an input (i.e. livestock producers when the country intervenes to restrict its exports of cereals) and public finance (if the policy instrument used involves revenue collection).[10] A full assessment of the domestic impact of restricting exports should go beyond the effects of a lower domestic price to consider the macro effects as well, including those associated with the changes in the balance of payments, exchange rate and public finance (Headey and Fan, 2008 and 2010).

From a more strategic point of view, restricting exports reduces importers' confidence in international markets as a reliable source of food in a crisis, when it is needed the most. This may make them shift their food security strategies towards increased self-sufficiency, larger nationally held food stocks and a greater differentiation of food suppliers, all of which imply trading off significantly higher costs to provide the domestic market with enough food when needed with a lower perceived risk of not being able to do so.[11] For an exporter this reaction by importers to the decision to restrict exports means a lower demand for its exports in the future.

Despite all this, the reality is that many exporters find good reasons to restrict their exports when international prices soar, with the short term goal of protecting the poor among their population prevailing on other medium term concerns. Essentially their choice is due to the priority assigned in their political economy dictated agenda to reducing the risk of political instability induced by social unrest. After all, policy makers remain in office, or have to leave it, depending on what happens in the short run, not in the medium term, and the urban poor are much more politically vociferous than the rural poor. This makes the short term goal of making sure the urban poor do not face rapidly growing prices for staple foods outweigh the interests of agricultural producers and longer term goals.

Could exporters resort to other less distorting policies than trade restrictions to achieve their objective of protecting domestic consumers from out-of-the-ordinary increases of international prices? The most efficient and effective short term policy intervention to this end would be to target the non-farming poor segments of the population with safety net measures to be applied when domestic prices rise above certain levels, for example by providing them, and them only, with subsidies in cash, or with food, out of emergency reserves, for free, at subsidized prices or in exchange for work services. A less efficient policy would be to lower the domestic price for all by releasing on the market food buffer stocks, publicly held as part of a price stabilization scheme. Intervening with targeted direct subsidies is a very costly policy in fiscal terms, which most least developed countries simply cannot afford. In addition, to be able to intervene effectively and efficiently in the event of rapidly escalating prices, the country needs to have planned well ahead for such a contingency and to have a system to quickly reach the targeted households already in place. To use Timmer's words

> *'The problem is that safety nets that reach the poor quickly and effectively take considerable time to design and implement and are quite costly in fiscal terms if the poor are a substantial share of the total population. Historically, unless the country is already running a cash transfer program to the poor … the emergence of a food price crisis is too sudden for an effective government response.'* (Timmer, 2011: 13).

Targeted assistance needs a well-functioning public sector, the availability of substantial financial means and the delivery system to be already in place. These conditions are difficult to attain in any event but even more so in developing countries, and this explains why policies lowering the price on the domestic market, providing support to consumers, irrespective of their needs, and penalizing producers, are generally preferred.

In theory, holding large public buffer stocks to stabilize domestic prices (which is different from holding relatively small emergency reserves to be distributed to the needy in a crisis) by selling on the market when prices are high and buying when they are low, is a possible way to prevent or reduce extreme price volatility. The existence of significant publicly held food reserves may, by itself, act as a deterrent and help prevent price increasing speculative activities, especially in the case of 'thin' markets. In addition, in the event of rapidly growing international prices, the release of publicly held stocks by a country generates benefits which extend to other countries as well, as it helps reduce the inflationary pressure both at home and abroad. Price stability in a globalized market is a global public good, not a private one, which, at least in principle, makes the pursuit of multilaterally designed and implemented action to achieve it a worthy goal. In practice, however, holding and managing public stocks, even by a single country, is an extremely difficult task. This is so mainly for two reasons: the costs of holding and managing the stocks, and the problems involved with having a transparent and effective decision rule on when to buy and when to sell. As a matter of fact, many attempts to stabilize prices by the means of publicly held stocks have ended up in costly failures and most economists are sceptical of their ability to stabilize prices and, hence, impede food price spikes.[12]

3. THE USE OF EXPORT RESTRICTIONS DURING THE 2007/2008 AND 2010/2011 FOOD PRICE SPIKES

The use of policy instruments to reduce or inhibit exports is not new or infrequent and is not confined to agricultural markets. Kazeki (2003a, 2003b) and Kim (2010) provide a detailed overview of the use of export restricting policies in the 1995/2002 and 2003/09 periods, respectively, based on WTO Trade Policy Review country reports. Export taxes were used by 39 out of the 100[13] countries subject to the WTO trade policy review process in the 1995/2002 period and by 65 out of 128[14] (51 percent) in the 2003/09 one. Export restrictions different from export taxes include a wide set of policy instruments, not always applied at the border, which are difficult to identify, making a precise count of the countries using them somewhat hazardous. Nevertheless, it can be said that the use of NTERs is more frequent than that of export taxes and it also expanded over the years. Export restricting policies have been and are used by developing and developed countries alike. Export restrictions are usually applied to a limited number of products. Those most often subject to export restrictions are mineral and metal, forestry, fishery and agricultural products, products made from leather, hide and skin, and conventional and non-conventional weapons.

In the past decade international prices of several staple foods have experienced rapid, very pronounced increases, followed by equally rapid falls, which explains why they are often referred to as price *spikes*. Figures 1 and 2 show what happened for wheat (the prices of other cereals, such as maize, and of soybeans followed similar patterns) and rice. From a historical perspective, price spikes similar to those observed in the past decade are not that frequent. Yet they tend to occur with a certain regularity, every 30 years or so (Timmer, 2010). Huchet-Bourdon (2011) analysed price volatility over the period 1957-2010 to conclude that for most agricultural products it has not increased; a similar conclusion has been reached by Gilbert and Morgan (2010). This means that prices suddenly and rapidly moving upward away from their trends, and then reverting to their normal levels, or trends, is something we should expect to happen again in the future.

Many contributions have analysed the price spikes of 2007/08 and 2010/11;[15] they reach rather different conclusions on the causes of what happened, identifying different sets of multiple factors and giving different weights to each of these factors. Elements which have been indicated as possible drivers which caused, made possible or amplified the price spikes include: rising energy (oil) prices; weather related adverse events in key exporting countries; low stocks; increased demand of agricultural goods used in the production of bio-fuels; a depreciated US dollar; lower interest rates; non-traditional hedge fund investments in financial derivative markets for agricultural commodities; reduced food aid as a result of reduced public stocks; reduced export subsidies; a long run slowdown of yield growth rates for key food crops, due, at least in part, to the reduction of growth rates of investments in agricultural research and development; increased food demand because of rising per capita incomes; increased demand for feed crops as a result of the fact that in some of the largest, rapidly growing, developing countries diets are shifting towards more meat consumption.

A first best long run solution to reduce the negative impact on poor consumers of food price volatility is to increase their incomes; bringing households out of poverty makes people better able to deal with the consequences of volatile food prices. Until this is not the case, countries may be expected to act to try to prevent excessive food instability and/or to be ready to intervene effectively in the event of an occurrence, for example by having targeted safety net instruments already in place, ready to be used. If a country is not in a position to avoid a rise in domestic prices and has not set up, well in advance, targeted safety nets, then it can only resort to short term ‘emergency’ policy instruments to reduce the negative impact on poor consumers of extremely high prices.

As discussed in the previous section, countries can do this using a number of different policy instruments, export restrictions being one of those available to net exporters. In fact, in 2007/08 and 2010/11 countries did actually deal with soaring international prices in different ways. Countries, mostly in Asia, had price stabilization policy schemes in place and these proved effective. Evidence exists that food price stabilization policies in India, Pakistan, Bangladesh, Indonesia, the Philippines, Viet Nam and Thailand, despite undeniable, and probably unavoidable, problems, have been effective in reducing domestic price volatility, especially when the private sector was given a significant role (Cummings, 2012; Dawe and Timmer, 2012). Many countries intervened by selling grain from publicly held stocks (Demeke *et al*. 2009; Jones and Kwiecinski, 2010); others, including Bangladesh, Brazil, Chile, China, India, Indonesia, South Africa, Ukraine and Malawi, had in place targeted safety nets which were used and helped reduce the impact on the poor of higher domestic prices (Clay *et al.*, 2011; Jones and Kwiecinski, 2010; Mousseau, 2010). Several countries, including Brazil, Republic of Congo, Madagascar, Kenya and Ethiopia, tried to reduce the inflationary pressure on domestic prices by lowering or eliminating taxes on food (Demeke *et al.*, 2009).

Many countries intervened by reducing exports or facilitating imports. An FAO study monitored policy action by 81 countries to conclude that 43 reacted to the 2007/08 price surge by reducing the import protection they had in place, while 25 restricted or inhibited exports (Demeke et al., 2009). Sharma (2011) updated this study by expanding the survey to 105 countries and extending the period considered to March 2011 to find that 31 percent of the countries had used export restrictions. Many major exporters of grains, including Argentina (for wheat, maize, soybeans and sunflower seeds), Cambodia (rice), China (rice, wheat, maize, flour), Egypt (rice), India (rice, wheat), Kazakhstan (wheat, soybeans, sunflower seeds), Pakistan (rice, wheat), Russia (wheat, maize, barley, flour, rapeseed), Ukraine (wheat, maize, barley) and Viet Nam (rice) restricted their exports (Demeke *et al*. 2009; Dollive, 2008; Jones and Kwiecinski, 2010; Sharma, 2011), in most cases by using, sequentially or at the same time, more than one instrument, such taxes, quotas and MEPs. In the case of rice, operations by STEs in exporting countries also played a role in restricting trade (Dawe and Timmer, 2012). Price controls and penalties for hoarding were introduced as well. To reduce its exports, in December 2007 China removed the existing VAT rebate on exports for 84 agricultural tariff lines, including wheat, maize, rice, and soybean (direct forms of export restrictions followed early in 2008); the VAT rebate amounted to about 6.3 percent of the total value of merchandise exports (Dollive, 2008; Kim, 2010).

Nevertheless, some countries decided not to react; among developing countries this was more often the case for countries, mostly in Africa, Latin America and the Caribbean (FAO, 2008b), where domestic markets are less integrated with world markets and, as a result, are less exposed to volatility developing on the latter.

In 2010/11 price increases occurred under significantly different market conditions with respect to those in 2007/08. Harvests in many food importing countries in Africa were better than average, and stocks were globally higher than in 2007. Price increases were not as severe as in 2007/08, both in absolute and relative terms[16] (Figure 1) and did not involve as many commodities; in fact, contrary to 2007/08, this time the price of rice did not rise significantly (Figure 2). Unlike what had happened in 2007/08, reactions to the 2010 market situation, both by importers and exporters alike, were less evident (Howse and Josling, 2012). This may be due in part to different market conditions, in part to the fact that countries had learned a lesson in 2007/08 and refrained from unnecessary, panic-driven reactions; this is true particularly in the case of rice. The most significant intervention was in August 2010, when Russia announced an export ban on grains following a disastrous harvest. Among major exporters only Ukraine reacted by introducing export quotas. Russia lifted the export bans in July 2011, when domestic production and stocks had returned to levels close to normal. In 2012 Ukraine reacted again to higher wheat prices by announcing the reintroduction of restrictions on its exports (Ictsd, 2012).

There is no doubt that countries reacting to rising international prices by restricting exports cause prices to increase further. The question is how much of the price spikes in 2007/08 and 2010/11, and how much of the resulting additional costs to the poor in importing countries unable to protect them, could be attributed to the policy reactions of different countries alone. A large literature exists on the causes of the recent price crises. Overall a large majority of these studies does not identify export restrictions as a 'key driver' of the price spikes, but rather as a factor which exacerbated the extent of the crisis by putting significant additional upward pressure on prices, whose rise had been initially fuelled by other factors.[17]

These conclusions, however, do not extend to the rice market, where export restrictions imposed by many of the major exporters and large precautionary imports from some large importers have been indicated by many as a major factor in the severe price rise which occurred in 2007/08[18]. Thailand's monthly export price of rice[19] increased in nominal terms between April-September 2006 and April-September 2007 by 140 percent, a much larger increase than those observed for other grains. Unlike other cereals, rice stocks were not low at the time; furthermore, rice is not a biofuel feedstock and little substitution occurs between rice and other grains, either in production or consumption (Gilbert, 2012). Between June and October 2007 rice prices remained stable, not reacting to the rapidly increasing wheat prices (Figures 1 and 2); however, as other grain prices continued to grow, several Asian countries — the Philippines, the largest rice importer, in particular — decided to increase their stocks in expectation of higher prices and shortages. The world market for rice is very 'thin', with volumes traded internationally close only to 7 percent of world production. This made increased demand by a few large importers rapidly lead to an international price increase, which triggered the reaction by some of the main exporters - including Thailand, Viet Nam and India, the three largest exporters - to restrict their exports. This made several importers buying on international markets to expand their reserves, notwithstanding the fact that they did not have any immediate need to do so. At that point a self-supporting spiral of price increases developed as a result of the 'panic' prevailing among both importers and exporters.[20] In the case of rice '*export restrictions played a dominant role in turning a critical situation into a full-blown crisis*' (Headey and Fan, 2010: 96).

Many studies assessed empirically the market effects of the export restrictions many countries introduced in 2007/08 and 2010/11, using a variety of simulation models, and all concluded that these effects were substantial. Tanaka and Hosoe (2011) used a multi-country Computable General Equilibrium (CGE) model, based on the GTAP database, to simulate the imposition of quotas on rice exports to Japan by its four main sources of imports (Australia, China, Thailand and the US). When export quotas are introduced, Japan's import price for processed rice increases by 20 percent; if export quotas are introduced in a scenario including the liberalization of Japan's trade regime for rice and factor mobility across sectors, the price increases fourfold. Martin and Anderson (2012) estimated, using a simple partial equilibrium approach, that 45 per cent of the increase of the international price of rice in 2006-2008 was due to importers and exporters trade policy reactions; for wheat it was 29 per cent. Anderson (2012) used a similar approach to conclude that in the 2006-2008 period changes in country trade restrictions caused international prices to be higher by 40 percent for rice, 19 percent for wheat and 10 per cent for maize. Anderson, Ivanic and Martin (2013) resorted to a further improved model and found that the overall effect of countries intervening to insulate their domestic market made international prices increase further, by 51.9 percent in the case of rice, 17.6 percent for wheat, 18 percent for maize and 30.9 percent for edible oils. Von Grebmer *et al*. (2011) make reference to research conducted at IFPRI using MIRAGE, a large CGE model, showing that export restrictions can explain as much as 30 percent of the increase in prices observed in the first six months of 2008. Boüet and Laborde (2010) used the static version of MIRAGE to estimate the effect for the world price of wheat of exporters reacting to an increase in the world price due to an exogenous shock by restricting their exports by means of export taxes to maintain their domestic prices unchanged. Based on their estimates, if exporters only react to the initial 10.8 percent increase in the world price of wheat, this rises by an additional 5.9 percent (the increase would be 55 percent higher). If importers react to the rising international price as well by lowering import tariffs as much as possible in order to minimize the change in domestic prices, the international wheat price is 20.6 percent higher than in the initial pre-shock, no policy change scenario. Using a large CGE model (GTAP) Rutten *et al*. (2013) estimated the impact of India reacting to a 0.25 percent increase in the world price of wheat due to an exogenous shock by introducing an export tax equal to 1.15 percent, which would ensure that the domestic price remains unchanged with respect to the initial, pre-shock scenario. This would lead to an increase in the world price by an additional 0.25 percentage points. Thompson and Tallard (2010) used a large partial equilibrium model (Aglink-Cosimo) to assess alternative policy reactions meant to limit the domestic market impact in the case of a price surge. The focus is on wheat and rice and the policy reaction is limited to ten countries, the most relevant ones among those which modified their policies at the time of the 2007/08 price spike. The simulation assumes a 70 percent initial increase of the international price of wheat and rice. When the ten countries intervene by modifying their trade policies to protect their domestic market, importers by lowering market protection and exporters by limiting exports, the international price of rice increases by 134 percent (this increase is 1.9 times that in the initial no-policy reaction scenario), that of wheat by 98 percent (1.4 times). Headey (2011), based on back-of-the-envelope calculations, attributes to export restrictions alone more than 50 percent of the increase of the international price of rice in 2007/08. Finally, Laborde, Estrades and Bouët (2013) simulated, by using the MIRAGE model, the removal of all export taxes and found that this would generate a 0.24 percent increase in world income, gains equal to two-thirds of those associated with the complete elimination of import duties and larger than those expected from the conclusion of the Doha Round.

Evidence exists that countries which imposed export restrictions were effective in making domestic prices rise significantly less than in countries which did not intervene (Abbott, 2011; Anderson, Ivanic and Martin, 2013; Clay et al., 2011; Dawe and Timmer, 2012; Demeke et al., 2009; Dorward, 2012; Götz *et al*., 2013a and 2013b; Jones and Kwiecinski, 2010; McCalla, 2009). Abbott (2011) and Jones and Kwiecinski (2010) analyzing maize, rice, soybeans and wheat price changes in a wide set of countries conclude that most of the countries that restricted exports experienced significantly lower price increases than those who did not. Greater price stabilization was achieved by Asian rice exporters than by export restricting countries in Latin America and Eastern Europe (Abbott, 2011; Demeke *et al*., 2009). Anderson, Ivanic and Martin (2013) found that for several countries their policy reaction was effective in containing the increase in the domestic price below the level it would have reached if no country had intervened. For rice this was the case, among others, for Bangladesh, China and Indonesia. For wheat China, India, Turkey, Pakistan and Japan were among the countries which were able with their policy reactions to keep domestic price below the no-country intervention level. Dawe and Timmer (2012: 129) underline how '*during the world rice crisis of 2008 three countries (China, India and Indonesia, the three most populous developing countries in the world) successfully insulated their domestic rice economies from the turmoil on world markets. … this was one reason why the crisis pushed fewer people into poverty and undernourishment than was initially feared.*'

The impact on the volumes exported varies significantly across the spectrum of the countries that intervened to restrict them. China, India, and Ukraine show significant reductions of their wheat exports; the same is true for China and Ukraine for maize, and for China and India for rice (Jones and Kwiecinski, 2010).

Export restrictions having been effective in significantly reducing domestic upward price variability in those countries which applied them means that, symmetrically, they also made prices increase significantly more in other countries. The negative impact of this beggar-thy-neighbour effect has been heterogeneous; it has been more severe in those less developed net food importing countries integrated in world markets, with a large share of their population being urban poor, and unable to lower their import protection because such protection was non-existent or too low (Gilbert and Morgan, 2010; Headey, 2013; Ivanic and Martin, 2008; Rutten *et al.*, 2013; Verpoorten *et al.*, 2013).

Finally, severe damage to trust in the world market as a reliable source of food was inflicted by the reactions of countries during the 2007/08 and 2010/11 food crises. Restoring confidence will require credible commitments by both exporting and importing countries, acting in their own self-interest (Götz *et al.*, 2013a; Timmer, 2011).

4. EXPORT RESTRICTIONS AND WTO AGREEMENTS

The key legal text regarding the discipline of export restrictions in WTO is Article XI (General Elimination of Quantitative Restrictions) of GATT 1994; as far as export restrictions in agriculture are concerned, they are also dealt with in Article 12 (Disciplines on Export Prohibitions and Restrictions) of the 1994 AoA.

Article XI of GATT states that imports and exports can be restricted or inhibited, but only by the means of duties and taxes, while the use of other export reducing policy instruments, such as quotas or export licenses, is forbidden (XI:1). The prohibition on using quantitative restrictions is lifted in the case of *'export prohibitions or restrictions temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party'*(XI: 2a).[21]

Article 12 of the AoA refers to consultation and notification obligations. Based on subsection 1(a), when a country institutes *'a new export prohibition or restriction on foodstuff in accordance with paragraph 2(a) of Article XI of GATT 1994' it 'shall give due consideration to the effects of such prohibition or restriction on importing Members' food security'*. Subsection 1(b) states that *'before any Member institutes an export prohibition or restriction, it shall give notice in writing, as far in advance as practicable, to the Committee on Agriculture comprising such information as the nature and the duration of such measure, and shall consult, upon request, with any other Member having a substantial interest as an importer with respect to any matter related to the measure in question. The Member instituting such export prohibition or restriction shall provide, upon request, such a Member with necessary information.'* The second paragraph of Article 12 states that developing country members are excused from these obligations, unless the export restricting measure *'is taken by a developing country Member which is a net-food exporter of the specific foodstuff concerned.'*

How restrictive are these obligations for a country willing to limit its exports? Analyses converge on the same answer to this question: very little.[22]

First, a country can always decide to restrict its exports by the means of an export tax.[23] Hence, if the prohibitions to use NTERs were to be made effectively binding, a country could always achieve its goal in a way compatible with WTO rules by using an export tax instead. In addition, export taxes being unbound, a country can always ban exports, if it so wishes, by imposing a tax large enough to make exports economically unviable.

Second, the text used in Article XI of GATT 1994 is so vague as to make its enforcement — i.e. a country challenging another country's claim to be in a position to invoke the exemption to the prohibition on export restrictions by using a quota or export licenses — practically impossible. What terms such as *'temporarily'*, *'prevent'*, *'relieve'*, or *'critical shortage'* in paragraph 2(a) of Article XI of GATT 1994 mean remains open to a wide spectrum of equally legitimate legally sound interpretations. The same applies to the term *'product essential to the exporting contracting party'* when it comes to non-agricultural products.[24] In addition, while the group of 'net food-importing developing countries' is well defined in the WTO legal context, no such definition exists for the 'net food-exporting developing countries' mentioned in paragraph 2 of Article 12 of the AoA. Finally, no penalties are identified for countries deciding to ignore the obligations deriving from Article 12. As pointed out by Konandreas (2011: 363) *'the obligations called for in Article 12 of the AoA … are useful to some extent for exerting some moral restraint on the exporter, but they may not actually mean anything in concrete terms.'*, or, as Meilke puts it, *'While GATT/WTO legal scholars could debate the exact constraints these rules put on members, it seems clear that countries are able to do what they want and face only a very weak reporting rule'* (Meilke, 2008: 151).

In fact, the WTO notification and consultation record on export restrictions is disappointing. It appears that formal consultations as from paragraph 1(b) never occurred (Konandreas, 2011), between 1995 and March 2013 only eight members submitted notifications for the introduction of 14 export restricting measures under Article 12 of the AoA,[25] and only one country, the Kyrgyz Republic, notified export restriction measures at the time of the 2007-08 price spike (WTO, 2013). Not surprisingly, no dispute challenging export restriction measures justified under paragraph 2(a) of Article XI of GATT 1994 has been brought before the Dispute Settlement Body so far.

WTO law on export restrictions is an area of evident 'under-regulation' or 'regulatory deficiency', as it neither properly defines the circumstances under which quantitative restrictions can be used, nor regulates export taxes (Karapinar, 2011 and 2012). This leaves countries with ample space for policy decision-making on export restrictions, a space which they do not have when it comes to restricting imports. In fact, while export restrictions are very weakly regulated, with the Uruguay Round AoA all import restrictions for agricultural goods different from tariffs had to be reverted to tariffs, all tariffs were bound and reduction commitments introduced. This means a clear asymmetry exists in how country policy interventions limiting exports and imports are treated in WTO. The general aim of WTO is to promote free trade by progressively removing all interventions which are trade distorting. When it comes to agriculture it even goes as far as imposing constraints on domestic policies which have trade distorting effects. Export restrictions are clearly trade distorting and there is no reason why they should not be effectively regulated within WTO. Distortions in agriculture are regulated in WTO under three pillars: market access, export competition and domestic support. By reducing border protection of domestic markets (market access) and reducing direct and indirect forms of export subsidization (export competition), WTO regulations make international prices increase, while domestic prices decline in the countries forced to reduce their border protection and export subsidization. Volumes exchanged internationally expand with the reduction of border protection and decline with reduced export subsidies. If WTO were to effectively regulate export restrictions, this would make prices in international markets decline and volumes traded internationally increase. Hence, the impact on international prices of reducing/removing export limiting trade distortions would be the opposite of that of reducing protectionism and export subsidization. The impact on the volume traded, however, would be the same as when export subsidies are reduced. Current WTO disciplines of trade distorting policies in agriculture appear driven by the willingness to limit their negative impact on prices in other countries, and, at the same time, the existence of no evident concern for the equally trade distorting policies which have a *positive* effect on prices in the other countries. Essentially, current WTO regulations in agriculture show a bias towards protecting the interests of those exporting countries which do not distort trade and seem to give little importance to the interests of net food importers. Former Director General of WTO, Pascal Lamy, has recently made the point that 'For decades, commodity trade has been understood from the point of view of 'commodity dependent' exporting countries, … *The trend of decreasing agricultural commodity prices was the focus of attention. However, from the beginning of the 2000s, there was an upward trend in agricultural commodity prices, culminating in the price peak of 2007-2008.'* arguing that the priorities of importers and exporters constitute two faces of international commodity trade which should both be addressed in WTO negotiations (Lamy, 2013).

A legitimate question then is why export restrictions did not receive as much attention as import protection in the Uruguay Round (and in the Doha Round, at least so far). When the Uruguay Round was launched in 1986 prices of many commodities were at record lows and stocks high. Developed countries were routinely using export subsidies as a way to dispose of products in excess of what they needed, surpluses often generated by the generous support their own policies had provided domestic producers with. Hence, one explanation for the current under-regulation of export restrictions in WTO is that they remained outside the core elements of the 1994 AoA simply because countries did not feel at the time there were good reasons to be concerned about the possibility of countries finding it convenient to restrict their exports. An alternative, or additional, explanation is that the WTO track record reflects the fact that in the Uruguay Round — unlike the Doha Round — the negotiating power at the table on agriculture remained largely, and firmly, in the hands of the main developed countries, most being net food exporters, for whom high international prices and their impact on food security is a low priority compared to making markets more open and profitable for their exports.

However, whether export restrictions remained under-regulated in WTO because of limited foresight on what could happen in the future, or because the interests of exporters largely prevailed in the negotiations, is not very relevant. The recent food crises, the policy reactions by some of the main exporters, the implications of their decisions on the food insecurity of the poor in several net food-importing developing countries and the negative effects of what happened on the reputation of international markets as a reliable source of food in national food security strategies, make for a different framework with respect to the one at the time of Uruguay Round negotiations. Equally different is the scenario of the distribution of the negotiating power among developing and developed, net food importing and exporting countries, which gives food security issues a more important place in multilateral negotiations and a chance to reforming existing legislation on export restrictions and reducing the current asymmetry in WTO regulations.

Interesting enough, while WTO members decided not to impose on themselves any tangible constraint on their policies restricting exports, at the same time they forced acceding countries to accept significant limitations on their ability to do the same. Several countries which acceded to the WTO after the conclusion of the Uruguay Round — including China, Mongolia, Russia, Saudi Arabia, Ukraine and Vietnam — had to accept obligations which go beyond, to different extents, existing WTO rules, introducing, in this as well as other areas, a sort of “WTO-plus” commitments (Crosby, 2008; Karapinar, 2011 and 2012; Kim, 2010). These obligations refer to the elimination for certain products of existing export restrictions different from export taxes, such as minimum export prices, but also to the elimination of existing export taxes for certain products or the introduction of binding levels. According to Karapinar (2012), who screened the accession protocols of the 25 countries which became members of WTO between 1995 and November 2011, commitments on export restrictions which are more restrictive than current WTO provisions can be found in three of them, those of China, Mongolia and Ukraine. China accepted to eliminate export taxes on all products but for 84 tariff lines (defined at the 8-digit HS level) and for them the accession protocol includes bound rates; Ukraine accepted to eliminate export bans, to reduce existing export taxes on certain products and to bind all its existing export taxes, unless increases above the bound rate are justified under GATT 1994; Mongolia agreed to replace the export ban it had in place on raw cashmere with an export tax which was bound at 30 percent and agreed to eliminate it within 10 years of the date of accession.[26] Among the accession protocols of the six countries which become members of WTO since then (Lao PDR, Montenegro, Russia, Samoa, Tajikistan and Vanuatu), WTO-plus obligations regarding export restrictions are included only in that of Russia, which agreed to eliminate, reduce and/or bind export taxes for a long list of goods.[27]

Export restrictions are often regulated in RTAs, including bilateral ones, and provisions often go well beyond those in WTO. Commitments regarding export restrictions in RTAs are subject to the Most Favored Nation Treatment rule (article I of GATT 1994). As with market protection measures, in order to be able not to comply with the MFN principle the RTA must satisfy the conditions spelled out in Article XXIV. Korinek and Bartos (2012) carried out an extensive review of how export restrictions are dealt with in 93 RTAs to conclude that 66 of them contained explicit disciplines on export taxes, which are not subject to any restriction under WTO. Regarding quantitative export restrictions, they found that the agreements surveyed contained a more stringent regulation than WTO in 15 cases, equivalent in 38 cases and weaker in 22 cases (in seven cases the agreements were signed before 1994). 18 of the 93 RTAs, including major RTAs such as ASEAN and MERCOSUR, did not contain any provisions on quantitative export restrictions. Disciplines stronger than WTO include: stricter and better defined rules on the implementation (aimed at increasing transparency and predictability); stricter conditions to be satisfied in order to be exempt from the general constraint forbidding the use of quantitative export restrictions; positive lists of goods for which export restrictions can be used; binding existing export taxes; prohibiting the introduction of new export taxes; banning export taxes altogether, with some exceptions (this is the case for 55 out of the 93 trade agreements analysed); the maximum length of the period of time they can be used and the maximum level of the export tax which can be applied. Some of the agreements contain provisions to limit the negative effects on other members of one of the members of the RTA restricting its exports. A legitimate question at this point is how come in so many RTAs obligations regarding export restrictions are more stringent than in WTO? One point which can be made is that the fewer the countries involved in a negotiation, the easier is to find an agreement. However, it should also be noted that regional and bilateral negotiations were not successful in yielding stronger than WTO provisions regarding export restrictions when the countries involved included major users of these policy instruments, such as China (Kim, 2010).

5. THE NEGOTIATIONS SO FAR FOR A MULTILATERALLY-AGREED STRICTER DISCIPLINE OF EXPORT RESTRICTIONS

Since the conclusion, in 1999, of the implementation period of the Uruguay Round AoA, the need to make export restrictions on foodstuffs subject to more stringent disciplines in WTO has been widely debated, in WTO as well as in other international *fora*, even before the two price spikes of 2007/08 and 2010/11, although no tangible result has been achieved.[28] This section provides an overview of what happened to try to understand where we are today and identify the difficulties which emerged and prevented a positive conclusion so far of negotiations on export restrictions.

The third WTO Ministerial Conference held in Seattle at the end of 1999 was meant to launch a new round of negotiations, but ended in a fiasco. Despite the failure, because of the commitment which was already included in the 1994 Uruguay Round agreement, negotiations on agriculture and services started, at least formally. The mandate for the negotiations on agriculture as stated in Article 20 of the 1994 AoA was very broadly defined. Disciplines of export restrictions were not explicitly mentioned but could certainly be included as part of the negotiations. It is interesting to note that in these very early stages of the negotiations, even if no major rise in international prices had occurred since the end of the Uruguay Round, several countries included the need to introduce more stringent regulations of export restrictions in the initial proposals they tabled.

The Cairns Group[29] circulated a document specifically focused on a proposal on 'Export restrictions and taxes'.[30] The need to strengthen the provisions included in the Uruguay Round AoA was justified on food security concerns, the necessity to jointly address tariff escalation and export restrictions meant to protect a domestic processing industry and, more in general, the goal of ensuring a fair and market-oriented agricultural trading system, for which tighter disciplines on export restrictions were indicated as an important step forward. However, this initial proposal by the Cairns group did not go beyond stating the need for the negotiations to *develop both improved disciplines on export restrictions and taxes and eliminate tariff escalation'* and *'to preserve Article 12.2 of the Agreement on Agriculture and provide additional special and differential treatment provisions to address the legitimate needs of developing countries, including least developed and net food-importing developing countries*. That this proposal remained relatively vague should not come as a surprise given the presence in this group of net food exporters of countries which were making use of export restrictions, including Argentina, Indonesia, the Philippines and Thailand (Piermartini, 2004).

On the contrary, the initial comprehensive proposals by Switzerland and Japan both included more stringent obligations regarding export restrictions.[31] Switzerland's proposal called for *'the elimination of all export restrictions on agricultural products and the binding at zero of all export tariffs (with a flexibility clause for the LDCs).'* Japan's proposal was justified by the need to reduce *'the imbalances of the rights and obligations between importing and exporting countries' and to make sure 'that an appropriate balance can be achieved with the outcome of negotiations on imports, in order to reach a fair and equitable agreement that can be accepted by both exporting and importing countries alike'*. The proposal was to introduce for export restrictions obligations symmetric to those already existing for import restrictions: *'To tariffy all export prohibitions and restrictions (by replacing them with export taxes)' and 'To bind all export taxes (including those possibly introduced in the future). For products subject to the export tax, to establish quotas in which a certain amount of exports will be exempt from the export tax.', plus disciplines for short term, temporary emergency measures 'necessary before export taxes are introduced'*.

The initial negotiation positions by Jordan, Congo, Republic of Korea and the US all included proposals on export restrictions under the 'export competition' heading. Jordan proposed *'the prohibition of all export restrictions on agricultural products and the binding of export subsidies at zero level'*; Congo *'the abolition of export taxes'*; Korea *'to prohibit exporting countries from imposing export restrictions and prohibitions arbitrarily'*, and *'to prohibit the use of export tax for the purpose of export restrictions'*; the US *'to prohibit the use of export taxes, including differential export taxes, for competitive advantage or supply management purposes'*.[32 33]

Notwithstanding these positions, the Ministerial Declaration[34] which in November 2001 launched the Doha Development Agenda Round did not explicitly mention export restrictions in the part which defines the 'mandate' of the negotiations on agriculture, stressing instead the commitment to comprehensive negotiations aimed at obtaining substantial improvements in the three areas which had been the focus of the negotiations in the previous Round: market access, export subsidies and trade-distorting domestic support. Food security is mentioned in the Declaration, but only with reference to the commitment to include Special and Differential Treatment for developing countries as *'an integral part of all elements of the negotiations'*.

In February 2003 the first draft of the 'Modalities' was circulated.[35] Regarding *'Export Restrictions and Taxes' the draft text is quite conservative, in a literal sense; it reads: 'Except as provided for in paragraph 2(a) and 2(b) of Article XI and Articles XX and XXI of GATT 1994, the institution of new export prohibitions, restrictions or taxes on foodstuffs shall be prohibited. … For developing countries, the disciplines of Article 12 of the Agreement on Agriculture and the relevant provisions of GATT 1994 [and of other relevant WTO agreements] shall continue to apply.'* This seems to imply that a country was not to be allowed to make use of an export tax for an agricultural product if it was not using it already at the time of the new agreement, unless the exceptions defined in the cited Articles of GATT 1994 could be invoked; this restriction would not apply to developing countries. As a matter of fact, the text does not seem to imply any change in the obligations regarding export restrictions different from a tax (export restrictions were already allowed only on the basis of the exceptions defined in the relevant articles of GATT 1994), but was to make the use of new export taxes subject to the same conditions existing under GATT 1994 for export restrictions different from a tax. The draft text proposes disciplines for the operations of exporting STEs, but only with respect to the need to avoid the possible circumvention of export subsidy commitments, i.e. ignoring the fact that they could operate to restrict exports as well.

Following the failure of the 2003 Ministerial in Cancun, negotiations remained in a sort of limbo until the 'framework agreement'[36] reached at the General Council meeting in August 2004 led to a restart. Annex A to the 'framework agreement', which contains the 'Framework for Establishing Modalities in Agriculture', under 'Other issues' states that *'Disciplines on export prohibitions and restrictions in Article 12.1 of the Agreement on Agriculture will be strengthened.'* At the Ministerial Conference in Hong-Kong, the following year, the report by the Chair of the committee where negotiations on agriculture take place, which is annexed to the Ministerial Declaration[37], does not go beyond stating that negotiations on strengthened disciplines on export prohibitions and restrictions *'have not advanced materially.'*

Given the state of the negotiations in the Round, no Ministerial Conference was held in 2007.

In April 2008, in view of the meeting to be convened in Geneva in July to try to find an agreement which could bring the round to an end, Japan and Switzerland circulated jointly an informal paper calling for stricter WTO rules on the introduction of export restrictions for food products and on the consultation and notification procedures. The paper, among other things, proposes that countries should be required to notify the Committee on Agriculture before introducing an export restriction and that this was to be implemented only after a consultation with the other members involved was completed, either by their agreeing on the introduction of the export restriction, or, if countries had not been able to reach an agreement within a certain amount of time, by the favourable decision of a binding arbitration (Ictsd, 2008; Mitra and Josling, 2009). This proposal defines a much stricter discipline of export restrictions than the current one.

The negotiations at the end of July 2008 lasted nine days, the longest ever in WTO history at such a high level, and ended with no agreement.

The last version of the agricultural 'modalities'[38], the sixth, was circulated in December 2008, in preparation of a Ministerial which was to convene later that month and eventually had to be called off. In fact, as the date of the Ministerial approached, it became evident that there was not enough widespread political will to find a shared solution to the many issues which had remained unsolved in July. This revised version of the 'modalities' describes the status of the Doha Round negotiations on agriculture when they were *de facto* suspended. Export 'prohibitions and restrictions' are dealt with at the very end of the document, under 'Other Issues'; the text does not include square brackets, which means that, in the opinion of the Chair of the Negotiating Committee, there was a broad agreement on it. As a matter of fact, the provisions do not appear very ambitious in their ability to reform the existing discipline. The text refers to export prohibitions and restrictions only, while export taxes are not mentioned.[39] Essentially it calls for modifying Article 12 of the AoA by restricting export prohibitions and restrictions allowed under Article XI of GATT 1994 to be only temporary measures (*'existing export prohibitions and restrictions in foodstuffs and feeds under Article XI.2 (a) of GATT 1994 shall be eliminated by the end of the first year of implementation'*, and *'any new export prohibitions or restrictions under Article XI.2 (a) of GATT 1994 should not normally be longer than 12 months, and shall only be longer than 18 months with the agreement of the affected importing Members.'*) and by slightly strengthening the consultation and notification procedures, for example by having countries notify export restrictions within 90 days of their introduction *('Prohibitions or restrictions under Article XI.2(a) of GATT 1994 in Members' territories shall be notified to the Committee on Agriculture within 90 days of the coming into force of these provisions.')*. This version of the 'modalities' too includes provisions regarding exporting STEs meant only to prevent them acting in such a way as to circumvent export subsidy commitments. Finally, the document includes a proposal to reduce tariff escalation, but no parallel proposal to introduce a similar discipline on exporting countries using export taxes to pursue the analogous goal of protecting the domestic industry which processes a domestically produced raw product.

The 2009 Ministerial Conference in Geneva was very low-key and ended with no joint declaration.

Meanwhile, the food price crises prompted other international 'institutions' to address the issue of the role export restrictions have in exacerbating price spikes and to call for a multilaterally agreed decision to limit their use. Among them a prominent role was taken by the G8[40] and its enlarged version, the G20[41]. At the G8 meeting in Japan in 2008 a Statement on Global Food Security was agreed. With respect to export restrictions it contains the following text: *'Rising food prices are adding inflationary pressures and generating macroeconomic imbalances especially for some low-income countries. ... It is also imperative to remove export restrictions and expedite the current negotiation at the World Trade Organization (WTO) aimed at introducing stricter disciplines on these trade actions which prolong and aggravate the situation, and hinder humanitarian purchases of food commodities.'* The following year, at the G8 meeting in Italy, the 'L'Aquila Joint Statement on Global Food Security' included a somehow less strong language on export restrictions: *'We also call upon all countries to remove food export restrictions or extraordinary taxes, especially for food purchased for humanitarian purposes, and to consult and notify in advance before imposing any new restriction.'* The need to modify WTO disciplines had by now disappeared from the joint declaration, as well as any reference to removing export restrictions altogether; instead a rather generic call was made for countries to act voluntarily to remove export restrictions and extraordinary taxes and to improve consultation and notification practices.

The document approved at the end of the FAO World Summit on Food Security, which was held a few months later, in November 2009, contains a text on export restrictions which is only apparently slightly different from that used in the G8 Statement: *'We will remove food export restrictions or extraordinary taxes for food purchased for non-commercial humanitarian purposes, and will consult and notify in advance before imposing any such new restrictions.'* (FAO, 2009b: 4). FAO member states, which include a much more diversified set of interests with respect to those participating in the G8, could not agree on the general call made by the latter for countries to remove food export restrictions altogether, but committed themselves only to do so for food to be distributed on a non-commercial basis for humanitarian purposes. Nevertheless, since then exemptions for the imposition of 'export restrictions and extraordinary taxes' on purchases of humanitarian food, including those by the WFP, have often been granted only after concerns had been raised and the exemption requested, while some countries had decided not to honour the commitment they had made at the summit (FAO et al., 2011: 26).

The Declaration at the end of the 2010 G8 meeting in Canada had a paragraph on food security, but this did not mention export restrictions. However, the final declaration of the G20 meeting which started in Toronto immediately after the conclusion of the G8 contains the commitment not to impose new export restrictions until the end of 2013.

The work done within the G20 in 2011 is often cited as a significant step forward in the international debate on the need for a multilateral agreement on limiting the use of export restrictions motivated by food security concerns. A meeting of the G20 Agriculture Ministers in June focusing on food price volatility prepared the way for the deliberation by the Heads of Government in November. The 'Action Plan on Food Price Volatility and Agriculture' which was agreed at the end of the meeting of the Ministers of Agriculture, on export restrictions says: *'We recognize that the first responsibility of each member state is to ensure the food security of its own population. We also recognize that food export barriers restricting humanitarian aid penalize the most needy. We agree to remove food export restrictions or extraordinary taxes for food purchased for non-commercial humanitarian purposes by WFP and agree not to impose them in the future. We will seek support within the United Nations agencies and will also recommend consideration of the adoption of a specific resolution by the WTO for the Ministerial Conference in December 2011.'* The Action Plan was endorsed by the Heads of Government at the G20 meeting in November in France; the final declaration of the summit, on export restrictions reads: *'We decide that food purchased for non-commercial humanitarian purposes by the World Food Program will not be subject to export restrictions or extraordinary taxes. … We reaffirm our standstill commitments until the end of 2013, as agreed in Toronto,* [to refrain from imposing new export restrictions and] *…to roll back any new protectionist measure that may have risen, including new export restrictions…'*.

A few weeks before the December 2011 WTO Ministerial Conference the Net Food-Importing Developing Countries (NFIDCs), the African and the Arab groups of countries jointly formally submitted a proposal - based on one they had circulated previously (Ictsd, 2011a) - to include in the final deliberation of the Ministerial a declaration giving the General Council the mandate to develop a work program *'to mitigate the impact of the food market prices and volatility on WTO least-developed and net-food importing developing members'*, including exploring *'the possibility of developing rules to exempt purchases of LDCs and NFIDCs … from export restrictions invoked under Article XI.2(a)* *of the GATT 1994 by other WTO Members, which are major exporters of the specific foodstuffs concerned'*.[42]

Another group of countries submitted the far less reaching proposal to include in the final outcome of the Ministerial Conference the text which was part of the deliberation of the G20 in June regarding the removal of export restrictions on food purchased for humanitarian purposes by the WFP, making this become a commitment for all WTO members.[43] Interesting enough, this proposal was not signed by all G20 countries; in fact, the list of the countries submitting the proposal did not include Argentina, Brazil, China, India, Russia, South Africa and the United States, while it included a handful of countries which are not part of the G20, namely Chile, Costa Rica, Norway, Singapore and Switzerland. G20 countries which had been using export restrictions themselves in recent years, such as Argentina, China and India, might had felt uneasy about opening up the door for changes in the current regime for export restrictions, for agricultural as well as non-agricultural goods. Others may have based their decision not to sign up the proposal on general concerns related to their strategy in seeing an advancement of the Doha Round as a whole, towards a 'single undertaking' conclusion vs. an 'early harvest' approach (ICTSD, 2011b).

Some actors were uneasy with the fact that including the proposed text in the deliberations of the Ministerial could have set a precedent, even if there was a wide convergence on the specific issue: i.e. a deliberation taken by a group of powerful countries such as the G20 being adopted, without changing a word, by the WTO. Eventually the proposal did not become a deliberation of the Ministerial Conference (a decision was made at the General Council meeting at the end of November) and the G20 declaration apparently had become an obstacle, rather than a facilitator, to a positive decision at WTO.[44]

At the same time, on a different front, Japan made an unsuccessful attempt to have the WTO's regular Committee on Agriculture discuss the interpretation to be given to some of the key terms in the current legal text regarding export restrictions in the Agreement on Agriculture.

The Ministerial Conference convened in Geneva in mid-December 2011 could not avoid acknowledging the fact that Doha Development Agenda negotiations were at an *impasse*, that *'significantly different perspectives on the possible results that Members can achieve in certain areas of the single undertaking'* existed, and that it was unlikely *'that all elements of the Doha Development Round could be concluded simultaneously in the near future'*.[45] Essentially no significant decision was taken at the Ministerial. The Chairman's Concluding Statement mentions export restrictions in Part II, which provides a summary, prepared under his sole responsibility, of key issues raised in the discussion on which consensus had not emerged. Under the heading of 'Food security' the text reads: *'Many Ministers urged WTO Members to commit to remove and not to impose in the future, food export restrictions or extraordinary taxes for food purchased for non-commercial humanitarian purposes by the World Food Programme. Other Ministers stressed the importance of addressing the root causes of food insecurity and underlined the importance of allowing Members to use their rights under WTO Agreements. Some Ministers signalled their support for a proposal to establish a work programme on trade-related responses to mitigate the impact of food market prices and volatility, especially on LDCs and NFIDCs, for action by the Ninth Ministerial Conference. Several Ministers noted that the issue of food security was multi-faceted and needed to be looked at in its entirety, including the impact of export restrictions on international prices.'*

Not much has happened since then, neither in the Doha Round negotiations nor in the debate on imposing stricter disciplines on export restrictions.

For the June 2012 G20 meeting in Mexico there was nothing else left to do on export restrictions but to reaffirm, once more, the commitment *'to remove export restrictions and extraordinary taxes on food purchased for* *non-commercial humanitarian purposes by the World Food Program'* and the '*commitment until the end of 2014 with regard to measures affecting trade …, , including [not to impose] new export restrictions …'*. An even lower profile was kept in the Declaration at the end of the September 2013 G20 meeting in Russia, which in the paragraph devoted to food security only reaffirmed, generically, the '*determination to implement all previous G20 commitments and existing initiatives including that stated in the Action Plan on Food Price Volatility and Agriculture which the G20 endorsed in 2011.'*

The price crises in the previous decade have been a catalyst for forcing policy makers to pay greater attention to food insecurity concerns. Yet this has yielded no tangible results with respect to modifying existing WTO obligations on the use of export restrictions and taxes, policy instruments which have proved to significantly amplify price escalation on world markets. Nevertheless, the increased attention given at the international level to the need to address food security has produced significant results on other fronts, including: a somewhat changed perspective by the major actors of the donor community and international institutions (as well as by many developing countries themselves) on the role of agriculture in development and on the importance of increasing investments in agriculture to address poverty reduction, food security and inclusive economic development concerns, which led to an increase in donors' aid pledges and international financial institutions disbursements aimed at strengthening agriculture; a reinforced coordination and cooperation among international institutions (such as FAO, WFP, IFAD, World Bank, IMF, and OECD) and a reform of some of the main fora dealing with food security (e.g. the multi-stake-holder Committee on World Food Security at FAO); and the strengthening of monitoring of price developments and of early warning systems (e.g. the creation of AMIS, Agricultural Market Information System).

Introducing stricter obligations for the use of export restrictions has never been high on the Doha Round agenda. A shared urgency and willingness to limit the use of policies that, everybody agrees, contributed significantly to exacerbating recent food price crises has not gained enough momentum in the international negotiations to give an agreement a chance to materialize. The impasse of the Doha Round has certainly made reaching an agreement on export restrictions much more complicated, but it is difficult to foresee how more restrictive than the current one the new discipline could have been in the event of a successful conclusion of the Round. Even the apparently low-ambition attempt - seen, at least in principle, with favor by all countries - to prohibit export restrictions and export taxes on humanitarian purchases by the WFP proved fruitless. Was the G20 initiative and the proposal to have its deliberation multilateralized at the WTO with no change counterproductive, or were some of the members unwilling to agree on such exemption, no matter what? Whatever the answer to this question, the truth is that exporting countries have proved in this negotiation as strong as importing ones in defending every single square inch of their policy space.

6. A MULTILATERAL AGREEMENT ON EXPORT RESTRICTIONS: WHAT ARE THE OPTIONS?

Why should more stringent WTO disciplines for export restrictions be negotiated?

Any strategy to fight food insecurity goes well beyond limiting export restrictions. However, as discussed in section 3, when food prices on international markets increase, exporting countries often decide to limit exports and, by doing so, contribute significantly to stoking the upward pressure on prices and exacerbate negative effects for the food security of many of the poor in the developing world, importing and other exporting countries alike. Food price spikes are not rare (Timmer, 2010). As pointed out by Konandreas, in the past 40 years or so only, six episodes of high food prices occurred - in 1974/76, 1980/82, 1988/90, 1995/97, 2007/08 and 2010/11 - each lasting for about two years, for a total of 12 years, which means that higher than usual prices were observed in about one out of three years (Konandreas, 2011: 348). This means there are very good reasons for doing everything possible to avoid, when prices increase again, the additional upward pressure caused by exporter policy reactions. Nothing has been done to prevent countries from repeating the policy responses of the past decade in the case of a new price spike, which, on past experience, we know will take place, the only question being ‘when?’.

Stricter disciplines on export restricting policies is not in the interest of importing countries only. There are at least three reasons why more stringent WTO disciplines may also be beneficial for exporters. First, stricter disciplines would make export limiting policy interventions more predictable, reducing the uncertainty importers face about what exporters can and cannot do. This would be in the interest of all countries, importers and exporters alike. In fact, one of the effects of the food price spikes in the past decade has been to undermine the confidence that the free market could be trusted to deliver food security, thereby providing arguments in favour of those claiming that public intervention and a relatively high degree of self-sufficiency are needed to correct this market failure. The result has been a partial reorientation of national strategies addressing food security concerns, involving less reliance on imports, with negative effects on the well-being of both, importers and exporters. Stronger WTO rules may be beneficial for the world trading system by restoring strength in the now somehow tattered reputation of world markets as a reliable, consistent source of food supply. Second, exporters may gain additional benefits from stricter WTO rules because the greater transparency and the fact that they would have less discretion in their reaction to rising prices and, hence, increased predictability, would lead to less uncertainty in investment decisions in agriculture by domestic and foreign private actors. Third, as discussed in section 2, if countries ignore the fact that others will react the same way, when both importers and exporters intervene, the exporters restricting their exports and the importers facilitating their imports by lowering their border protection, this will, at least to a considerable extent, counteract the goal of their policies, the effects of which will be significantly smaller than that intended. A credible coordination of the responses by countries is needed to avoid falling into a prisoner’s dilemma trap, with all of them losing out in the process.

An additional argument in support of the legitimacy and, possibly, the urgency, of improving existing WTO disciplines on export restrictions is the treatment those received in accession negotiations since the Uruguay Round. As recalled in section 4, several new members, including China and Russia, had to accept in their accession protocols limits on their capacity to restrict exports which are significantly more stringent than existing rules which apply to all other members.

Finally, introducing stricter disciplines on export restrictions is certainly a legitimate issue to be negotiated in WTO, and a widely shared political willingness has emerged to do so, but is it also a ‘natural’ area of regulation for the WTO? In other words, would reinforced disciplines for export restrictions conform or conflict with the general framework of WTO rules? The answer to this question is that, if we consider the current set of WTO rules, stricter disciplines on export restrictions should, in fact, already be in place. As discussed in the previous section, export restrictions can be considered an area of 'under-regulation' in WTO and an asymmetry exists between the rules governing policies which restrict imports and those which do the same with exports. No matter what reasons lie behind the observed asymmetry in WTO policy disciplines, there is no WTO-consistent rationale which can justify it. Based on the general principles governing WTO, countries asking for a reduction of the imbalance between disciplines on export restricting and import restricting trade distorting policies have good reasons to do so. Yet this by no means guarantees their right to have their requests accepted by other members.

What are the options for a WTO agreement on export restrictions?

What follows is a discussion of a number of options which could be considered to modify current WTO disciplines on export restrictions. As discussed in section 2, export restrictions are used for avariety of goods and can be based on very different goals, from protecting a domestic processing industry, to securing resources needed to finance the public sector. Here the focus of the analysis is much narrower and limited to disciplines of export restrictions for agricultural goods, used on a temporary basis, justified by short term food security concerns.

The possible options for an agreement which are considered are addressed in increasing order of the scope of the changes of the current regime they involve, i.e. of their 'ambition' in terms of their capacity to limit the policy space currently available to exporting countries.

These options should be seen as additive, in the sense that, not only, in general, they are not mutually exclusive, but, quite the contrary, each of them should be seen as including the pertinent provisions of the less ambitious ones considered previously.

(a) Exempting from the imposition of export restrictions food purchases by international organizations to be distributed as food aid.

The option to reform current disciplines starting from the lowest level of ambition is an agreement to exempt from the imposition of export restrictions and export taxes food purchased by international organizations to be distributed on a non-commercial basis for humanitarian purposes. To define which transactions should be exempted from the imposition of export restrictions, under which circumstances and by which international organizations should they be handled, Annex L of the December 2008 draft modalities[46] can be used, *mutatis mutandis*, as a basis. Less restrictive disciplines would call for the prohibition to be imposed on extraordinary export taxes only, rather than on export taxes altogether, and for it to apply only to purchases made by selected international organizations, such as the WFP. This limitation of the use of export restrictions, even if effectively implemented, would have a significant but limited impact on food insecurity, as it would prevent the imposition of an additional cost on the purchase and distribution of food for humanitarian purposes when this is needed the most and hardest to access. The volume of wheat and wheat flour distributed as food aid in 2008 was only 53 percent of that distributed in 2005; for rice it was 64 percent.[47]

Paradoxically, export reducing policy reactions not only lead to an increase, at least in the very short run, in the number of food insecure and the demand for food to be distributed on a non-commercial basis, as well as to an increase in the cost of this food (the reduction of the domestic price in a 'large' country limiting its exports is smaller than the export tax it introduces), but also boost the exporter's fiscal revenue, due to the increase of both food aid demand and the export tax levied.

It is important to realize that the volume of food involved in purchases by humanitarian international organizations is very limited with respect to the size of the international market of the same commodities. In 2008 852,000 t of rice were distributed as food aid, including rice purchased and distributed locally, an amount which equals 3.1 percent of the rice traded internationally in the same year; food aid in wheat and wheat flour reached 1,444,000 t, 1.1 percent of the quantity of the same commodities traded internationally. As a result, were this option to be implemented, its impact on volume traded and market prices would be marginal; however, the benefits regarding the amount of food humanitarian organizations would be able to distribute under their relatively rigid financial constraints would be sizeable.

Procurement policies of humanitarian agencies, e.g. the WFP, are designed in such a way as to ensure that purchases do not negatively affect the food security of the country where food is procured, which should reduce further the motivation of the latter for limiting exports of domestically produced food to be distributed on a non-commercial basis for humanitarian purposes.

As discussed in section 5, restraints on imposing export restrictions and extraordinary export taxes on food to be distributed on a non-commercial basis for humanitarian purposes were agreed both at the November 2009 FAO World Summit on Food Security and at the June 2011 G20 meeting. However, not all countries subsequently acted in accordance with the commitment they had agreed to and no consensus materialized to introduce a similar commitment within the legally binding framework of WTO.

A recurring argument made in support of such an apparently minor modification to current provisions is that bringing export restrictions in agriculture a step further, no matter how small this is, towards transparent and effective WTO rules should be seen as an important first step which would then indicate the direction for the possible negotiation of more stringent disciplines in the future. Obviously this can be seen as an argument in favour as well as an argument against accepting this small change in existing regulations, depending on which side the issue is considered from. This may help explain why such an apparently minor modification to current rules, fully and uncontroversially justified on genuine humanitarian concerns, has not generated the political convergence needed to reach an agreement in WTO.

(b) Improving the enforceability of existing disciplines.

The second option considered does not modify current disciplines, rather it aims at making them enforceable by clarifying some of the terms used, adopting a transparent, unambiguous language.

Under this option export taxes would remain a policy instrument countries may use; only the conditions to allow the use of export restrictions, different from a tax, would be clarified and the procedures to be followed to implement an export restriction strengthened.

Under current rules, export prohibitions and restrictions can be introduced only if they are *temporarily applied to prevent or relieve critical shortages of foodstuffs or other products essential to the exporting contracting party* (Article XI:2a of GATT 1994).

The current text does not define legally binding conditions, making it practically impossible to challenge any potentially WTO illegal use of an export restriction in agriculture at the time of a price spike. The agreement under this option should spell out what is meant in Article XI:2a by the words *temporarily, prevent, relieve, critical shortages of foodstuff* and *essential*. This is a necessary condition to make it legally possible to identify agricultural export restrictions different from an export tax contrary to Article XI, and, subsequently, to challenge such restrictions within the WTO dispute settlement framework possible.

Article 12 of the AoA refers to specific consultation and notification obligations for the introduction of export restrictions in the case of agricultural products. Countries (other than net food importing developing countries) introducing an export restriction based on Article XI:2a of GATT have to give *due* *consideration to the effects of such prohibition or restriction on importing Members' food security'*. Before introducing the restriction the country *'shall give notice in writing, as far in advance as practicable, to the Committee on Agriculture comprising such information as the nature and the duration of such measure'* and *'shall consult, upon request, with any other Member having a substantial interest as an importer'* providing, upon request, all necessary information. As mentioned above these notification requirements, although very bland, remain largely ignored.

Making them more stringent and effective could be achieved by introducing a notification and implementation procedure similar to that jointly proposed by Japan and Switzerland in 2008. Countries should be required to notify in advance the Committee on Agriculture of their intention to introduce an export restriction on a foodstuff (the use of export taxes would remain unrestricted) providing adequate information on the legal base for introducing the restriction, the expected impact on other members' food security and specifying the date by which it will be removed. The actual introduction of the restriction could not occur before the successful conclusion of a time constrained consultation with other members affected by the restriction or, if this consultation has not come to end by the given deadline, before a green-light decision by an arbitration panel whose decision would be binding, this process also to be completed within a severe time constraint. To address the legitimate concern of countries fearing that the process leading to the implementation would be too long and would prevent the temporary restriction from generating its expected and much needed effects, countries could be allowed to implement the export restriction after a very short period of time after the notification of the declaration of intent, but would be forced to immediately remove the policy and to compensate members who were negatively affected if the arbitration panel were to rule that it did not satisfy the requirements of Article XI:2a of GATT. Again, a necessary condition for this procedure to be meaningful, is the removal of the ambiguity surrounding the meaning of the language used in Article XI:2a, making the definition of the conditions under which countries may recur to the use of export restrictions legally enforceable.

Implementation rules more transparent than those in current WTO disciplines and similar to those suggested under this option are included in several RTAs. For example, the bilateral trade agreements between the EU and several Balkan countries stipulate that, under exceptional circumstances, a country may impose an export tax on an agricultural good; however, in order to do so the country must apply to the Interim Committee overseeing the implementation of the agreement before introducing the tax, with the aim of finding an agreement to deal with the circumstances calling for limiting exports which is acceptable to both parties. However, if no agreement is reached within 30 days, then the country can proceed with the imposition of the tax (Korinek and Bartos, 2012).

This option would be a significant step forward with respect to the existing discipline, as it would significantly improve the transparency and predictability of the use of export restrictions and, hence, reduce information asymmetries and transaction costs for traders and investors and the uncertainty about world markets as a source of food when this is most needed.[48]

The impact of this option on the quantities traded and prices would be very small, as countries could always opt for an export tax instead of the now more transparent NTER. However, the higher institutional cost of introducing export restrictions may deter some countries from implementing export restrictions and reduce the probability of 'panic' policy reactions, such as the sudden introduction of an export ban. The significant reduction in the asymmetry of information which this option would introduce with a lower uncertainty on the implementation of export restrictions, will bring higher investments in agriculture and production everywhere, with a further (mid term) deflationary effect on prices.

(c) Limiting the impact of export taxes and restrictions on world markets, rather than imposing a discipline on export taxes and restrictions directly.

This option involves a completely different approach to disciplining export restrictions. Rather than imposing a stricter discipline on export taxes and quantitative restrictions, it imposes a constraint on their effects on world markets. Current disciplines would be left unchanged (possibly, but for what is foreseen in options (a) and (b) above), but their use would be made conditional on exporting country and product specific constraints on the volume exported. In order to be allowed to use policies limiting exports, countries will have to maintain unchanged with respect to the recent past the share of domestic production of the specific product exported, or, alternatively, to guarantee that a given proportion of this share is exported, e.g. having to export a share of domestic production which is no less than, for example, 80 percent of that observed in a given reference period. Historical levels of the quantities produced and exported should be calculated as the average quantities produced and exported over a certain period in the past, using reliable, pre-defined data sources (such as the FAOSTAT and UNCTAD COMTRADE data bases).

This approach was the one chosen in the initial negotiation proposals on agriculture by Canada in 1999 (Meilke, 2008: 151) and Japan in 2000 (G/AG/NG/W/91). However, the proposal to make the use of export restrictions conditional on the percentage of domestic production of the specific commodity which is exported remaining unchanged with respect to an historical level *'in order to allow importing countries to secure the necessary level of imports'* (G/AG/NG/W/91:16), was put forward in addition to the introduction of significantly stricter disciplines, while here it is considered as an alternative to be considered on its own. Provisions similar to those discussed here are included in NAFTA and in the Canada-Costa Rica and Canada-Chile RTAs (Korinek and Bartos, 2012: 23), where they apply, on a 'preferential' basis, only to export flows directed to countries which are part of the specific agreement.[49]

This option would make it possible for the exporter to limit the increase in the domestic price, while allowing, at the same time, domestic producers to accrue at least some of the benefits deriving from higher international prices (depending on the policy instrument used). The least complicated policy instruments countries may use to abide by this constraint are an export quota or an export tax.[50] If the exporter introduces an export quota equal to the minimum volume it must export in order to fulfill the commitment and be able to use the export restriction, and quota licenses are distributed for free to exporting firms these will be able to capture on the allowed exports the difference between the international and the domestic price (the quota rent). In this case, in principle, they can even gain with respect to the shock-inclusive, intervention-free scenario. If an export tax such that the volume exported equals the maximum needed to satisfy the constraint is used instead, the price difference will end up in fiscal revenue for the exporting country. Prices on international markets would still increase more than if the exporter had not intervened. How the absorption of the price volatility due to the shock is shared between the domestic country and the rest of the world will depend on the share of the domestic production which must be exported and on whether the shock occurred domestically or in a foreign market.

This option has the advantage that it would not need any negotiation of the details defining the exceptional circumstances under which a country could use export restrictions. In addition, it is based on the explicit acceptance that exporters have the right to pursue and fulfil, at least in part, the goal of protecting their consumers by preventing domestic production flooding foreign markets when prices show out-of-the-ordinary increases. Provisions can be included to allow for less stringent, or no constraints, in the case of a sudden significant drop in domestic production in the exporting country. The main issue involved in this option would be the setting of the constraints, which have to be country and product specific, and the monitoring of the implementation, due to the lack and/or the poor quality of the data to be used. In fact, estimates of domestic production at the very detailed level needed (which should reflect that at which export restrictions are to be applied) are often unavailable and, when they exist, are of relatively poor quality, certainly less reliable than trade data.

This option would have a relatively small, but significant, impact on volumes traded and international prices. The actual magnitude of this impact will depend on the details of the constraints to be satisfied in order for a country to be allowed to restrict its exports.

(d) Prohibiting the use of export restrictions, other than export taxes, on exports directed towards poor net food importing countries.

This option goes beyond strengthening the existing discipline on export restrictions as it involves limiting the use of export restrictions on exports directed towards those countries who will be more severely affected, i.e. poor net food importing countries. However, under this option too — as was the case under options (a) and (b) — export taxes would remain unrestricted.

Current discipline would be modified to make illegal the imposition of export restrictions on staple foods which are important in the consumption of the poorest segments of the population of poor net food importing countries. The prohibition would be limited to exports directed towards poor countries with severe food insecurity problems, which are those which would be more significantly affected by the exporter policy.

The provisions should include the definition of the set of poor net food importing countries whose imports cannot be subject to export restrictions, and the list of the staple foods which would be subject to the prohibition. The set of the net food importing countries benefitting from the positive discrimination needs to be well defined, in a transparent and unambiguous way. This can be done in several ways, including: choosing the set somewhere between the two extremes, considering the union of the two sets of the Net Food Importing Developing Countries (NFIDCs) and of the Least Developed Countries (LDCs),[51] at one end, and the set of net food importing least developed countries only, at the other; or considering those countries, either least developed or developing, in which the share of the population which is food insecure, or undernourished, exceeds a certain threshold. The prohibition should be limited to those staple foods which constitute a key component of the diet of the country's poor. This positive list of products can be importer specific, or a single list of staple food products can be identified which would apply across all poor net food importing countries.

The choices to be made with respect to the beneficiary countries and the staple foods to which the prohibition applies would define the extent of the protection assured to poor importing countries and, symmetrically, of the limitation of the decision space for the policy making of the exporters. Furthermore, the less complicated and more transparent these choices are, the more predictable and more effective the implementation will be.

There are at least three aspects of this option which need to be considered. The first relates to the possibility of arbitrage occurring, that is exports not subject to any restriction directed to a country entitled to the positive discrimination being re-exported to a country which is not entitled to the same treatment. The second relates to the possibility of the exporting country reacting rationally to the prohibition on limiting its exports to the group of beneficiary countries and achieving its domestic policy goal through the imposition of a more restrictive than otherwise limitation on its exports towards the countries which are not among the beneficiaries of the prohibition. Since the price volatility induced by the original shock will have to be eventually absorbed somewhere, this legitimate policy choice by the exporter would make these third countries bear the cost of the prohibition, in terms of having to absorb a higher share of the price volatility, not the exporter. In other words, the prohibition would induce a transfer of wealth from the rest of the world (importers and exporters who decide not to adjust their policies or are not in the position to do so) to the poor net food importing developing countries. The third is the fact that the exporter could always bypass the restriction by opting for the use of an export tax, which under this option would remain unrestricted.

With reference to the first point, arbitrage can be avoided by including in the new provisions the obligation for the importing country benefitting from the new discipline not to re-export the staple food it imported. The redistribution of the costs of the prohibition involved in the new discipline is a fact; if we can assume exporters willing to use export restrictions to limit the increase of domestic prices of food staples to be mostly developing countries, this would suggest it would make more sense to define a relatively large set of beneficiary countries, such as the entire set of the net food importing developing and least developed countries, which would then impose on the developed world most of the cost of developing country exporters protecting their consumers, without determining additional costs to the poor in developing countries, possibly an equitable arrangement. Regarding the third concern, the only way out would be a more ambitious agreement, which would extend to export taxes the provisions for a country-selective prohibition of the use of export restrictions such as those described above.

It is impossible to make an overall comparison between the 'ambition' of this option and its market impact and those of the previous one, as the relative capacity of these two options to limit the use of export restrictions and, hence, reduce their inflationary effects on international markets, will largely depend on the country and product specific details contained in the provisions.

(e) Introducing stricter disciplines for export restrictions as well as export taxes.

The ambition of this option lies in the stricter discipline it would impose on the use of export restrictions and on the fact that the same restrictions would now apply to export taxes. However, the provisions under this option would not go as far as imposing limitations on policies restricting exports analogous to those currently imposed on policies which restrict imports.

Essentially in this option export restrictions and export taxes are declared illegal and then exceptions are defined under which this prohibition does not apply. These exceptions need to be defined in a simple and transparent way, resulting in 'automatic' and easy to verify, legally enforceable rules. Export restrictions and taxes would now be treated equally. Korinek and Bartos (2011: 24) found this approach to be common to the vast majority of RTAs which deal with export restrictions.

The exceptions could relate to the countries that would be allowed to intervene to restrict their exports, the staple food products which can be subject to export restrictions and the trigger mechanism with which a country would be allowed to restrict its exports.

Only developing countries acting on food security concerns would be allowed to use, on a temporary basis, export-reducing policies. The choice can span from all developing countries, to restricting the use of export restrictions to least developed countries only (net food importers and exporters alike). The lift of the prohibition could be further restricted to countries with a significant share of food insecure population. Identification of countries allowed to use export restricting policies could be based either on transparent criteria or on self-selection. Products for which export restrictions can be imposed should be limited to staple foods; the list of products should be limited to those which are important in the diet of the poorest segments of the population and can be either exporter specific, or a single list of staple food products be identified which would apply across all exporters. The most sensitive element of the provisions under this option is the mechanism which would make it possible for a country which can in principle use export limiting policies for a specific product to actually be allowed to do so. The trigger mechanism needs to be as transparent and automatic as possible, and to include both a trigger activated by a significant increase in domestic price and one activated by a significant increase in exports, and should parallel mechanisms already in use in WTO regulations, such as those used for the Special Safeguard Provisions (Article 5 of the AoA) or, if an agreement were to be found in the Doha negotiations, those which would likely be in place for the Special Safeguard Mechanism (SSM).

The group of the countries allowed to use export restrictions, the staple foods for which these can be used and the trigger mechanism to be activated in order for the export limitation to be allowed will jointly define the level of ambition of the agreement.

One possibly efficient way to design the new provisions would be to stay with relatively ample, uncomplicated and easy to apply rules with respect to the countries which can make use of export limiting policies, to define a set of staple foods on which such policies can be applied which is the same for all countries and relatively ample, and to devote, instead, more energy to the negotiation on the trigger mechanism, which should be transparent as well as effective in identifying circumstances which make the use of export restrictions justified by an exporting country's legitimate food security concerns.

Two issues seem particularly relevant in the design of the provisions under this option. The first one relates to the decision to be made regarding the countries which would be allowed to impose export restrictions. Were this group relatively large, for example the entire set of the developing countries, it may well happen that they account for most of the production and exports of specific foodstuffs – rice would be a typical example – *de facto* exempting from the prohibition all the main exporters on that market. The second issue to be carefully considered relates to the need for the price and export based trigger mechanisms to be defined considering a single commodity or on the combined basis of a group of staple foods relevant for the country's food security. In other words, should the price and/or exports of a staple food important for domestic consumption by the poor members of the population suddenly increase, should the country be allowed to impose export restrictions temporarily on that product alone, or on the entire set of staple foods relevant for its food security? And, on the contrary, if only the price of one relevant staple food increases and those of the others do not, the overall availability of food remaining sufficiently large to compensate the limited access of consumers to the foodstuff whose price increased, should the country be allowed to limit its exports of the latter? Depending on the answers to these questions, the trigger mechanisms could be based on the prices and exported volumes of a single product or of a set of staple foods, in this case possibly weighting them with their relative importance in the basket of the staple foods consumed by the country's poor.

The impact of this option on traded volumes and prices can be expected to range from significant to substantial, depending on the details of the provisions actually agreed.

(f) Full symmetry in regulating import and export restrictions.

The feasible option with the highest ambition is that of extending to export restrictions, *mutatis mutandis*, the provisions for import restrictions, either those currently in place or, if the Doha Round negotiations ever see an end, those contained in the final agreement. While the complete abolition of export restrictions and taxes has been proposed, this does not seem to constitute, at least for the time being, a politically feasible option for a WTO agreement.

In tandem with the discipline on market access introduced with the AoA, this option should include the 'taxification' of all existing export restrictions other than export taxes, i.e. their replacement with 'equivalent' export taxes, and the reduction of export taxes, both, the existing ones and those resulting from the 'taxification'.[52] For products for which export restrictions different from a tax exist, a Special Safeguard Clause will make it possible to introduce, for a limited time and under special circumstances, an export tax above the maximum level otherwise allowed. To guarantee minimum export volumes, export quotas at reduced tax rates, whose volumes will be defined in terms of a certain percentage of domestic production in a reference period, will be introduced for all countries restricting their exports; the quotas will have to be administered on a MFN basis. Under certain circumstances countries should be allowed not to replace an existing export restriction with an equivalent export tax, but in this case minimum export volumes will have to be larger than otherwise. Finally, a Special and Differential Treatment will apply to developing countries; this will define longer implementation periods, the exemption from tax reduction commitments and the introduction of bound tax rates instead, and smaller tax rate quotas. These provisions should be integrated with those in options (a), (b), (c) and (e) above, as appropriate.

Bindings for export taxes and the prohibition on introducing new ones are included in the accession protocols of some of the countries which became members of the WTO since the Uruguay Round as well as in many RTAs.

Finally, if an agreement were to be found to conclude the Doha Round, this would certainly include revised disciplines for market access; in this case these new provisions would be those to be extended, *mutatis mutandis*, to export restrictions.

The effectiveness of this option in expanding volumes traded and reducing price increases in the event of a price rise initially due to an exogenous shock will be a function of the details of the provisions agreed. However, in this case the impact should be expected to be substantial.

A quantitative assessment of the different trade and price effects of the six options, described above only in their general terms, is impossible, because these will largely depend on the fine details contained in the actual legal text agreed. Nevertheless, to have at least some reference information in mind when considering what their impact could be, the conclusions reached in the studies which empirically simulated the market effect of export restrictions or of their removal, discussed in section 3, may be useful.

7. CONCLUSIONS

Fighting food insecurity is a complex challenge, involving numerous factors. Countries intervening to restrict their exports is not among the main causes of the inadequate food intake by many of the poor in the developing world. Nevertheless, export restrictions significantly contribute to exacerbating negative effects on food security when an unexpected, rapid increase of food staple prices occur and a food crisis develops. Export restrictions have important negative effects on food security also in a medium run. By undermining confidence on international markets as a trustable source of food in the event of a food shortage, they induce a shift in net food importers' food security strategies from relying on international markets toward higher self-sufficiency and larger food reserves, and lower the propensity to invest in agriculture in exporting countries, where a competitive advantage in production exists. The effect is a sub-optimal use, from a global point of view, of the scarce resources available, with negative effects on food availability, poverty and, ultimately, food security. In the medium term also exporters will be negatively affected by their own export limiting policies because of a lower demand for their exports and reduced investments in their agricultures.

In addition, because the non-cooperative policy reactions by importers and exporters to soaring international prices partially offset each other, significantly lowering the capacity of the policy instruments used to limit the increase of domestic prices, the need emerges for all countries, importers and exporters alike, to look into multilaterally agreed improved disciplines of export restrictions.

Agricultural export restrictions are a policy area which is 'under regulated' in the Uruguay Round agreement, current provisions are weak and remain largely ignored. Negotiations to improve them which took place since the early 2000s did not succeed, although most of the responsibility for the failure is linked to the difficulties encountered by the Doha Round negotiations as a whole.

Six possible options for a WTO agreement on export restrictions have been identified and discussed, with different levels of ambition in terms of their capacity to limit the use of temporary export restrictions aimed at preventing the transmission to the domestic market of soaring international prices.

The argument that the issue of high international food prices has been largely relegated to the margins of the negotiations in the Doha Round negotiations, which seem to have never internalized the fact that the state of agricultural markets has changed since the conclusion of the Uruguay Round and, as a result, that considering disciplines of trade interventions in the event of high food prices never has come *'on the collective radar of WTO members'* (De Schutter, 2011), certainly helps explain what happened. Nevertheless, the main reason why an agreement on export restrictions has never been given a high priority on the agenda of the negotiations is the lack of the necessary consensus on it. The truth is that it is difficult to foresee that large developing country exporters - and some of them are certainly among the most politically powerful actors at the table of the negotiations today - would give up the possibility of restricting staple food exports without obtaining significant gains in other areas (Gilbert, 2012; Headey, 2011). It is against this simple fact that all potential scenarios have to be assessed.

In theory, a WTO agreement on export restrictions could occur under three alternative scenarios: as part of the agreement concluding the Doha Development Agenda Round, under a 'single undertaking' scenario; as part of an agreement on a limited number of issues which is reached on the side of Doha Round negotiations, under what is often referred to as an 'early harvest' scenario; and as a 'stand alone' agreement, involving only revised disciplines of export restrictions. Analysing the probability of each of these scenarios to materialize is well beyond the scope of this paper.[53] Nevertheless, to conclude, a brief discussion of these three alternatives may be useful, to put the possibility of the options for an agreement on export restrictions into perspective.

In principle, in a 'single undertaking' scenario it should be easier for all exporters to find reasons to agree to disciplines which will limit their decision space in the politically highly sensitive event of a severe increase of staple food prices. In this case, not only may they find the gains from the commitments on market access, export competition and domestic support in the agreement on agriculture exceed their cost from the reduction of their ability to constrain exports, but net gains from the agreement as a whole may also come from areas outside the boundaries of the negotiations on agriculture. If the Doha Round sees a conclusion, the 'single undertaking' agreement would very likely include an agreement on balanced but stricter, effective and legally enforceable disciplines on export restrictions carrying a significant degree of ambition, such as those in scenarios (c), (d), (e) or (f) above.

While stricter disciplines on export restrictions would certainly be part of a 'single undertaking' agreement, this may or may not be the case under an 'early harvest' scenario.[54] While export restrictions were among the areas debated in preparation of the 2011 Ministerial Conference, they do not seem to have received much attention so far in the preparatory negotiations for the 9th Ministerial, the one to be held in Bali, Indonesia, in December this year. The main trade issues being considered include: trade facilitation; modifying commitments related to domestic support in agriculture to allow developing countries to buy on the domestic market at supported prices food to be stockpiled or used as food aid; introducing stricter constraints on direct and indirect export subsidies; the implementation of import tariff rate quotas; as well as some long standing issues, such as those related to the 'cotton initiative' and the introduction of duty-free and quota-free market access for least developed country exports. The request by a group of developing countries to introduce the possibility to relax commitments in the area of domestic support to make it possible to stockpile food purchased on the domestic market at supported prices, reveals a negotiations agenda based on a self-sufficiency approach to address food security concerns, which means less emphasis is put on the need for stricter rules on export restrictions. Nevertheless, even if export restrictions were to be included in an 'early harvest' agreement, the ambition of the new provisions would likely be on the low side. In fact, the areas covered by the agreement being limited, possible gains for the exporters to compensate the cost of their accepting significant constraints in their capacity to reduce exports would likely be limited as well.

The third scenario is that of a stand alone agreement, involving export restrictions only. Given what happened at the Ministerial Conference in 2011 and on what has not happened so far in preparation for the one in Bali, the probability of countries deciding to agree on the introduction of more restrictive disciplines for export restrictions, without agreeing on anything else significant, seems low. In this case exporters should be willing to give up part of their ability to limit their exports without obtaining anything in exchange.[55] Nevertheless, should export restrictions be the focus of a 'stand alone' agreement, one could expect this to be characterized by a relatively low level of ambition, such as in options (a) or (b) above. However, this is not to dismiss the importance of such an agreement, which, in fact, would be a significant and useful step forward with respect to the current discipline.

If a WTO agreement on export restrictions does not materialize, countries may decide to agree on a code of conduct regarding export restrictions outside this institution, in the framework of FAO, of the G20 group, within RTAs or on the basis of a voluntary agreement signed by a significant group of exporters, for example as part of an International Commodity

Agreement. Would this be a feasible option? Would it be an effective option? My answer to the first question is yes, that to the second question is no.

Based on what has been discussed in section 3, it would certainly be a feasible option, as countries have already shown to be ready to assume commitments on export restrictions outside the WTO framework stricter than those they are subject to within it. However, this would not be an effective option. In fact, any agreement without legally enforceable provisions, to make not in their interest for countries to ignore the commitments they had agreed to, would be of little use, and among existing international institutions only WTO has proved to have an effective mechanism to enforce compliance of its rules (when these are defined in a legally binding way). This is not the case for the other institutions mentioned above. For example, it has already been mentioned that not all countries honored the commitments on export restrictions they had assumed at the 2009 FAO World Summit on Food Security. Gilbert (2012) discusses why International Commodity Agreements are not an effective option to address food security issues on a multilateral basis, including the introduction of stricter disciplines for export restrictions. His argument is that they tend to collapse in period of crisis because they too fail the 'incentive compatibility requirement' needed to avoid countries reneging on their commitments when compliance becomes very costly. In principle, it is the action of major grain countries, importers and exporters, that has the greatest impact on international markets relevant for food security, which implies that a voluntary binding agreement between the small set of the largest producers, exporters and importers may be sufficient to obtain the desired result (Headey and Fan, 2010; Howse and Josling, 2012). In this case the question to be answered reverts to why should they find the motivation to commit to limit their policy space and to pay a cost in terms of price instability on their domestic market to deliver such a global public good?

In other words, any alternative to a WTO agreement will likely prove difficult to achieve or very weak in its capacity to effectively limit exporters reacting to price surges by restricting their exports.

ENDNOTES

1 A large country may exercise its market power by setting the level of its export tax with the goal of maximizing its revenue, or to maximize its overall welfare by improving its terms of trade, assuming other countries do not retaliate.

2 Export restrictions of a very different nature are ‘voluntary export restrains’, which are export limitations resulting from an agreement between the exporter and an importer under the threat of the latter to impose an import limiting measure instead. In this case the exporter has the advantage of capturing the rents associated with its export restriction, which would otherwise be accrued by the importer. For example, in 1986 Canada agreed with the US to impose a 15 percent export tax on softwood lumber to avoid the US imposing an import tariff of the same amount. The export tax was terminated in 1991 under pressure by domestic producers, but a new agreement was reached in 1996 which included a mixture of export quotas and taxes (Scholefield and Gatsford, 2006: 243-4).

3 The different instruments a country may use to restrict exports and their effects are discussed in Mitra and Josling (2009), Piermartini (2004) and Sharma (2011).

4 Bouët, Estrades and Labord (2013) discuss the motivation for using a DET and its effects.

5 When a RTA includes preferential rules on import restrictions, it often includes also export restrictions to be imposed by the importer in order to avoid the circumvention of the export restrictions imposed by the original exporter on third countries by re-exporting those goods imported on a preferential basis.

6 However, if conditions on the international market trigger the policy reactions by several ‘small’ countries to limit their exports, the joint effect of their individual decisions will become substantial.

7 This is not the case if a country is limiting its exports by using an export quota or an export ban. In addition, there is an asymmetry in exporters and importers policy reactions, because the imposition of an export restriction is likely to be fiscally advantageous for the exporter, i.e. it will generate additional benefits to that of limiting the increase of the domestic price, while the opposite will be the case when an importer lowers its import restrictions or subsidizes imports, thereby reducing its fiscal revenue or making its fiscal expenditure increase, respectively.

8 The analysis would be different for a policy aimed at stabilizing domestic prices, when the intervention is not temporary and the goal is reducing the extent of price volatility by avoiding the occurrence of extreme price fluctuations at both ends of the distribution.

9 Götz *et al*. (2013a) found evidence that export restrictions introduced by Russia and Ukraine in 2007/08 and 2010/11 induced investors to downsize and delay planned investments in the grain sector.

10 In the case of a large country intervening, the redistribution involves foreign actors as well. In this case the effects will be opposite in sign, with foreign consumers and processors losing wealth and foreign producers gaining.

11 Demeke *et al*. (2009) and Wise and Murphy (2012) discuss the fact that recent spikes in international prices acted as a catalyst for many net importer developing countries to reassess food security strategies which were heavily reliant on the market.

12 Dawe and Timmer, 2012; FAO et al., 2011; Gilbert, 2012; Headley and Fan, 2010; Martin, 2012; Timmer, 2011; Wise and Murphy, 2012.

13 The EU is counted as 15 countries.

14 The EU is now counted as 25 countries.15

15 These include Abbott *et al.*, 2008 and 2009; Baffes and Dennis, 2013; Baffes and Haniotis, 2010; Balcombe, 2011; Busse *et al.*, 2011; Dewbre *et al.*, 2008; FAO, 2008a; Gilbert and Morgan, 2010; Headey and Fan, 2008 and 2010; HLPE, 2011; Lagi *et al.*, 2011; Martin, 2012; Piesse and Thirtle, 2009; Prakash, 2011; Serra and Gil, 2013; Tadesse *et al.*, 2013; Tangermann, 2011; Timmer, 2010; von Braun *et al.*, 2008; Westhoff, 2008.

16 Average monthly price of wheat (US, SRW) increased by 177 $/mt (+99.5 percent) in nominal terms between December 2006-May 2007 and November 2007-April 2008, and by 126 $/mt (+66 percent) between January 2010-June 2010 and December 2010-May 2011.

17 FAO, 2009a; Headey, 2011; Headey and Fan, 2008 and 2010; Ivanic *et al.*, 2011; Konandreas, 2012; Sharma, 2011; Thompson and Tallard, 2010.

18 Dawe, 2010; FAO *et al.*, 2011; Headey, 2011; Headey and Fan, 2008 and 2010; Timmer, 2008.

19 5 percent broken, white rice, f.o.b. Bangkok (which can be considered as a reference price for international transactions).

20 Cummings, 2012; Dawe, 2010; FAO *et al.*, 2011; Headey, 2011; Headey and Fan, 2010; McCalla, 2009; Timmer, 2010.

21 Exceptions allowing the use of quantitative restrictions are also defined in Articles XX and XXI of GATT 1994, which identifies a relatively wide spectrum of exceptional circumstances, such as the export restrictions deriving from obligations from an intergovernmental commodity agreement, the need to ensure essential quantities of a product to a domestic processing industry (as long as certain other conditions are met), to preserve exhaustible natural resources or to protect international safety.

22 Howse and Josling, 2012; Karapinar, 2011; Kim, 2010; Konandreas, 2011; Korinek and Bartos, 2012; Sharma, 2011.

23 A different opinion is expressed by Howse and Josling (2012: 17-18) who argue that it is legally questionable whether the use of export taxes should be considered to be always possible.

24 Decisions on cases regarding export restrictions which have been brought before the Dispute Settlement Body do not help significantly to reduce the vagueness about how these terms should be interpreted (Karapinar, 2011 and 2012).

25 Bulgaria, Czech Republic, Hungary, Kyrgyz Republic, Republic of Moldova, Poland, the Former Yugoslav Republic of Macedonia, and Ukraine.

26 In 2007 Mongolia was granted a waiver to extend this deadline by five years (Karapinar, 2012).

27 Commitments regarding export duties are listed in Part V of the ‘Schedule of Concessions and Commitments on Goods’ annexed to Russia’s accession protocol.

28 Analyses providing different perspectives on what happened include Chatterjee and Mukumba, 2011; De Schutter, 2011; Howse and Josling, 2012; Mitra and Josling, 2009; and Wise and Murphy, 2012.

29 The composition of the Cairns group has changed over the years. This proposal was circulated by Argentina, Australia, Bolivia, Brazil, Canada, Chile, Colombia, Costa Rica, Guatemala, Indonesia, Malaysia, New Zealand, Paraguay, Philippines, South Africa, Thailand and Uruguay.

30 WTO Document G/AG/NG/W/93.

31 WTO Documents G/AG/NG/W/94 and G/AG/NG/W/91, respectively.

32 WTO Documents G/AG/NG/W/140, G/AG/NG/W/135, G/AG/NG/W/98 and G/AG/NG/W/15, respectively.

33 The European Union did not table any proposal in the negotiations on agriculture until much later, in January 2003, and this did not include any reference to export restrictions.

34 WTO Document WT/MIN(01)/DEC/1.

35 WTO Document TN/AG/W/1. The 'modalities' are the document which shapes the final outcome of the negotiations on agriculture. They provide the 'rules' each country must observe in producing the draft schedules of its commitments, which, once verified and agreed by the other members, will eventually be included in the legal text of the final agreement.

36 WTO Document WT/L/579.

37 WTO Document WT/MIN(05)/DEC.

38 WTO Document TN/AG/W/4/Rev.4 .

39 'Differential export taxes' are mentioned in the same document as an issue on which no convergence existed, with no further comments.

40 The members of the G8 are Canada, France, Germany, Italy, Japan, the United Kingdom, the United States and Russia.

41 The members of the G20 are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom, the United States and the European Union.

42 WTO Document WT/GC/140/Rev.1.

43 WTO Document WT/GC//138. The proposed text was: *''We recognize that the first responsibility of each member state is to ensure the food security of its own population. We also recognize that food export barriers restricting humanitarian aid penalize the most needy. We agree to remove food export restrictions or extraordinary taxes for food purchased for non-commercial humanitarian purposes by WFP and agree not to impose them in the future.*'

44 The issue of strengthening WTO discipline on export restrictions has been raised in Non-Agricultural Market Access (NAMA) Doha Round negotiations as well, but there too with no tangible results (Kim, 2010; Mitra and Josling, 2009).

45 WTO Document WT/MIN(11)/11.

46 WTO Document TN/AG/W/4/Rev.4.

47 Food aid includes emergency, program and project deliveries; the source is the WFP's INTERFAIS (International Food Aid Information System).

48 Agatiello and Fliess (2013) discuss in detail potential benefits for exporting and importing countries from increased transparency in the use of export restrictions.

49 More recent RTAs also involving Canada no longer use this approach in their dealing with export restrictions (Korinek and Bartos, 2012: 33).

50 Alternatively, the country might decide to fulfill the constraint by imposing on exporting firms, in order to be allowed to export a certain quantity of the product, the obligation to provide evidence that the quantity necessary to obtain the needed exports-to-production ratio has been actually sold on the domestic market. In practice this would be a very hard regulation to implement effectively, even more so in the presence of relatively weak public institutions.

51 The group of the NFIDCs is based on the self-designation by countries themselves and does not include LDCs, most of which are net food importers.

52 Replacing an export restriction with an 'equivalent' export tax has implications for the political economy of a country's decision making. In fact, although an export tax will transform the rent associated with the export restriction in revenue for the public finances, countries may prefer imposing the export restriction instead. This may be the case for two very different reasons. If the export restriction is such that the rent it generates is accrued by producers/exporters, this will ease the cost for them of the policy, potentially even increasing their gains with respect to the intervention-free scenario. A counterargument is that, in principle, a country can always use an export tax instead and transfer back the revenue this generates to those which are negatively affected by it (and can do so targeting very precisely the groups affected). The second reason is that a less transparent and more discretionary policy implementation framework – for example an export quota based on the distribution of export licenses - makes possible rent-seeking activities by policy makers and by those in charge of administering the policy instrument used.

53 Bureau and Jean (2013a and 2013b) offer a discussion of the status and prospects of multilateral negotiations and the implications for food security.

54 It seems rather odd that such an agreement is unanimously referred to as an 'early harvest'. Were it ever to occur, it would more likely include the 'only harvest possible' from the, by then, officially failed negotiations. In fact, the decision to close an agreement outside the 'single undertaking', given the status and prospects of the Round, would occur only if all countries concur that nothing else can be possibly harvested at a later stage, otherwise it would be better to keep on negotiating to try to include other possible areas of agreement in the 'early harvest'.

55 Laborde, Estrades and Bouët (2013) simulated the impact of eliminating all export taxes using a CGE model to conclude that this would lead to an increase in world welfare, but some of the countries that currently restrict their exports would lose out. This means that a WTO agreement involving export restrictions only would be unlikely.

REFERENCES

Abbott P. (2011). “Export Restrictions as Stabilization Responses to Food Crisis”. *American Journal of Agricultural Economics*. 94 (2): 428-434.

Abbott P. C., C. Hurt and W. E. Tyner (2008). What’s Driving Food Prices?. Farm Foundation. Issue Report. July.

Abbott P. C., C. Hurt and W. E. Tyner (2009). What’s Driving Food Prices? March 2009 Update. Farm Foundation. Issue Report. March.

Agatiello O. R. and B. Fliess (2013). Export Restrictions. Benefits of Transparency and Good Practices. OECD Trade Policy Paper No. 146. OECD Publishing. http://dx.doi.org/10.1787/5k49czl4c5kh-en.

Anderson K. (2012). Government trade restrictions and international price volatility. *Global Food Security*. (1): 157-166.

Anderson K., M. Ivanic and W. Martin (2013). Food Price Spikes, Price Insulation, and Poverty. Policy Research Working Paper. The World Bank, Development Research Group, Agriculture and Rural Development Group. July.

Arezki R. and M. Brückner (2011). Food Prices and Political Instability. IMF Working Paper. WP/11/62. March.

Baffes, J. and A. Dennis (2013). Long-Term Drivers of Food Prices. The World Bank, Development Prospects Group & Poverty Reduction and Trade Department, Economic Management Network. Policy Research Working Paper No. 6455. May.

Baffes, J. and T. Haniotis (2010). Placing the Recent Commodity Boom into Perspective. In Aksoy M. A. and B. Hoeckman (eds.). Food prices and Rural Poverty. The World Bank.

Balcombe K. (2011). The nature and determinants of volatility in agricultural prices: an empirical study. In A. Prakash (edt). Safeguarding Food Security in Volatile Global Markets. FAO. Rome.

Berazneva, J. And D. R. Lee (2013). “Explaining the African food riots of 2007-2008: An empirical analysis”. *Food Policy*. 39: 28-39.

Bouët, A., C. Estrades and D. Laborde (2013). Differential Export Taxes along the Oilseeds Value Chain: A Partial Equilibrium Analysis. mimeo.

Bouët, A. and D. Laborde Debucquet (2010). Economics of Export Taxation in a Context of Food Crisis. A Theoretical and CGE Approach Contribution. IFPRI Discussion Paper 00994, June.

Bureau J.-C. and S. Jean (2013a). International Agricultural Trade and Negotiations: Coping with a New Landscape. FoodSecure Working Paper No. 08. March. (www.foodsecure.eu)

Bureau J.-C. and S. Jean (2013b). “Trade liberalization in the bio-economy: coping with a New Landscape”. *Food Policy*. 44: 1-10.

Busse S., B Brünner and R. Ihle (2011). Emerging linkages between price volatilities in energy and agricultural markets. In A. Prakash (edt). Safeguarding Food Security in Volatile Global Markets. FAO. Rome.

Chatterjee B. and C. Mukumba (2011). Food Export Restrictions. Balance Importers’ and Exporters’ rights. CUTS-CITEE Working Paper No. 1/2011.

Clay E. J., S. Keats and P. Lanser (2011). Incorporating Global Food Price Spikes into the Risk Management Agenda. Overseas Development Institute. September.

Crosby, D. (2008). "WTO Legal Status and Evolving Practice of Export Taxes", *Bridges*, (5), October-November: 3-4.

Cummings, R. W. jr. (2012). "Experience with managing food grains price volatility in Asia". *Global Food Security*. 1: 150-156.

Dawe, D. (edt). (2010). The Rice Crisis. Markets, Policies and Food Security. FAO. Rome.

De Schutter, O. (2011). The World Trade Organization and the Post-Global Food Crisis Agenda. Putting Food Security First in the International Trade System. UN Special Rapporteur on the Right to Food. Briefing Note No. 4. November.

Dewbre, J., C. Giner, W. Thompson and M. Von Lampe (2008). "High food commodity prices: will they stay? who will pay?". *Agricultural Economics*. (39) supplement: 393-403.

Dollive K. (2008). The Impact of Export Restraints on Rising Grain Prices. U.S. International Trade Commission. Office of Economics. Working Paper No. 2008-09-A.

Dorward, A. (2012). "The short- and medium-term impacts of rises in staple food prices". *Food Security*. 4: 633-645.

FAO (2008a). Soaring Food Prices: Facts, Perspectives, Impacts and Actions Required. (HLC/08/INF/1). April.

FAO (2008b). National Policy Responses to High Food Prices. Context and Perspectives. Policy Brief, Economic and Social Development Division. July.

FAO (2009a). Reform of the Committee on World Food Security. Committee on World Food security, Thirty-fifth Session, Rome 14, 15 and 17 October (CFS:2009/2 Rev 2).

FAO (2009b). Declaration of the World Food Summit on Food Security. World Summit on Food Security. Rome, 16-18 November.

FAO, IFAD, IMF, OECD, UNCTAD, WFP, the World Bank, the WTO, IFPRI and the UN HLTF (2011). Price Volatility in Food and Agricultural Markets: Policy Responses. OECD. 2 June.

Gilbert, C. L. (2012). "International agreements to manage food price volatility". *Global Food Security*. 1: 134-142.

Gilbert C.L. and C.W. Morgan (2010). "Food price volatility". Philosophical Transaction of the Royal Society B, Biological Sciences. 365: 3023-3034.

Götz, L., T. Glauben and B. Brümmer (2013a). "Wheat export restrictions and domestic market effects in Russia and Ukraine during the food crisis". *Food Policy*. 38: 214-226.

Götz, L., F. Qiu, J.-P. Gervais and T. Glauben (2013b). Export Restrictions and Multiple Spatial Price Equilibria: Export Quotas for Wheat in Ukraine. Paper prepared for presentation at GEWISOLA 2013 (Berlin, 25-27 September).

Headey D. (2011). "Rethinking the global food crisis: The role of trade shocks". *Food Policy*. 36: 136-146.

Headey, D. (2013). The Impact of the Global Food Crisis on Self-Assessed Food Security. The World Bank. Policy Research Working Paper No. 6329. January.

Headey D. and S. Fan (2008). “Anatomy of a crisis: the causes and consequences of surging food prices”. *Agricultural Economics*. (39) supplement: 375-391.

Headey D. and S. Fan (2010). Reflections on the Global Food Crisis. How did it happen? How has it hurt? And how can we prevent the next one? IFPRI. Research Monograph No. 165.

HLPE (High Level Panel of Experts on Food security and Nutrition) (2011). Price volatility and food security. A report by the High Level Panel of Experts on Food Security and Nutrition. Committee on World Food Security. July.

Howse, R. and T. Josling (no date, probably 2012). Agricultural Export Restrictions and International Trade Law: A Way Forward. International Food & Agricultural Trade Policy Council.

Huchtet-Bourdon M. (2011). Agricultural Commodity Price Volatility : An Overview. OECD Fppd, Agriculture and Fisheries Working Paper No. 52. OECD Publishing. (http://dx.doi.org/10.1787/5kg0t00nrthc-en)

ICTSD (2008). “Japan, Switzerland Propose Stronger WTO Curbs On Use Of Food Export Restrictions”. *Bridges Weekly Trade News Digest*. (12) 15. 30th April.

ICTSD (2011a). “Agricultural Export Restrictions Spark Controversy at the WTO”. *Bridges Weekly Trade News Digest*. (15) 12. 6th April.

ICTSD (2011b). “Agricultural Export Restrictions Spur Discussion Ahead of WTO Ministerial”. *Bridges Weekly Trade News Digest*. (15) 33. 5th October.

ICTSD (2012). “Ukraine to Ban Wheat Exports from mid-November”. *Bridges Weekly Trade News Digest*. (16) 36. 24th October.

Ivanic, M. and W. Martin (2008). “Implications of higher global food prices for poverty in low-income countries”. *Food Policy*. (39) supplement: 405-416.

Ivanic, M., W. Martin and A. Mattoo (2011). Welfare and Price Impacts of Price-Insulating Policies. Mimeo, 12 August.

Jones, D. and A. Kwiecinski (2010). Policy Responses in Emerging Economies to International Agricultural Commodity Price Surges. OECD Food, Agriculture and Fisheries Papers No. 34. (http://dx.doi.org/10.1787/5km6c61fv40w-en)

Karapinar, B. (2011). “Export Restrictions and the WTO Law: How to Reform the ‘Regulatory Deficiency’. *Journal of World Trade*. (6): 1139-1155.

Karapinar, B. (2012). “Defining the legal boundaries of export restrictions: a case law analysis”. *Journal of International Economic Law*. (15) 2: 443-479.

Kazeki J. (2003a). Analysis of Non-Tariff Measures: the Case of Export Duties. OECD. TD/TC/WP(2002)54/Final.

Kazeki J. (2003b). Analysis of Non-Tariff Measures: the Case of Export Restrictions. OECD. TD/TC/WP(2003)7/Final.

Kim J. (2010). Recent Trends in Export Restrictions on Raw Materials, in OECD (2010) The Economic Impact of Export Restrictions on Raw Materials. OECD Publishing: 13-57. (http://dx.doi.org/10.1787/9789264096448-en)

Konandreas, P. (2011). “Global governance: international policy considerations”. in Prakash A. (edt). Safeguarding Food Security in Volatile Global Markets. FAO. Rome: 345-376.

Konandreas, P. (2012). Trade Policy Responses to Food Price Volatility in Poor Net Food-Importing Countries. ICTSD and FAO, Issue Paper No. 42, June.

Korinek J. and J. Bartos (2012). Multilateralising Regionalism: Disciplines on Export Restrictions in Regional Trade Agreements. OECD Trade Policy Papers No. 139. http://dx.doi.org/10.1787/5k962hf7hfnr-en.

Laborde D., C. Estrades and A. Bouët (2013). "A Global Assessment of the Economic Effects of Export Taxes". *The World Economy*. 36 (10): 1333-1354.

Lagi M., Y. Bar-Yam, K. Z. Bertrand, and Y. Bar-Yam (2011). The Food Crises: A Quantitative Model of Food Prices Including Speculators and Ethanol Conversion. (http://dx.doi.org/10.2139/ssrn.1932247)

Lamy P. (2013). "The Two faces of International Commodity Trade". Inter Press Service News Agency (http://ipsnews.net).

Martin, W. (2012). Managing High and Volatile Food Prices. IATRC. Trade Policy Issue Paper No. 2012/6. November.

Martin, W. and K. Anderson (2012). "Export Restrictions and Price Insulation During Commodity Price Booms". *American Journal of Agricultural Economics*. 94 (2): 422-427.

McCalla, A. (2009). "World Food Prices: Causes and Consequences". *Canadian Journal of Agricultural Economics*. 57: 23-34.

Meilke K. (2008). "Does the WTO Have a Role in Food Crises?". *The Estey Centre Journal of International Law and Trade Policy*. (9) 2: 146-155.

Mitra, S. and T. Josling (2009). Agricultural Export Restrictions: Welfare Implications and Trade Disciplines. International Food & Agricultural Trade Policy Council. Agricultural and Rural Development Policy Series. IPC position paper, January.

Mousseau, F. (2010). The High Food Price Challenge. A Review of Responses to Combat Hunger. The Oakland Institute.

Piermartini, R. (2004). The Role of Export Taxes in the Field of Primary Commodities. Geneve: WTO Secretariat.

Piesse, J. and C. Thirtle (2009). "Three bubbles and a panic: An explanatory review of recent food commodity price events". *Food Policy*. (34): 119-129.

Prakash A. (edt). (2011). Safeguarding Food Security in Volatile Global Markets. FAO. Rome.

Rutten M., L. Shutes and G. Meijerink (2013). Sit down at the ball game: How trade barriers make the world less food secure. *Food Policy*. 38: 1-10.

Serra T. and J. M. Gil. (2013). "Price volatility in food markets: can stock building mitigate price fluctuations?". *European Review of Agricultural Economics*. (40) 3: 507-528.

Sharma, R. (2011). Food Export Restrictions: Review of the 2007-2010 Experience and Considerations for Disciplining Restrictive Measures. FAO Commodity and Trade Policy Research Working Paper No 32, May.

Scholefield R. and J. Gaisford (2006). 'Export Taxes: How They Work and Why They Are Used. In W. A. Kerr and J. D. Gaisford. *Handbook on International Trade Policy*. Cheltenham: Edward Elgard: 237-246.

Tadesse G., B. Algieri, M. Kalkuhl and J. von Braun (2013). "Drivers and triggers of international food price spikes and volatility". *Food Policy*. in press (http://dx.doi.org/10.1016/j.foodpol.2013.08.014).

Tanaka T. and N. Hosoe (2011). Does agricultural trade liberalization increase risks of supply-side uncertainty?: Effects of productivity shocks and export restrictions on welfare and food supply in Japan. *Food Policy*. 36: 368-377.

Tangermann, S. (2011). Policy Solutions to Agricultural Market Volatility. A Synthesis. International Centre for Trade and Sustainable Development. Issue Paper No. 33. June.

Thompson, W. and G. Tallard (2010). Potential Market Effects of Selected Policy Options in Emerging Economies to Address Future Commodity Price Surges. OECD. Food, Agriculture and Fisheries Papers. No. 35. (http://dx.doi.org/10.1787/5km658j3r85b-en)

Timmer C. P. (2008). Causes of High Food Prices. Asian Development Bank Economics, Working Paper Series. No 128. October.

Timmer C. P. (2010). "Reflections on food crises past". *Food Policy*. (35): 1-11.

Timmer, P. (2011). Managing Price Volatility: Approaches at the global, national, and hosehold levels. Center for Food security and the Environment. Stanford University. May.

Veerpoten M., A. Arora and J. Swinnen (2013). "Self-reported food insecurity in Africa during the food price crisis". *Food Policy*. 39: 51-63.

Von Braun J. et al. (2008). High Food Prices: The What, Who, and How of proposed Policy Auctions. IFPRI Policy Brief. May.

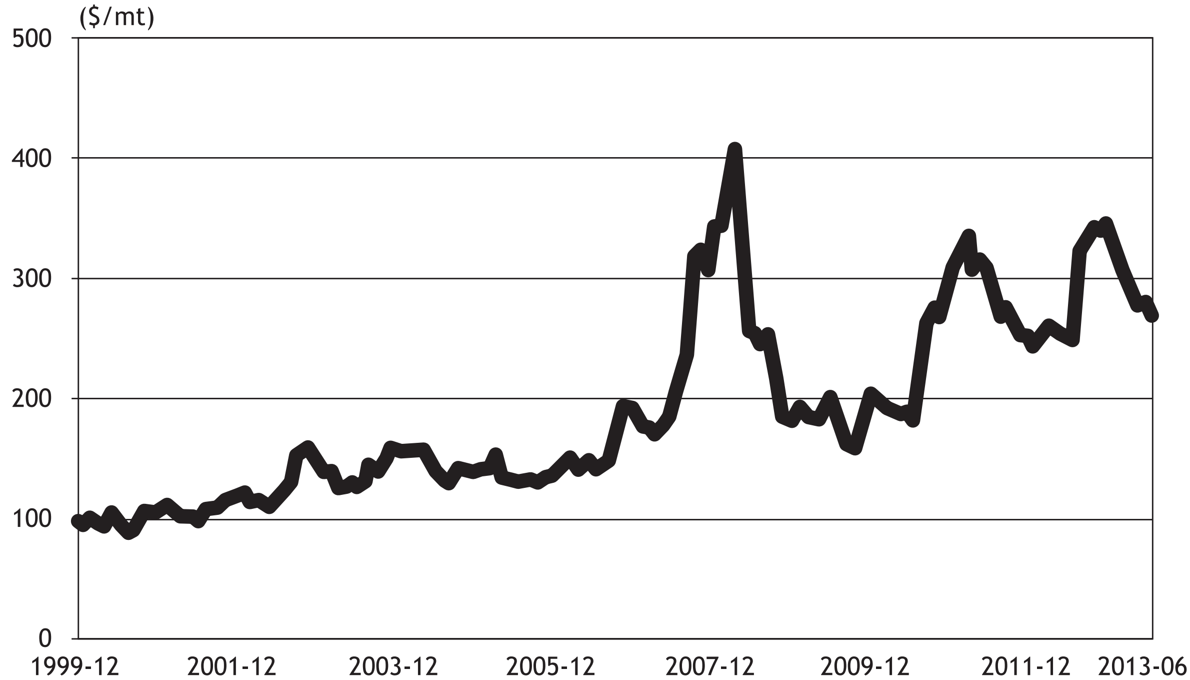
Von Grebmer K. *et al*. (2011). "011 Global Hunger Index. The Challenge of Hunger: Taming Price Spikes and excessive Food Price Volatility. IFPRI. October.

Westhoff P. (2008). "Farm Commodity Prices; Why the Boom and What Happens Now?". *Choices*. 23 (2): 6-10.

Wise, T. A. and S. Murphy (2012). Resolving the Food Crisis. Assessing Global Policy Reforms Since 2007. Global Development and Environment Institute and Institute for Agriculture and Trade Policy. January.

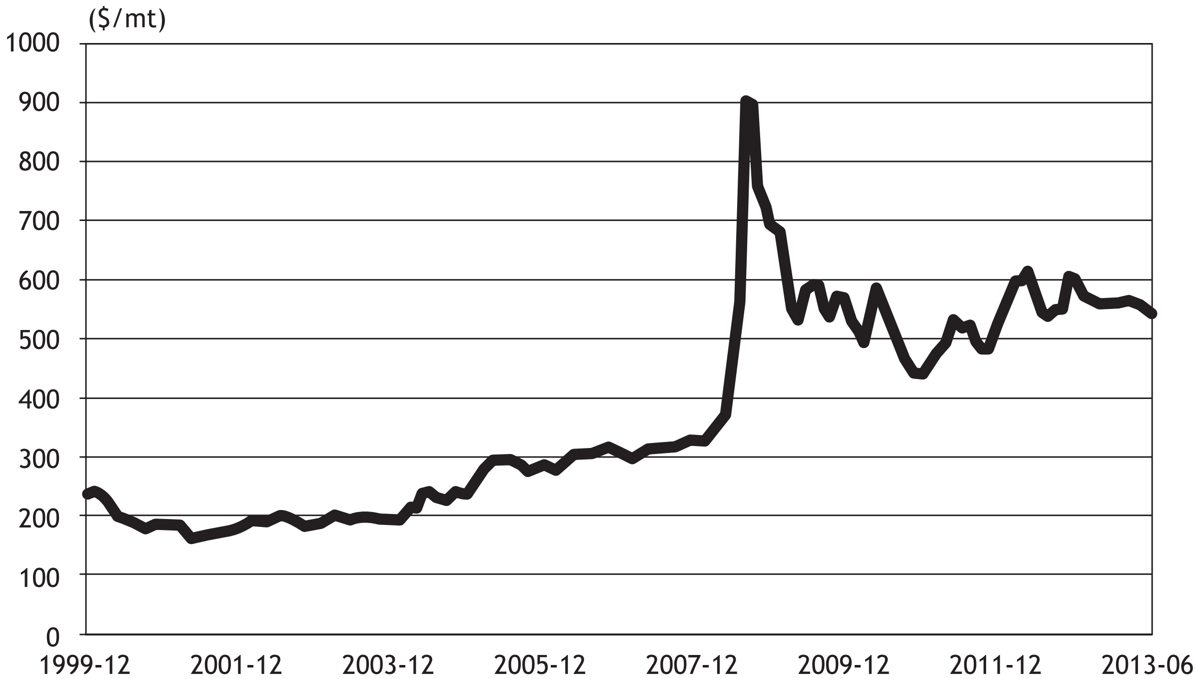
WTO, Committee on Agriculture (2013). Export Prohibitions and Restrictions. Background paper by the Secretariat. (TN/AG/S/28). 20 March.

Figure 1. Wheat, monthly price (US, SRW, nominal $/mt; Dec 1999 - June 2013)



Source: World Bank

Figure 2. Rice, monthly price (Thailand, 5%, nominal $/mt; Dec 1999 - June 2013)



Source: World Bank

SELECTED ICTSD ISSUE PAPERS

Agriculture Trade and Sustainable Development

India's Agricultural Trade Policy and Sustainable Development. By Anwarul Hoda and Ashok Gulati. Issue Paper No. 49, 2013.
Global Biofuel Trade: How Uncoordinated Biofuel Policy Fuels Resource Use and GHG Emissions. By S. Meyer, J. Schmidhuber, J. Barreiro-Hurlé. Issue Paper No. 48, 2013.
Agricultural Domestic Support and Sustainable Development in China. By Ni Hongxing. Issue Paper No. 47, 2013.
The 2012 US Farm Bill and Cotton Subsidies: An assessment of the Stacked Income Protection Plan. By Harry de Gorter. Issue Paper No. 46, 2012.
Potential Impact of Proposed 2012 Farm Bill Commodity Programs on Developing Countries. By Bruce Babcock and Nick Paulson. Issue Paper No. 45, 2012.
US Farm Policy and Risk Assistance: The Competing Senate and House Agriculture Committee Bills of July 2012. By Carl Zulauf and David Orden. Issue Paper No. 44, 2012. Net Food-Importing Developing Countries: Who They Are, and Policy Options for Global Price Volatility. By Alberto Valdés and William Foster. Issue Paper No. 43, 2012.Trade Policy Responses to Food Price Volatility in Poor Net Food-Importing Countries. By Panos Konandreas. Issue Paper No. 42, 2012.
Trade Policy Options for Enhancing Food Aid Effectiveness. By Edward Clay. Issue Paper No. 41, 2012.
Possible Effects of Russia's WTO Accession on Agricultural Trade and Production. By Sergey Kiselev and Roman Romashkin. Issue Paper No. 40, 2012.
Una Evaluación de la Ayuda para el Comercio en la Práctica: Lecciones de Guatemala. Por
Hugo Maul, Lisardo Bolaños, Irene Flores, Rodrigo Méndez y Gustavo Sáenz. Documento deFondo No. 26, 2012.
A Review of Trade Preference Schemes for the World's Poorest Countries. By Sam Laird. Issue Paper No. 25, 2012.

Competitiveness and Sustainable Development

Evaluating Aid for Trade on the Ground: Lessons from the Philippines. By Joy Abrenica, Ramon Clarete, Loreli de Dios and Maria Fe Esperanza Madamba. Issue Paper No. 28, 2013.
Evaluating Aid for Trade on the Ground: Lessons from Ghana. By Sarah Jane Danchie, Edward Brown and Abdul Mijiyawa. Issue Paper No. 27, 2013.
Una Evaluación De La Ayuda Para El Comercio En La Práctica. By Ricardo Paredes. Issue Paper No. 24, 2012.
Evaluating Aid for Trade on the Groung: Lessons from Nepal. By Ratnakar Adhikari, Paras Kharel and Chandan Sapkota, Issue Paper No. 23, 2011.
Evaluating Aid for Trade on the Ground: Lessons from Cambodia. By Siphana Sok, Cambodochine Dao, Chandarot Kang and Dannet Liv. Issue Paper No. 22, 2011.
Evaluating Aid for Trade on the Ground: Lessons from Malawi. By Jonathan Said, John McGrath, Catherine Grant and Geoffrey Chapman. Issue Paper No. 21, 2011.
Evaluating Aid for Trade Effectiveness on the Ground: A Methodological Framework. By Ratnakar Adhikari. Issue Paper No. 20, 2011.
EU Climate Policies and Developing Country Trade Vulnerability: An Overview of Carbon Leakage-Sensitive Trade Flows. By ICTSD. Issue Paper No. 19, 2011.

Dispute Settlement and Legal Aspects of International Trade

Forum Selection in Trade Litigation. By Arthur E. Appleton. Issue Paper No. 12, 2013.
How to successfully manage conflicts and prevent dispute adjudication in international trade. By Roberto Echandi. Issue Paper No. 11, 2013.
Conflicting Rules and Clashing Courts. The Case of Multilateral Environmental Agreements, Free Trade Agreements and the WTO. By Pieter Jan Kuijper. Issue Paper No.10, 2010.
Burden of Proof in WTO Dispute Settlement: Contemplating Preponderance of the Evidence. By James Headen Pfitzer and Sheila Sabune. Issue Paper No. 9, 2009.
Suspension of Concessions in the Services Sector: Legal, Technical and Economic Problems. By Arthur E. Appleton. Issue Paper No. 7, 2009.

Fisheries, International Trade and Sustainable Development

The Importance of Sanitary and Phytosanitary Measures to Fisheries Negotiations in Economic Partnership Agreements. By Martin Doherty. Issue Paper No. 7, 2008.
Fisheries, Aspects of ACP-EU Interim Economic Partnership Agreements: Trade and Sustainable Development Implications. By Liam Campling. Issue Paper No. 6, 2008.

Innovation, Technology and Intellectual Property

Fast-tracking Green Patent Applications: An Empirical Analysis. Issue number 37. By Antoine Dechezleprêtre, February 2013.
Unpacking the International Technology Transfer Debate: Fifty Years and Beyond. Issue Paper No. 36 by Padmashree Gehl Sampath and Pedro Roffe, 2012. Realizing the Potential of the UNFCCC Technology Mechanism. Perspectives on the Way Forward. Issue Paper No. 35 by John Barton, Padmashree Gehl Sampath and John Mugabe, 2012.
Bridging the Gap on Intellectual Property and Genetic Resources in WIPO's Intergovernmental Committee (IGC). By David Vivas-Eugui. Issue Paper No. 34, 2012.
The Influence of Preferential Trade Agreements on the Implementation of Intellectual Property Rights in Developing Countries. By Ermias Tekeste Biadgleng and Jean-Christophe Maur. Issue Paper No. 33, 2011.
Intellectual Property Rights and International Technology Transfer to Address Climate Change: Risks, Opportunities and Policy Options. By K. E. Maskus and R. L. Okediji. Issue Paper No. 32, 2010.

Trade in Services and Sustainable Development

Facilitating Temporary Labour Mobility in African Least-Developed Countries: Addressing Mode 4 Supply-Side Constraints. By Sabrina Varma. Issue Paper No.10, 2009.
Advancing Services Export Interests of Least-Developed Countries: Towards GATS Commitments on the Temporary Movement of natural Persons for the Supply of Low-Skilled and Semi-Skilled Services. By Daniel Crosby, Issue Paper No. 9, 2009.

Environmental Goods and Services Programme

Market Access Opportunities for ACP Countries in Environmental Goods. By David Laborde, Csilla Lakatos. Issue Paper No. 17, 2012
Facilitating Trade in Services Complementary to Climate-friendly Technologies. By Joy Aeree Kim. Issue Paper No. 16, 2011.
Deploying Climate-Related Technologies in the Transport Sector: Exploring Trade Links. By Rene Vosenaar. Issue Paper No. 15, 2010.

Trade and Sustainable Energy

International Transport, Climate Change and Trade: What are the Options for Regulating Emissions from Aviation and Shipping and what will be their Impact on Trade? By Joachim Monkelbaan. Background Paper, 2010.
Climate Change and Trade on the Road to Copenhagen. Policy Discussion Paper, 2009.

Regionalism and EPAs

Questions Juridiques et Systémiques Dans les Accords de Partenariat économique : Quelle Voie Suivre à Présent ? By Cosmas Milton Obote Ochieng. Issue Paper No. 8, 2010.
Rules of Origin in EU-ACP Economic Partnership Agreements. By Eckart Naumann. Issue Paper No. 7, 2010
SPS and TBT in the EPAs between the EU and the ACP Countries. By Denise Prévost. Issue Paper No. 6, 2010.

Global Economic Policy and Institutions

Multilateral Negotiations at the Intersection of Trade and Climate Change: An overview of Developing Countries' Priorities in UNCSD, UNFCCC and WTO Processes. By Manual A. J. Teehankee, Ingrid Jegou, Rafael Jacques Rodrigues. Issue Paper No. 2, 2012.

These and other ICTSD resources are available at http://www.ictsd.org

ICTSD's Programme on Agricultural Trade and Sustainable Development aims to promote food security, equity and environmental sustainability in agricultural trade. Publications include:

- India's Agricultural Trade Policy and Sustainable Development. By Anwarul Hoda and Ashok Gulati. Issue Paper No. 49, 2013.
- Global Biofuel Trade: How Uncoordinated Biofuel Policy Fuels Resource Use and GHG Emissions. By S. Meyer, J. Schmidhuber, J. Barreiro-Hurlé. Issue Paper No. 48, 2013.
- Agricultural Domestic Support and Sustainable Development in China. By Ni Hongxing. Issue Paper No. 47, 2013.
- The 2012 US Farm Bill and Cotton Subsidies: An assessment of the Stacked Income Protection Plan. By Harry de Gorter. Issue Paper No. 46, 2012.
- Potential Impact of Proposed 2012 Farm Bill Commodity Programs on Developing Countries. By Bruce Babcock and Nick Paulson. Issue Paper No. 45, 2012.
- US Farm Policy and Risk Assistance. The Competing Senate and House Agriculture Committee Bills of July 2012. By Carl Zulauf and David Orden. Issue Paper No. 44, 2012.
- Net Food-Importing Developing Countries: Who They Are, and Policy Options for Global Price Volatility. By Alberto Valdés and William Foster. Issue Paper No. 43, 2012.
- Trade Policy Responses to Food Price Volatility in Poor Net Food-Importing Countries. By Panos Konandreas. Issue Paper No. 42, 2012.
- Trade Policy Options for Enhancing Food Aid Effectiveness. By Edward Clay. Issue Paper No. 41, 2012.
- Possible Effects of Russia's WTO Accession on Agricultural Trade and Production. By Sergey Kiselev and Roman Romashkin. Issue Paper No. 40, 2012.
- Post-2013 EU Common Agricultural Policy, Trade and Development: A Review of Legislative Proposals. By Alan Matthews. Issue paper No. 39, 2011.
- Improving the International Governance of Food Security and Trade. By Manzoor Ahmad. Issue Paper No. 38, 2011.
- Food Reservesin Developing Countries: Trade Policy Options for Improved Food Security. By C. L. Gilbert, Issue Paper No. 37, 2011.
- Global Food Stamps: An Idea Worth Considering? By Tim Josling, Issue Paper No. 36, 2011.
- Risk Management in Agriculture and the Future of the EU's Common Agricultural Policy. By Stefan Tangermann, Issue Paper No. 34, 2011.
- Policy Solutions To Agricultural Market Volatility: A Synthesis. By Stefan Tangermann, Issue Paper No. 33, 2011.
- Composite Index of Market Access for the Export of Rice from the United States. By Eric Wailes. Issue Paper No. 32, 2011.
- Composite Index of Market Access for the Export of Rice from Thailand. By T. Dechachete. Issue Paper No. 31, 2011.
- Composite Index of Market Access for the Export of Poultry from Brazil. By H. L. Burnquist, C. C. da Costa, M. J. P. de Souza, L. M. Fassarella. Issue Paper No. 30, 2011.

About the International Centre for Trade and Sustainable Development, www.ictsd.org
Founded in 1996, the International Centre for Trade and Sustainable Development (ICTSD) is an independent think-and-do-tank based in Geneva, Switzerland and with operations throughout the world, including out-posted staff in Brazil, Mexico, Costa Rica, Senegal, Canada, Russia, and China. By enabling stakeholders in trade policy through information, networking, dialogue, well-targeted research and capacity-building, ICTSD aims to influence the international trade system so that it advances the goal of sustainable development. ICTSD co-implements all of its programme through partners and a global network of hundreds of scholars, researchers, NGOs, policymakers and think-tanks around the world.