

SECURING GLOBAL FOOD SUPPLY:

What Role for Latin America's Net Agricultural Exporters?

Edited by Martín Piñeiro, Margaret Myers, and Laura Uzquiza

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Foreword

We are pleased to present “Securing Global Food Supply: What Role for Latin America’s Net Agricultural Exporters?” a new report co-edited by Martín Piñeiro, founding member of Grupo de Países Productores del Sur (GPS) and director of the Agricultural Affairs Committee of the Argentine Council for International Relations (CARI), Margaret Myers, director of the China and Latin America Program at the Inter-American Dialogue, and Laura Uzquiza, researcher at Argentina’s National Scientific and Technical Research Council (CONICET) and GPS. Drawing on findings from a meeting co-hosted by the Dialogue and GPS in April 2015, the report analyzes critical challenges to global food security and the role and responsibilities of Latin America as a primary food-exporting region.

This report features the work of five distinguished specialists in agricultural economics. Shenggen Fan from the International Food Policy Research Institute (IFPRI) begins with an examination of trends in global food security. Fan’s chapter is followed by analysis by Piñeiro and Myers of the various domestic agricultural policies adopted by independent countries during and following the global food crisis in 2008. Carlos Pérez del Castillo of GPS then recommends a trade policy agenda to remedy food shortages and related challenges. Finally, Ricardo Meléndez-Ortiz, president of the Geneva-based International Centre for Trade and Sustainable Development (ICTSD), looks at the challenges and opportunities of trade-related solutions to global food insecurity.

Grupo de Países Productores del Sur represents a network of private sector institutions from Argentina, Brazil, Paraguay, and Uruguay. Under the leadership of GPS, representatives of these four countries seek common policy solutions to the world’s mounting food security challenges.

The Inter-American Dialogue is the leading US center for policy analysis, exchange, and communication on issues in Western Hemisphere affairs. The Dialogue’s China and Latin America Program engages and informs academics, policymakers and private sector leaders in China, Latin America, and the United States on evolving themes in China-Latin America relations.

The views expressed in this work are those of the authors and do not necessarily reflect the perspectives of the Dialogue or GPS.

MICHAEL SHIFTER

President, Inter-American Dialogue

HORACIO SÁNCHEZ CABALLERO

Coordinator, Grupo de Países Productores del Sur

Introduction

Global food demand has expanded rapidly over the past decade, the result in large part of economic growth in a number of developing countries tied to successful public policies, middle class expansion, and corresponding increases in food consumption. This rise in global food demand has been accompanied by a significant increase in non-food-related agricultural production (such as for biofuels).

As Fan notes in the opening chapter of this report, escalating food demand was not accompanied by equivalent growth in agricultural production, inevitably leading, along with other drivers, to increases in the international prices of major agricultural commodities. Food prices (and food price volatility) peaked in 2008 during the so-called global food crisis. The combined impact of high food prices and food price volatility presented critical policy challenges for net food importers in the developing world, while highlighting the role of net food exporters in assuring global food security.

Although international food prices have substantially decreased over the past two years, they remain higher than before the 2008 crisis and are expected to continue at relatively elevated levels in the coming years. Many net food-importing countries have adopted defensive measures and policies to adjust to this “new normal.” These actions tend to affect only domestic markets, but some have clearer negative externalities in international markets. They have minimal impact on international trade or global food supply.

In addition to domestic measures, some large net food importers—such as China and Saudi Arabia—are turning to foreign agriculture to augment their domestic food supply. Although domestic, these initiatives carry broad economic and political implications.

This report, notably the chapter by Piñeiro and Myers, examines policy responses by net importers and exporters of food in light of sustained high food prices and food price volatility. It analyzes the policies and programs being implemented to better position some countries in a world marked by increasing food supply scarcity and related security risks.

Noting that global governance arrangements have, thus far, done little to mitigate supply and price risk, Pérez del Castillo offers in our third chapter a proposal for addressing global food insecurity. He calls for alignment, through a rule-based framework negotiated in the World Trade Organization (WTO), of the long-term objectives of net food-exporting countries and net food importers. This framework, he argues, would reduce reliance on distortionary trade policy and, thereby, improve overall conditions for global food security. Meléndez-Ortiz also addresses the need for trade-related reform in support of global food security. He points out that agricultural price spikes have exposed gaps in WTO rules on agricultural trade.



Latin America must invest in R&D aimed at producing more with less, including food production that is nutritious and healthy, inclusive (especially of women), climate smart and resource efficient, sustainable and resilient.

Trends In Global Food Security

SHENGGEN FAN (IFPRI)

Ensuring food security and adequate nutrition for all is a great challenge of our time. Despite progress, hunger and malnutrition persist globally. About 795 million individuals, or roughly one in every nine people on our planet, are undernourished.¹ The vast majority—about 98 percent—lives in developing countries.

An additional 2 billion people suffer from “hidden hunger,” or deficiencies in essential micronutrients such as vitamin A, iron, and iodine. Hidden hunger has the potential to weaken the physical and cognitive development of children and adolescents and to reduce the productivity of adults. More than 2 billion people in the world are thought to be anemic, including half of all children under 5 years old and 42 percent of pregnant women, with most of these cases occurring in Africa and Southeast Asia. The economic cost of micronutrient deficiencies is estimated to be 2.4 to 10 percent of gross domestic product in many developing countries.

On the other end of the spectrum, a growing number of people are suffering from overnutrition, which carries its own serious burden of chronic non-communicable diseases. Currently more than 2 billion people are overweight or obese. The health, social, and economic consequences of obesity are experienced in nearly every country in the world.

Emerging global trends, including population growth, demographic shifts, and rising incomes, are changing food demand in ways that increase the vulnerability of food security and the likelihood of undernutrition and overnutrition. By 2050, the world will have 2 billion more mouths to feed, many of them in developing countries.² At the same time, urban populations and global incomes are growing—by as much as 75 percent between 2010 and 2050, mostly in Asia and Africa. As is already evident in China, these dramatic demographic shifts bring demand for more and wider varieties of food. As incomes rise, diets move from traditional staple foods such as cereals to high-value foods such as fruits, vegetables, and meats.

Challenges to Achieving Global Food Security³

The demand for food is putting new pressure on the planet’s natural resources. Annual growth in agricultural output averaged about 2.3 percent between 1961 and 2009. Stepped up agricultural production is now taking a significant toll on water, land, energy, and raw materials. Poor resource management has added to the degradation of terrestrial and aquatic ecosystems, and biodiversity loss is emerging as a considerable concern. This problem will become even more pressing as demand for food rises.

Agriculture contributes to a growing demand for water but at the same time is vulnerable to water shortages. At present, irrigation alone counts for as much as 70 percent of global water use.⁴ Because of both growing water demand and scarcity, 15 to 35 percent

of global irrigation is thought to be non-sustainable.⁵ Under current projections, by 2050 only 66 percent of the demand for irrigated water is likely to be met. As agriculture seeks more water, so do industry and households, further challenging food production. By one calculation, global water usage in 2020 will be 22 percent higher than in 1995.

The world's water resources are not uniformly distributed. Roughly 2.4 billion individuals—36 percent of the globe's population—currently live in water-scarce areas. Many are residents of developing countries that are extremely vulnerable due to their low adaptive capacity.⁶ In parts of the Middle East and South Asia, and areas of East Asia and Africa, water stress can be especially high.

Water scarcity threatens global economic development. Nearly a quarter of the world's GDP is produced in places experiencing water stress. Furthermore, 39 percent of grains, a large source of calorie consumption for the world's poor, are produced using unsustainable methods. By 2050, water stress will put 52 percent of the global population, 45 percent of global GDP, and 49 percent of global grain production at risk.

In recent decades, the response to growing food demand has been to cultivate more land. Cultivated systems—including for food, feed, fuel, and fiber production—now make up 25 percent of the world's land surface. But the amount of arable land available is diminishing. Globally between 1970 and 2000, per capita arable land decreased by about 65 percent⁷ and, by 2050, it is expected to contract again by more than 50 percent. Higher crop yields will mitigate the land challenge somewhat: In coming years, as much as 71 percent of the growth in crop production in developing countries will come from improved yields.⁸

Energy sector developments also affect food security in a variety of ways. In recent years, high energy prices have made biofuels and other alternative energy sources more profitable. As a result, biofuel production is expected to increase by 50 percent before the end of the decade. This will put undue pressure on already scarce agricultural resources, namely land and water, and promote so-called "food-fuel competition." Critical components of food production, such as tillage, planting, and harvesting, are dependent on energy sector developments. High energy prices are also pushing up the cost of agricultural inputs, including water, fertilizer, transportation, and storage. That, in turn, exerts upward pressure on international food prices.

A deficient energy supply also impedes necessary upgrades in agricultural processes, such as mechanization, lighting, and heating. Globally, about 1.5 billion people lack access to electricity.

The convergence of these many factors threatens global food security and adequate nutrition, and climate change promises to exacerbate the challenge. Climate disruption has already had a significant impact on crop yields. As temperatures rise, agricultural systems will feel greater pressure. It is projected, for example, that a 2°C temperature increase by 2050 will reduce wheat yields by up to 50 percent in Tunisia, Brazil, Central America, and the Caribbean.

Toward Comprehensive Agricultural Policy

Sustainable growth in agriculture will be critical if global demand for food, feed, fiber, and fuel is to be met while preserving the planet's natural resources and protecting biodiversity. IFPRI's International Model for Policy Analysis of Agricultural Commodities and Trade (IMPACT) has been used to assess best options for addressing food supply challenges. IFPRI research advances policy formulation that simultaneously promotes investment in agricultural R&D and irrigation infrastructure, better natural resource management policies, and reduced agricultural trade barriers. With an eye on both supply and nutrition-related challenges, this integrated approach is designed to bring growth in yields, agricultural output, calorie consumption, and child nutrition, according to multiple studies. Such policy outcomes would generate spillover effects for developing countries.

IMPACT shows that this comprehensive policy approach favorably impacts grain prices. Research indicates that application of a sustainable, integrated policy framework of the sort promoted by IFPRI will result in prices that are almost 40 percent lower in 2050.⁹ Lower prices improve both affordability and access to food, thereby raising daily per capita calorie availability by 47 percent, according to the IMPACT model.

Water consumption also declines substantially with gains in water-use efficiency. Several strategies already exist, including lined irrigation canals, to improve water transport from source to farm and from farm gate to field. Water-to-crop application can be improved through technologies such as modern drip or sprinkler irrigation systems and deficit irrigation systems. And, beyond irrigation efficiency, shifts from irrigated areas in water-scarce basins to areas in water-rich basins or shifts from irrigated to rain-fed crops can also improve water-use efficiency.

Since natural resources are becoming increasingly stressed and scarce, sustainable food production is also linked inextricably to land and energy policies. Conservation tillage and improved fertilizer management are among the agricultural practices that save energy. Food security will increasingly require greater collaboration among government ministries, civil society, and the private sector in policy design, implementation, and monitoring. A comprehensive and coordinated approach to policy development will harness sector synergies.

Investment in R&D is yet another critical component of an integrated strategy. Investment in resource-efficient agricultural inputs and practices can help boost the sustainability and productivity of farms, while simultaneously increasing the income of small farmers. Investment in R&D also furthers critical productive technologies and practices, among them efficient nutrient use through plant breeding or slow-release fertilizers, integrated soil fertility management, and alternative wetting and drying processes for irrigated rice production. Integrated land management practices play a key role in promoting sustainable land use and have proven to be productive. Integrated soil nutrient management practices such as the combined use of inorganic fertilizer, mulching, and manure generate higher and more sustainable crop yields.

In the past, technologies focused on greater crop yields. One result was the introduction of new rice varieties throughout Asia during the Green Revolution. Today, investment is being directed at stress-tolerant crops that are less susceptible to biotic and abiotic strains, such as pests and drought. While these advances improve the profitability of farming, their development and adoption require supportive national research and extension systems as well as effective input and output markets.

Strong institutions that support resource rights are also needed. Resource allocation systems that are not legally binding are highly susceptible to expropriation and can significantly complicate policy planning. There is evidence that solid legal frameworks for resource allocation, if administered effectively, can promote the adoption of strategies that more efficiently use and preserve key natural resources such as water and land. This is especially true in developing countries and in rural areas where livelihoods are tied to natural resources. For example, effective water-management pricing, taxes, subsidies, and quotas can reduce water waste by providing incentives for resource-efficient technologies and by penalizing unsustainable practices.

A reduction in food losses and waste also increases resource-use efficiency. In developing countries where food losses are a major concern, agri-food supply chains need to be strengthened. To do this, investments in infrastructure and transportation, as well as in food and packaging industries, will be crucial. That said, food waste is most common in developed countries and at the retail and consumer level. This is driven by global demand for a growing amount and wider range of products, as well as consumer standards that overemphasize food appearance. Public awareness campaigns are valuable in addressing food waste challenges.

Awareness-raising measures can help an integrated policy approach work on behalf of poor and vulnerable groups. As a starting point, it is necessary to inform communities about the linkages between and among natural resources, energy production, and food production. Also critical to this process is analysis of existing food policies and their impacts on energy and other resources. New mechanisms and metrics for monitoring policy impacts must be developed.

LAC's Role

Although it is a major food-producing region, Latin America and the Caribbean (LAC) is vulnerable to food security and nutritional challenges. The region's natural resources have already experienced negative effects from climate change.

LAC must invest in R&D aimed at producing more with less, including food production that is nutritious and healthy, inclusive (especially of smallholders and women), climate smart and resource efficient, sustainable and resilient. Policy and institutional innovation is also critical if the region is to: a) ensure stable food prices; b) shift production from rice, wheat, and other staples to more nutritious crops (e.g. vegetables and fruits); c) promote sustainable, healthy diets; d) support resource rights; e) efficiently allocate resources; and f) strengthen effective social programs.

As an important agricultural supplier globally, LAC nations must also work to eliminate distorting trade policies and better target subsidies. LAC should create global and regional grain reserves. It should also exploit the knowledge and resource bases of developing countries, improve coordination among traditional and emerging donors, and engage in broader and more innovative partnerships.

Effective global, national, and local policies can help address supply and nutritional challenges in the coming years. Social protection policies in Bangladesh, Egypt, and Latin America have boosted the poor's access to food. In-depth research informed the expansion of Mexico's cash-transfer program Progresá (now Oportunidades), which once was the world's largest such program and now serves as a model for other countries.

The international community, individual countries, and local governments must explore and develop integrated and complementary solutions addressing the concurrent challenges that affect food security and nutrition. Continued reliance on local and piecemeal solutions to food-related challenges will do little to address increasingly critical global food security and nutritional challenges.

There is growing consensus that food price increases and food price volatility in the late 2000s were determined by a rapid rise in global demand for more and better food, growth in the use of agricultural commodities for non-food products, and the relationship between energy prices and agricultural prices.

Achieving Food Security: The Dilemmas and Strategies of Large Net Importers

MARTIN PIÑEIRO (GPS-CARI)

MARGARET MYERS (Inter-American Dialogue)

Rapid price increases and rising food price volatility caught the global community off guard in the late 2000s, leading to a proliferation of policies intended to improve domestic food security. Many of these policies were defensive in nature with neutral effects on the global economy, but others have negatively impacted international markets. Outward looking policies, including investment in overseas land, have in many cases generated political backlash in agriculture producing nations. Though occasionally successful in lowering local prices or increasing local supply, varied policy responses will do little to ensure global food security in the coming years. The need for an international response to growing global food challenges is increasingly urgent.

An Environment of Uncertainty

The elevated food prices associated with the 2008 global food crisis were not especially high in comparison to prices in previous decades. Real non-energy food prices were nearly twice as high just prior to WWI than they were in 2008. However, the world economy and individual countries—especially net food importers—were accustomed to a period of steadily declining food prices following the global oil crisis in 1974 and had tailored their policies according to what they perceived as a “new normal.”

Many studies have attempted to determine the causes of food price increases and food price volatility in the 2000s.¹⁰ There is growing consensus that these conditions were determined by a rapid rise in global demand for more and better food, growth in the use of agricultural commodities for non-food products, and the relationship between energy prices and agricultural prices. A somewhat weaker consensus finds that greater food price volatility resulted from climate-related production shocks, the dollar’s variable exchange rate against other currencies, the financialization of commodity markets, and the variability and low levels of commodities stocks.

Causes aside, food price increases and price volatility have very clear negative effects on economic growth, income distribution, and food security. This is especially true for low-income populations, although the effect on a given country depends largely on that country’s role in global agricultural markets. The negative effects of higher and more volatile food prices are primarily felt by net-importing countries in the developing world, particularly among the poorest segments of society. As prices rise, low-income populations spend a larger proportion of their income on food, which often means diminished expenditures on health and education.

High and volatile food prices also have potentially important security and political implications. The Arab Spring has been at least partially linked in the literature to rising food prices. Food price inflation was similarly tied to social unrest in China in previous decades.

Most governments try to limit these negative effects through direct subsidies to low-income consumers and other social expenditures, although this approach inevitably weakens their fiscal position. Price volatility further complicates matters by making economic adjustments more difficult to implement at all levels.

With food prices expected to remain at high levels in the coming years, although somewhat lower than the 2008 peak, the outlook is troubling for net-importing countries. Macroeconomic projections that suggest considerable global economic risk and uncertainty in the years ahead also point to a high possibility of continued price volatility. Interest rates, exchange rates, and other macroeconomic variables that affect commodities remain unstable.

Price volatility could be further exacerbated by protectionist commercial strategies implemented by certain countries, including export taxes that affect global food supply, private standards, and other market-distorting policy measures. And climate change could have an especially profound effect on agricultural production and food prices in the very near future.

Against this backdrop, the international community would likely benefit from stronger governance mechanisms that address the growing concerns of net-importing countries. Global food security is highly dependent on conditions of trade—the most efficient means by which to integrate excess supply with excess demand in different geographic regions and countries. In recent years, however, the environment for negotiating international trade in the WTO has deteriorated. A number of countries have taken stiffer positions or introduced new restrictions, leading to a virtual stalemate in the Doha Round process. This new situation is, at least in part, the result of anxieties that many countries have developed as a consequence of recent instability and volatility of global food supply and prices. The trade community would nonetheless be advised to work toward a common solution wherein the critical interests of both net-importing and net-exporting countries can be better addressed.

Domestic Approaches to Achieving Food Security

The world faces a scenario marked by relatively high food prices, likely accompanied by increasing price volatility. Under these conditions it is reasonable to expect political pressure on governments to pursue policy that supports domestic food security. These pressures will be most intense among food-importing countries that are vulnerable to high and volatile food prices.

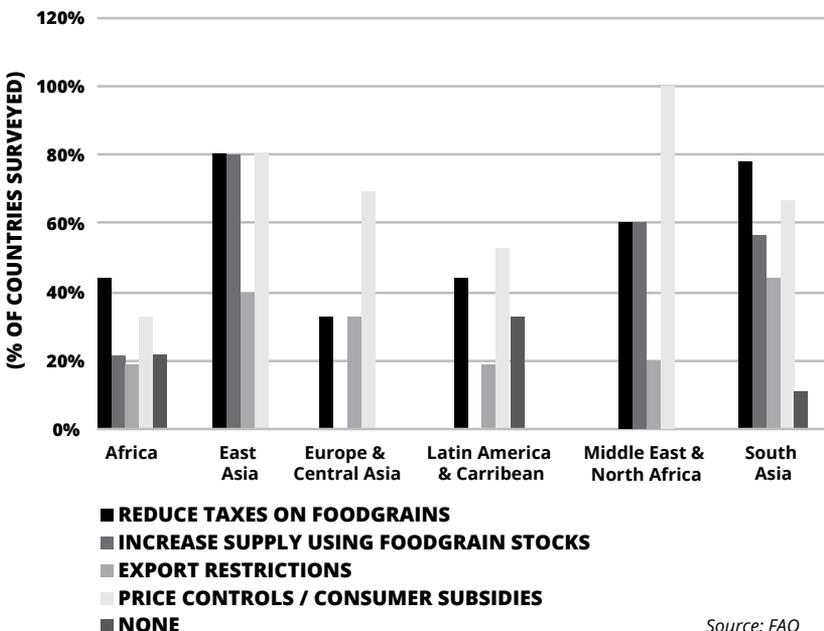
Food security policies are typically understood to be either defensive or proactive/offensive in nature. Most national efforts to diminish the impact of high and volatile international prices are neutral from the point of view of international trade and do not negatively affect other countries. Measures of this sort include: a) tariff reductions, b)

lowered domestic taxes on food, c) price controls in domestic markets, d) stock releases, and d) targeted direct support to low-income consumers.

Other measures—while still defensive in nature—have clearer negative externalities in international markets. Although employed by relatively few countries, these policies have been a source of disagreement in the WTO. They include: a) support to domestic production which may or may not contradict WTO rules; b) export taxes that do not contradict explicit WTO rules if applied for short periods of time in response to situations of crisis in local markets, but which negatively affect global food supply; and c) other limitations to exports that also affect global supply in the short run and are, in general, contradictory to WTO rules. The international trade community is concerned about these measures, but they are not considered in WTO deliberations and there is no general consensus on their usage. Figure 1 cites FAO data on the extent to which some of these defensive measures have been applied on a regional basis.

FIGURE 1. POPULARITY OF MEASURES USED IN THE FACE OF RISING FOOD PRICES

Source: Anania, G. "Agricultural export restrictions and the WTO: What options do policy makers have for promoting food security," ICTSD, Geneva, 2013.



Source: FAO

In addition to defensive measures, some large net food importers have actively engaged overseas markets to augment supply at home. In these cases, directives are often issued by governments or through state-owned enterprises (SOEs) in order to establish control over the supply of agricultural commodities. Commonly used measures include: a) acquisition of large tracts of agricultural land in foreign countries; b) acquisition of production rights on foreign lands; c) acquisition of foreign firms that participate in international trade; and d) acquisition of foreign firms that are producers of main agricultural inputs.

These measures have generated heated political discussion regarding their adherence to existing WTO rules and their negative impact on host countries, including effects on income distribution, local populations, and excessive influence in local markets. This discussion has led to two distinct but interrelated outcomes: a) a number of countries, as among them Argentina, Brazil, and Ecuador in Latin America, have passed legislation limiting the amount of land that may be bought by foreigners; and b) voluntary guides have been developed, in the context of the Committee on World Food Security (CFS) and FAO, for responsible land tenure and natural resource governance. These guidelines establish principles and regulations governing acquisition of agricultural land and water.

Defensive Measures

Except in the cases of Latin America and Europe-Central Asia, the lowering of import tariffs and price controls/consumer subsidies are the defensive policies most frequently used, followed by the release of food stocks. Frontier measures are easy to implement and have been effective in lowering local prices but tend to have negative fiscal implications. However, their real impact is related to the price transmission elasticity of international prices to local prices, which greatly varies from country to country.

Food price volatility has also provided incentives for countries to increase support for domestic production and, thus, decrease dependence on international markets and prices. These tendencies have weakened progress toward more open international trade and have negatively affected the success of multilateral negotiations in the WTO.

Export taxes and/or other restrictions on exports have, indeed, been effective in increasing local supply in the short run and decreasing prices in local markets. However, these efforts have negative effects on supply and prices in international markets in the short run and on domestic production in the long run—factors that inevitably contribute to higher international prices. Furthermore, these measures have strengthened the perception held by a number of net food-importing countries that international markets are unreliable. These countries facilitate further support for local production, with the objective of increasing self-sufficiency.

Latin American responses to the international food price situation have generally followed those in the rest of the world, with two exceptions. Country studies point to different responses from Argentina and Brazil—two of the world's largest net exporters of agricultural commodities. Argentina has emphasized measures that protect local consumers at the expense of producers, while Brazil has adopted a more balanced approach.

This policy variance within Latin America reflects the absence of a unified, international response to the global food crisis. Defensive policies, especially those that have negative international externalities, should be addressed in global governance mechanisms to ensure better information and appropriate consideration of their effect on international markets, as well as to protect “an open and ruled-based trading system that would mitigate price volatility and so contribute to global food security.”¹¹

Proactive Measures

Large net food importers with generous funding capacities have traditionally used proactive or offensive measures. Although these measures are employed by relatively few countries and in limited cases, their size and strategic significance have generated strong political reactions in certain host countries.

Of the four types of offensive/proactive interventions described in Section III, the most significant, both in frequency and in terms of inspiring a negative political reaction, is the acquisition of rights over foreign agricultural land. Ownership of agricultural land by small and medium-sized foreign investors, and in some cases by multinational firms, has been ongoing for many years. However, investment has increased over the past twenty years as a consequence of higher international food prices, supply volatility, and growing domestic demand. A relatively new development is investment in land by foreign governments through state-owned enterprises, financial support of private firms, or negotiations with host countries.

Acquisition of rights over foreign land is mainly accomplished through three legal arrangements: a) inter-state agricultural cooperation agreements (IACAs), which are formal agreements between states (or sub-national public authorities or public companies) to provide the legal framework required for land acquisition and/or use; b) direct land purchases by investment funds, multinational corporations, or foreign individuals with or without explicit support from their governments; and c) foreign direct investment by private firms for agricultural production with no land acquisition but with long-term user rights.

In many cases, the specific arrangements are, from a legal point of view, difficult to classify. Furthermore, the available information makes it hard to determine the exact legal nature of the investment. For this reason the remainder of our analysis will not always clearly differentiate between these different types of foreign investment and whether they are mainly private or public.

TABLE 1. LAND INVESTMENT ESTIMATES AS INDICATED IN THE LITERATURE

Source: CFS-HLPE Land Tenure and International Investments in Agriculture, Report 2. Rome, July 2012.

AMOUNT OF LAND (HA)	COVERAGE	TIME PERIOD	SOURCE	METHOD
2.5 million	Ethiopia, Ghana, Madagascar, Mali and Sudan	2004–2009	Cotuia et al 2009	Systematic inventories based on in-country research
51–63 million	27 countries in Africa	Until April 2010	Friis & Reenberg 2010	Systematic inventory of media reports
Approximately 1.5 million	Mali, Laos, Cambodia	Until 2009	Gorgen et al. 2009	Systematic inventories based on in-country research
> 3.5 million	Kazakhstan, Ukraine, Russia	2006–2011	Visser & Spoor 2011	Media and web based
46.6 million	81 countries	2004–2009?	Deiniger et al., 2011	Systematic inventory of media reports
4.3 million	Brazil	until 2008	Willkinson et al 2010	–
545,000	Mali	By end 2010	Baxtor, 2011	Field visits, govt documents
3.6 million	Ethiopia	2008–11	Horne, 2011	Field visits, govt documents
15–20 million	“poor countries”	2006–09	IFPRI 2009	–
> 80 million	Global	Since 2000	International Land Coalition	Systematic inventory of verified media reports
Approximately 15–20 million ha	Global	Since 2000	V. Braun and Meinzen-Dick (2009)	Estimate based on media reports
Not identified	Global	2007–2008	GRAIN 2008	Media and web based

Table 1 is an inventory of areas involved in large-scale land investment, as estimated in some of the “land grab” literature. Most of these deals have taken place in sub-Saharan Africa. However, some have been reported in former Soviet Republics and also in Brazil, according to Wilkinson,¹² with investment coming from firms in China, the Gulf States, India, Libya, and South Korea. Inter-state agricultural cooperation agreements (IACAs) may be the most explicit means by which governments and the firms that represent them seek to acquire overseas agricultural land.

Examples of IACAs include two attempts by China and Saudi Arabia to acquire production rights, through state-owned firms, on large tracts of land in Argentina. In the first case, Chinese agricultural giant Beidahuang signed an agreement with the Rio Negro provincial government in Argentina. The agreement included contracts for an agri-food project and a proposed port facility, with the objective of jointly producing and then exporting agricultural goods to China. A separate, but similar, agreement was signed in February 2011 by Argentina’s Chaco province and the Al-Khorayef Group from Saudi Arabia. Public backlash led the central government to suspend both agreements. In reaction to perceived “land grabs,” Argentina (and Brazil) later passed legislation imposing limitations on land acquisition by foreigners.

Meanwhile, a recent example of investment in (or full acquisition of) large private firms that are already involved in various phases of agricultural production in a given country or region involves the acquisition of large Dutch trader Nidera by COFCO (one of the main agricultural production and trade companies from China). Nidera is one of the six large global trading companies (the “six sisters”) that control international trade of agricultural commodities, and its acquisition provides the Chinese government with information, market access, and tremendous commercial capacity. Nidera is also a main provider of seeds to Argentina and is active in other Southern Cone countries. This form of investment is now a major focus of China’s largest agricultural firms. China’s interest in increasing its presence across the global agricultural value chain is evident in both official documents and in recent examples of overseas agricultural investment.

An Overview of Applied Measures: Some Conclusions

A review of the literature suggests that in response to the 2008 global food crisis most countries applied policy measures to protect themselves from the negative effects of rising and volatile prices. In most cases a broad combination of measures was applied. A precise classification or typology of countries is difficult to construct, in part because detailed information is not readily available. It is, however, possible to broadly discuss these policies and the countries that adopted them.

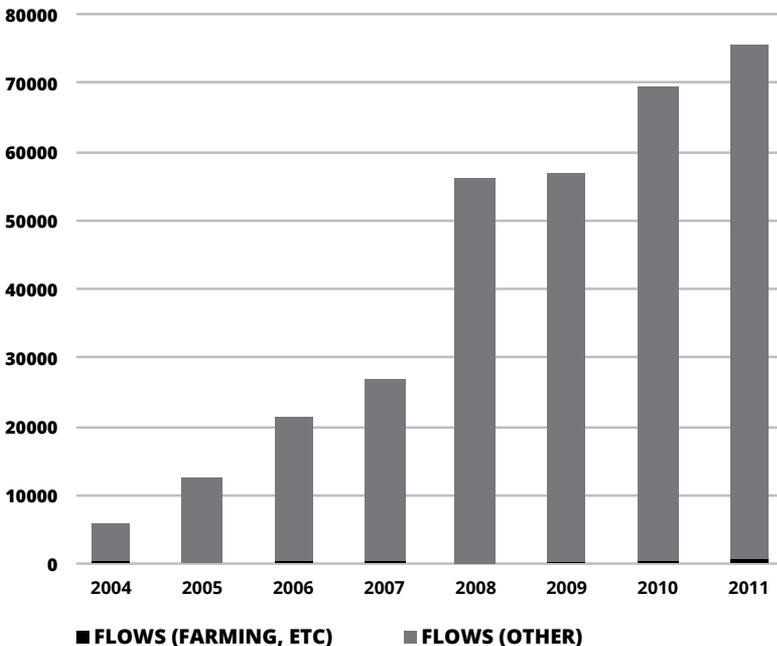
As indicated in the previous section, the majority of these policies do not have major effects on global food trade. However, countries such as Argentina, Brazil, Honduras, India, and Russia applied a combination of defensive measures, some of which are likely to negatively affect international trade and global food security. Among them are export restrictions and subsidies for local producers. The Gulf States and South Korea have applied both defensive and proactive/offensive measures to ensure access to overseas resources.

China stands out as a country with enormous and increasing food demand, considerable (but insufficient) agricultural production capacity, and an evolving set of food policy priorities. Despite some advances in agricultural productivity, China's need to complement internal production with foreign agricultural is urgent, especially in the case of soy. This reality has generated concern in the international community about China's likely interest in overseas land and agricultural assets. In the 2000s, countless media reports, journal articles, and databases tracked China's land acquisitions across the globe. Apprehensions heightened in the midst of the 2008 food crisis when China's Ministry of Agriculture was rumored to have given the State Council a draft proposal that specifically encouraged overseas land investments. No such policy was ever publicly released.

There have been high-profile Chinese investments in foreign land in recent years (some of them in Latin America), but China's current thinking on overseas agricultural investment supports very different—though still outwardly focused—objectives. Increasingly, Chinese overseas foreign direct investment (OFDI) in agriculture is focused not on overseas farming and related land purchases, but on investment across the industry supply chain so as to control both supply and pricing. China's OFDI in farming accounts for a very minor share of the country's total agricultural OFDI (see Figure 2).

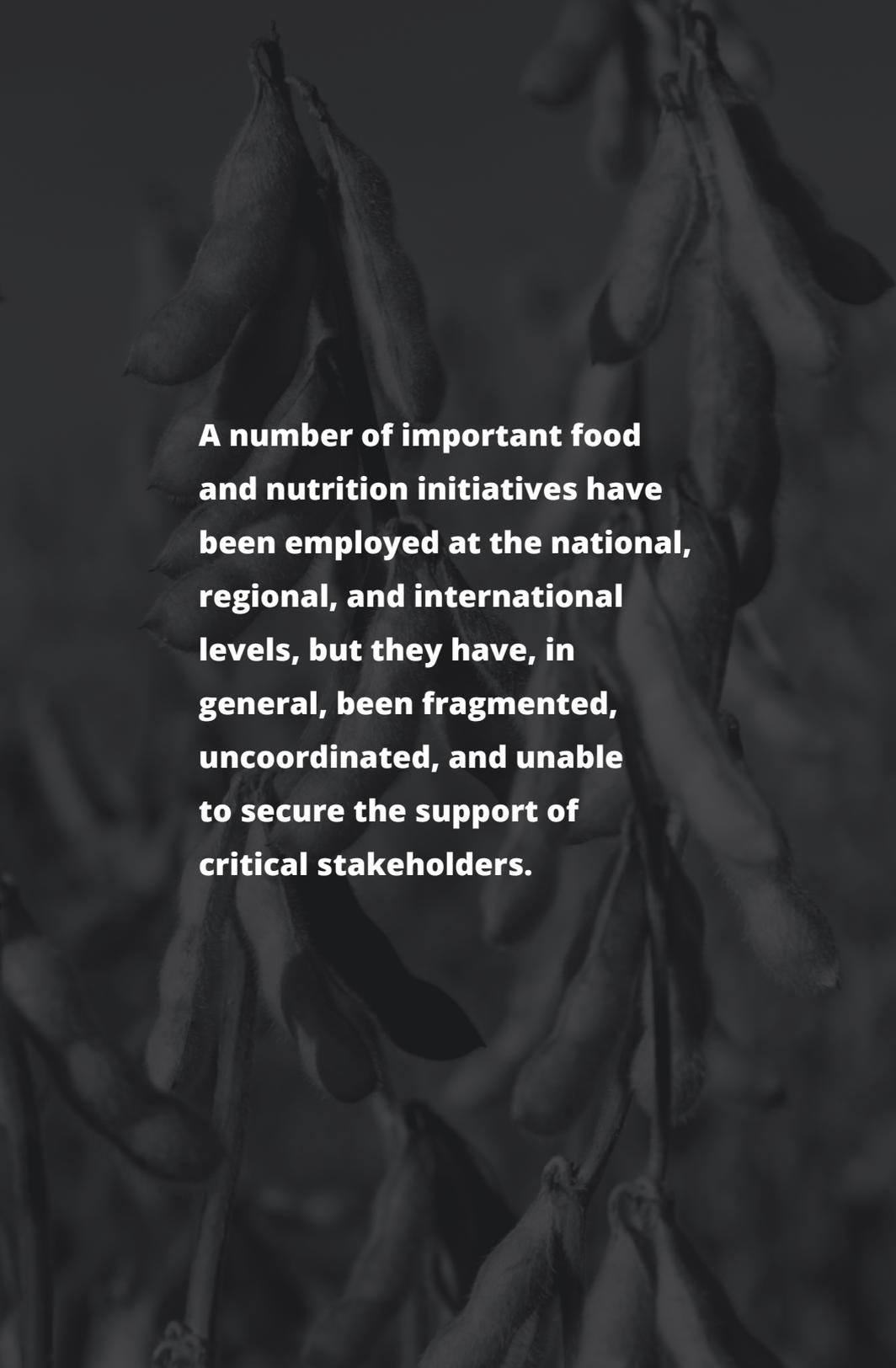
FIGURE 2. CHINA'S OUTWARD FDI FLOWS IN FARMING, FORESTRY, ANIMAL HUSBANDRY AND FISHERY COMPARED TO CHINA'S OTHER AGRICULTURAL OFDI, 2004-2011 (USD MILLIONS)

Source: 2011 Statistical Bulletin of China's Outward Foreign Direct Investment, pp.40-41.



China's preference for other forms of overseas agricultural investment is also indicative of a growing interest, especially on the part of COFCO, China's top grain trader, in competing more effectively with agricultural multinationals (e.g., ADM, Bunge, Cargill, and Louis Dreyfus [ABCD]). This thinking is increasingly supported at the governmental level. In 2013, *Caijing* magazine published key findings from several reports on overseas agricultural investment produced by a Ministry of Agriculture research team. To boost China's food supply, the team recommended minimizing land purchases and focusing on agricultural logistics and processing when investing overseas, with the aim, presumably, of increasing Chinese control over foreign production, processing, and logistics for commodities like soy, which cannot be supplied domestically in sufficient quantities.

Policy variance on the part of net food importers (in addition to net exporters) again suggests the absence of a unified, international response to the global food crisis. Much of recent domestic food policy is driven by the threat of price spikes and volatility. China's own policies reference supply volatility, in particular, as a reason to secure greater control over the global supply chain. But global food challenges will require an international response, not a domestic one. This is a challenging proposition, certainly, but it is also a critical one as food insecurity continues to grow.



A number of important food and nutrition initiatives have been employed at the national, regional, and international levels, but they have, in general, been fragmented, uncoordinated, and unable to secure the support of critical stakeholders.

Achieving Food Security: The Opportunities And Responsibilities Of Large Net Exporters

CARLOS PÉREZ DEL CASTILLO (GPS)

In recent years, food security concerns have risen to the highest levels of government. There is growing awareness that food insecurity is not merely a humanitarian problem requiring technical solutions but a highly political issue, closely associated with poverty reduction, economic and social development objectives, political stability, and global security. Yet a coherent and coordinated response to growing food security challenges continues to elude the international community.

A number of important food and nutrition initiatives have been employed at the national, regional, and international levels, but they have, in general, been fragmented, uncoordinated, and unable to secure the support of key stakeholders. Even as food insecurity increases, we are facing considerable limitations in terms of global governance on this critical issue.

The New Global Context

As indicated elsewhere in this report, prices of staple foods have increased sharply since 2007-08, accompanied by growing commodity price volatility. These factors have reduced the ability of low-income consumers to purchase food. While prices of most commodities have fallen lately, they are still higher than in previous years and are likely to remain at these levels in the coming decades, according to projections by FAO-OECD. Escalating demand, meanwhile, is placing considerable pressure on natural resources, although productivity increases through crop engineering, innovation, and technology; agricultural intensification; and adoption of agricultural best practices can help somewhat in mitigating environmental degradation.

Another challenge has been the rise in biofuel production, instead of food crops, as supported by government mandates on biofuels and other policies. Demand for biofuels made of maize has driven up international prices for that crop. In developed countries, decades of high levels of agricultural domestic support and trade-distorting export competition policies have also prevented agricultural producers from reaching their full potential. These measures are a disincentive for long-term investment in agriculture and lead to inefficient allocation of world resources.

All of these challenges will be exacerbated by climate change, which promises to have a significant impact on agricultural production, productivity, and price volatility in the coming decades. Many studies suggest that changes in temperature and rainfall patterns

will lead to severe droughts and floods, as well as geographical relocation of pests and diseases that affect agricultural output. The negative impact of climate change is disproportionately felt in the lowest-income regions, moreover. These challenges, among others, will shape global agricultural production and food security in the 21st century.

Advances in science and technology, together with a changing institutional context, offer some opportunities. Among the most promising are advances in bioscience and communications technologies. To fully address global food insecurity, however, it will be imperative to also harness political will, encourage international cooperation, promote a system of global governance on food security, and develop partnerships with sufficient technical and financial backing.

Real progress requires engagement among multiple stakeholders (e.g., individual governments, the private sector, international and regional organizations, farmers' associations, academia, NGOs, and civil society). A deep awareness and understanding of the magnitude of the problem is also critical in finding effective and lasting solutions.

International Agricultural Trade: a Primer

International agricultural trade expanded rapidly over the last two decades, reaching USD 1.7 trillion in 2013 (as compared to USD 1.3 trillion in 2008 and USD 551 billion in 2000). Still, trade in agricultural goods is a relatively small and declining percentage of overall trade, accounting for only 9 percent of the world total in 2013 compared with 12 percent in 1990 and 20 percent in 1970. The contraction comes as markets move from being supply-driven and exerting downward pressure on commodity prices to being demand-driven. Real prices are now at exceptionally high levels as compared to historical trends, and food price volatility is on the rise. Expansion of the middle class in the developing world will put additional pressure on existing supply in the coming decades.

Protectionist measures adopted by developed countries, such as domestic support and export subsidies, were especially prominent in the era of supply-driven markets. Together with tightened borders, they greatly distorted trade and have significantly influenced the decline in commodity prices since the 1970s, providing disincentives for efficient agricultural producers interested in long-term investment. As many developed countries focus on subsidized food exports, developing countries (which would otherwise have had a comparative advantage in food exports) abandoned production and became net food importers.

As a result of changes in agricultural policies and high commodity prices in international markets, developed countries now have largely abandoned distorting protections in their agricultural sectors. However, China, India, Brazil and other large agricultural-producing countries are gradually increasing their levels of agricultural protection in an effort to ensure domestic supply.

International Agricultural Governance

Agricultural production and trade were excluded from the first seven rounds of multilateral trade liberalization negotiations set in motion by the General Agreement on Tariffs and Trade (GATT). With the adoption of the Agreement on Agriculture (AoA), the Uruguay Round took the first positive step toward integrating this sector into the rules and disciplines of the multilateral trading system. The Agreement on Agriculture (and, subsequently, the Doha Ministerial Declaration) acknowledged the need to establish a fair and market-oriented trading system through a program of fundamental agricultural reform, in order to correct and prevent restrictions and distortions in global agricultural markets. While the AoA was certainly a step in the right direction, the results of the Uruguay Round fell short of expectations.

The Doha Round launched in 2001 in the footsteps of the Uruguay Round. In Doha, member governments agreed to pursue comprehensive and ambitious negotiations aimed at achieving “substantial improvements in market access,” “reductions of all forms of export subsidies with a view to phasing them out,” and “substantial reductions in trade-distorting domestic support.” The Ministerial Declaration adopted at Doha stipulated that the modalities for reform would be established no later than March 31, 2003, and that the negotiation would conclude no later than January 1, 2005.

The reality has been quite different.¹³ Thirteen years after the launch of negotiations, the round faces paralysis. The lack of progress has generated frustration and disappointment, sparked a proliferation of preferential trade agreements as an alternative channel for trade liberalization, and damaged the overall credibility of global trade governance mechanisms.

Nonetheless, considerable progress was made during these agricultural negotiations. Major advances were noted in a text submitted for approval by the chairman of the negotiating committee on agriculture in 2008. The text relayed three critical pillars: reductions in the order of 70 to 80 percent in trade-distorting domestic support, elimination of export subsidies, and further progress on market access. The chairman’s text and the goals within remain very much on the table. Some members would like them to serve as a basis for conclusion of the Doha Round.

While current negotiations have focused on the three pillars, the AoA, as well as the Doha Declaration, have a number of provisions or references related to the food security concerns of developing countries. Because the concept of food security is embedded in agriculture, it already fits in the Doha mandate. Food security could either be considered as part of the existing three pillars or as a fourth pillar of these negotiations.

Food security concerns have grown in prominence over the course of these global agricultural negotiations, although they are often narrowly defined. Some developing countries have used the concept of food security to obtain defensive positions in regards to agricultural trade liberalization. (An example is the Group of 33 developing countries supporting the Special Safeguard Mechanism [SSM] for developing countries against import commodity surges.) More recently, India blocked implementation of the WTO Ministerial Conference Bali Agreements until it received permission for a highly subsidized

public food stockholding scheme that is not in line with AoA obligations and disciplines. Food security concerns were used to justify this maneuver.

Narrow and defensive concepts of food security—legitimate as they may be—are unlikely to lead to global food security or allay the concerns of net importers. International agricultural negotiations, instead, require a more comprehensive notion of food security, as was defined during the World Food Summit in 1996. A balanced, innovative, and broader approach to food security concerns could bring momentum to these fragile negotiations and maximize opportunities for a successful outcome, including for developing countries that suffer most from food insecurity.

This sort of approach would also offer a more positive view of trade as part of the solution to food insecurity, moving away from the notion of food sovereignty and self-sufficiency as the key solutions. It could even attract the attention and much-welcome participation of newcomers to these agricultural negotiations, such as Middle Eastern countries, which have relied to some extent on land purchases in other countries to augment domestic production.

The Need for International Cooperation

As the number of net food-importing countries grows in the coming years, self-sufficiency policies alone will not be capable of meeting rising global food demand. The international community will have to increasingly rely on international food trade to ensure security.

A necessary first step is the restoration of global confidence in international markets as a reliable source of food. International trade was seriously eroded and its credibility undermined during the recent food crisis. Food-exporting countries' use of export bans, restrictions, and taxes to secure domestic supply exacerbated price increases and volatility in world markets. Renewed trust in the markets can only be achieved through negotiations that align the long-term objectives of net food exporters and net importers in a reliable, rule-based framework that will serve the interests of both groups of countries. Guarantees to all concerned should be provided through a set of rules, disciplines, and measures that will contribute to a more food-secure world.

The institutional framework that most supports a positive outcome on international food security cooperation will need to be identified. Existing multilateral institutions have comparative advantages in addressing global agricultural challenges. However, the best options, in the opinion of the author and GPS, are the WTO and current agricultural negotiations within the Doha Round. These negotiations have a proper and ambitious agriculture mandate, the boundaries of which incorporate food security issues. Furthermore, the WTO deals specifically with trade issues, which will be critical to any food insecurity solution. Also, in contrast to most other multilateral bodies, the provisions negotiated under WTO agreements are binding in nature for all members.

WTO rounds revolve around the concept of “single undertaking” wherein a country seeks ambitious results in those areas where it has comparative advantage and is willing to make concessions in other sectors. In practice, countries have sought balance within specific negotiating sectors, including agriculture, non-agriculture market access (NAMA), and services.

There remains, of course, regrettable asymmetry in negotiating power between developed and developing countries when it comes to agricultural negotiations. In the Uruguay Round, developed countries secured the consolidation of important levels of trade-distorting support and subsidies into WTO schedules, which they then implemented over decades with domestic financial support. Developed countries are now reducing these distortionary measures in exchange for concessions in current negotiations. Developing countries do not have these bargaining chips. They are only able to negotiate market access. The incorporation of food security and agricultural supply into these negotiations could increase developing country bargaining power and restore a degree of equity to these negotiations.

A Proposal to Net Food Exporters

Net food importers look to international markets to address growing demand for food at reasonable prices. Many would prefer guarantees of exports from major food-producing countries rather than costly and inefficient self-sufficiency policies, which in many cases are economically and environmentally unviable. The challenge, then, is to encourage efficient producers of food to guarantee export of specific volumes of staple goods. This could be accomplished through negotiated trade modalities.

Alternatives to this model have been considered. They include establishment of a multilateral agreement based on an international grain reserve (buffer stock) or national reserves, coordinated internationally, that would withdraw food from the market in periods of surpluses and inject it back during periods of scarcity. This mechanism could presumably match food supply and demand and mitigate excessive food-price fluctuation. However, while attractive in theory, this approach was discarded in light of similar past agreements marked by management difficulties, high operating costs, and other functional challenges.

Remaining approaches tend to fall on the shoulders of net food-exporting countries, relying on them to supply international markets at fair and equitable prices. These commitments have numerous domestic implications and costs. They require higher levels of investment in agriculture, including R&D and infrastructure. They also require national food stock policies to manage production stresses brought on by climate conditions, pests, disease, or natural disaster.

As compensation for their commitment, net food-exporting countries would require parallel guarantees from importing members, including improved access to markets, significant reductions in trade-distorting agricultural domestic support, and the elimination of export subsidies. These three conditions have been the subject of intense negotiation among members in the Doha Round, as indicated in the text of the chair of the Doha Round Negotiating Committee on Agriculture.¹⁴

Despite evident challenges, negotiation of binding multilateral or bilateral food security agreements within the framework of the current Doha Round agricultural negotiations is possible. The agreements could take the form of long-term contracts on supply volume. Or, as with importing countries' minimum access commitment through Tariff Rate Quotas, exporters could adopt a similar scheme to guarantee access to food supply.

Any negotiation must, of course, consider the type and level of commitment that net food exporters can guarantee. Most, if not all, the world's net exporters have market economies, so it will be the private sector that is responsible for delivering on export guarantees. We do not envision governments being willing to introduce a domestic system of price guarantees to producers of specific food commodities, for example. Rather, the private sector would benefit from—and might welcome—pragmatic expansion and liberalization of food trade.

Also of critical importance are new disciplines in the Agreement on Agriculture (and/or the WTO legal texts) regarding export restrictions and taxes. Export restrictions have seriously undermined confidence in international markets as a reliable source of food. Any conversation on export restrictions is, of course, politically sensitive. But removing these restrictions would facilitate an end to export subsidies. Export subsidy elimination was provisionally agreed to during the Hong Kong WTO Ministerial Conference of 2006 but was not implemented owing to the current impasse in negotiations. A reasonable transition period for the implementation of these disciplines and temporary exceptions or special clauses for certain categories of developing countries could promote additional progress.

Two other international mechanisms aim to ensure that food supply is directed to those countries that need it most. The first is a financial facility mechanism for net food-importing countries during food crises or periods of excessive price volatility. Like the International Monetary Fund (IMF) in times of crisis, this mechanism would enable net food importers to draw low-interest loans with reasonable payback periods. Also advisable is creation of a global emergency grain reserve for the most food-insecure countries to ensure that food aid will be available to them in times of crisis. A reserve of this sort could be managed and run by the World Food Program.

These initiatives are not new and have been implemented in various ways in the past. However, they have never been contemplated within the framework of an international agricultural trade agreement whose norms, commitments, and obligations are binding to all signatories. The implementation of these schemes is likely to present numerous challenges, but in the view of the author and GPS, they are perfectly viable propositions assuming there is political will to find lasting solutions to food-security issues.

Extensive global hunger is morally unacceptable and should motivate the international community to act. Incorporating a broad concept of food security into the current agricultural negotiations in the WTO could present new possibilities for members and generate momentum for re-engagement, possibly breaking the existing stalemate in the Doha Round.

On Timing

After thirteen years of protracted and frustrating negotiations, the Doha Round is in a difficult and critical phase. There are no signs from the negotiation's key players—developed or developing countries—of flexibility in their positions. Therefore there is little chance of breaking the current impasse. In line with the commitments agreed to at the WTO Bali Ministerial Conference, governments are now required to produce results on all of the remaining Doha Round negotiating issues by July 2015. Core issue areas include Agriculture, Non Agricultural Market Access, Services, Trade Related Aspects of Intellectual Property Rights, Rules, Trade and Development (special and differential treatment), and Trade and Environment. This package of results on these and other issues is to be submitted during the Ministerial Conference in Nairobi in December 2015 for final consideration, becoming the basis for the conclusion of the round.

It remains to be seen whether this can be achieved. The WTO director general has been urging members to come up with “reasonable,” “pragmatic,” and “doable” results across all issues. What is clear at this stage is that if (and that's a big if) any agreement is reached, it would amount to a “mini-package” with a low level of ambition vis-à-vis the Doha Round mandate (a lowest common denominator, in other words). This would be a regrettable outcome after more than a decade of extensive negotiations.

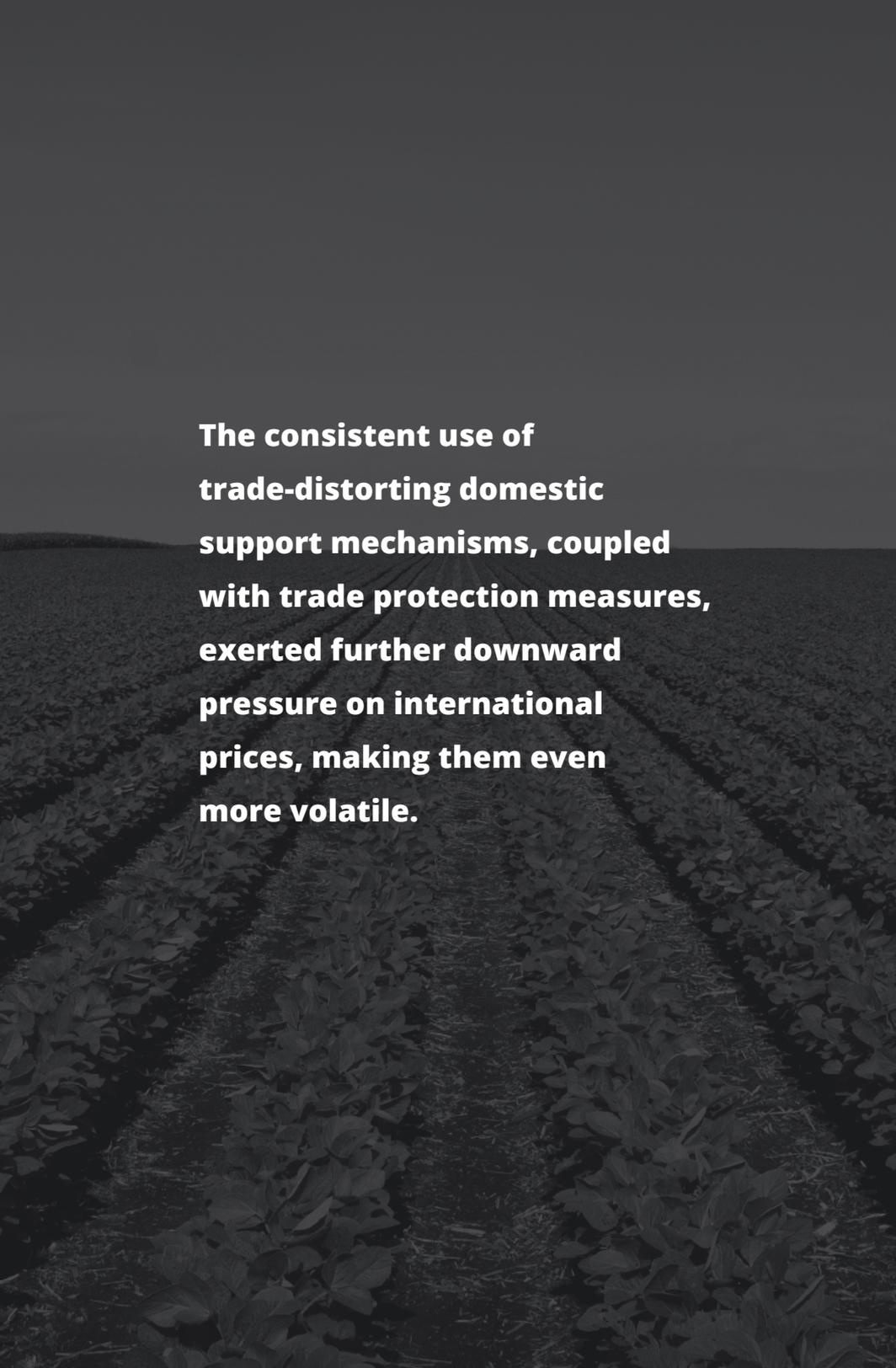
In the likely event that members fail to reach agreement on this “mini-package,” the Doha Round may die. To continue negotiations into future years, with no end in sight, would further erode the credibility of the Multilateral Trading System and its capacity to respond and adapt to emerging global trade and sustainable development challenges.

It is likely that governments would agree to a post-Doha Program of Work that would include a commitment to agriculture reform. I do not envisage at this stage any appetite for a new round. After personally consulting a number of key players in these negotiations in the last week of February 2015 in Geneva, I see little time and space for the introduction of the broader concept of global food security in the Doha Round's agricultural negotiations. Food security-related proposals are better aimed at the post-Doha WTO Program of Work.

The Way Ahead

The possibility of dealing with global food security concerns in the framework of the WTO is promising, if still challenging. As indicated previously, these discussions could be held during existing multilateral agricultural negotiations in the Doha Round or, eventually, in a post-Doha Program of Work on Agriculture. This setting offers the possibility of negotiating a proposal between net food-exporting and net food-importing countries that would be acceptable to both parties.

The proposed solutions are ambitious. A great deal of consultation and coordination is needed to assess their merits and flaws and to meet the needs of all concerned parties. But the alternatives are few. Trade-based solutions must be considered and pursued in order to address the world's increasingly critical food security challenges.



The consistent use of trade-distorting domestic support mechanisms, coupled with trade protection measures, exerted further downward pressure on international prices, making them even more volatile.

Addressing Global Food Demand Through Multilateral Trade

RICARDO MELÉNDEZ-ORTIZ (International Centre for Trade & Sustainable Development)¹⁵

Developing Countries and Their Growing Share of Farm Trade

Over the last 15 years or so, global agricultural trade, excluding intra-EU flows, has nearly tripled, reaching USD 1 trillion. While this trade is concentrated among six key players—Brazil, China, Japan, India, the European Union, and the United States—their collective importance has decreased, the result in part of booming import markets in Africa. Emerging economies have also become more prominent as China's imports soar, Brazil becomes an increasingly key exporter of agricultural products, and India develops an agricultural trade surplus (of USD 9 billion) while doubling of its share in global food imports.

In the coming decades, changes in demand—as a result of growing urban populations and associated dietary shifts—will further affect the direction and geography of trade flows. It is estimated that an additional 1 billion people will join the middle class in 2020. In this context, according to the OECD-FAO Agricultural Outlook, the Americas will strengthen their position as the world's dominant export region, in both value and volume. Changing consumption patterns will drive more exports of high-value commodities such as meat, ethanol, sugar, oilseeds, and cotton. Western Europe, on average, will maintain a negative trade balance with flat exports. Although the rapidly growing population in Africa will demand more food, the greatest demand will come from Asia, which by 2023 is expected to have trade deficit for all agricultural commodities except rice, vegetable oils, and fish. India will remain a leading exporter of cereals and rice; it is also expected to be a major exporter of meat and cotton, allowing it to maintain an overall trade surplus for agricultural products.

These trends reinforce the need for a strong, predictable, and equitable multilateral trade system. They also suggest growth in trade flows (particularly imports) from emerging economies regardless of market accessibility. Indeed, regions that will experience a relatively large increase in the middle class are also those that will significantly increase imports for most commodities.

15. The editors prepared this article on the basis of the author's presentation during the IAD-GPS meeting in Washington, DC in April 2015 and other contributions by the author. Additional information on the points made in this article can be found in Meléndez-Ortiz, R., Bellmann, C., and Hepburn, J., (2014), "Tackling Agriculture in the Post-Bali Context: A Collection of Short Essays." Geneva, 2014. ICTSD e-book: www.ictsd.org/node/92340.

Shifting Toward a Supply-constrained World

Historically, agricultural markets have been characterized by declining real prices. The benefits of improved productivity and falling production costs have been passed on to consumers, increasing per capita calorie consumption and reducing the number of chronically hungry people. Food supply growth exerted downward pressure on prices and, ultimately, on farm income. As a response, policymakers, particularly in OECD countries, implemented price support measures, buffer stock programs, or acreage set-aside schemes. While these measures achieved objectives at the domestic level, the consistent use of trade-distorting domestic support mechanisms, coupled with trade protection measures, exerted further downward pressure on international prices, making them even more volatile. Domestic policy also resulted in surpluses, often sold on international markets with the help of export subsidies, which contributed to lower international food prices.

In developing countries, low and volatile prices provided disincentives to invest in agriculture, often resulting in lower domestic food production, while shifting consumption patterns towards less expensive, subsidized imported foods. Subsidies have helped net food-importing countries with limited domestic supply capacity, low foreign exchange availability, and large urban populations. However, they undermine the capacity of efficient agriculture exporters and countries with untapped food production potential—notably in sub-Saharan Africa—to feed their own populations and, over the long run, they stifle domestic productivity growth.

Despite historic downward pressure on food prices, several agricultural commodities experienced price spikes over the last five years. Arguably, markets for certain agricultural products have always exhibited high volatility. However, the magnitude and frequency of the price spikes experienced in 2007–08 and again in 2010–11 and 2012 were of such severity that they attracted considerable political attention. These spikes reflected the immediate impact of weather-related production shortfalls in major producing regions, against a backdrop of high energy prices, steadily rising demand due to ever-rising average incomes, and low rates of productivity growth in many regions. Isolated extreme weather events are not necessarily a long-term trend, but climate change is likely to increase the incidence of extreme weather in the future. As a result, markets will continue to be characterized by relatively high and volatile prices. Furthermore, persistently high energy prices and policies to promote the use of agricultural products for biofuel have created a direct link between energy and food prices, changing the dynamics of food production and trade.

In the short term, food price spikes have hit low-income, food-deficient countries particularly hard. In the past, rising prices of food imports were linked to increases in food demand. In recent years, however, price increases have had a much stronger effect on food imports. As suggested by Konandreas,¹⁶ the policy measures applied during these price spikes also expose possible failures in current WTO disciplines. The applied policy responses can be classified as follows: a) tariff manipulation and trade policy (e.g., export restriction to reduce price transmission and increase domestic supply); b) domestic market-based measures (e.g., domestic food stockpiling through administrative

procurement and the release of supplies at subsidized prices); c) producer-oriented policy responses (e.g., input subsidies and producer price support); and d) consumer-oriented policy responses (e.g., food subsidies, social safety nets, tax reduction, and price controls).

There are various problems associated with the abovementioned policy responses, but some are challenges that can be organized under three broad categories. First are the issues related to the interpretation or adequacy of existing provisions. A prominent example is public stockholding for food security purposes. In the context of less reliable global markets, some developing countries saw the importance of building up domestic food stocks to address food security needs. Then there are the issues related to the weakness of existing provisions. While existing disciplines on imports and domestic support provide a degree of comfort and predictability to exporting countries, similar disciplines on the export side, catering to the interests of poor net food-importing countries, have proven inadequate and underdeveloped. A telling example is the case of export prohibitions and taxes. The third problem focuses on disciplines missing from the system altogether, such as the trade impact of biofuel policies pursued by some countries.

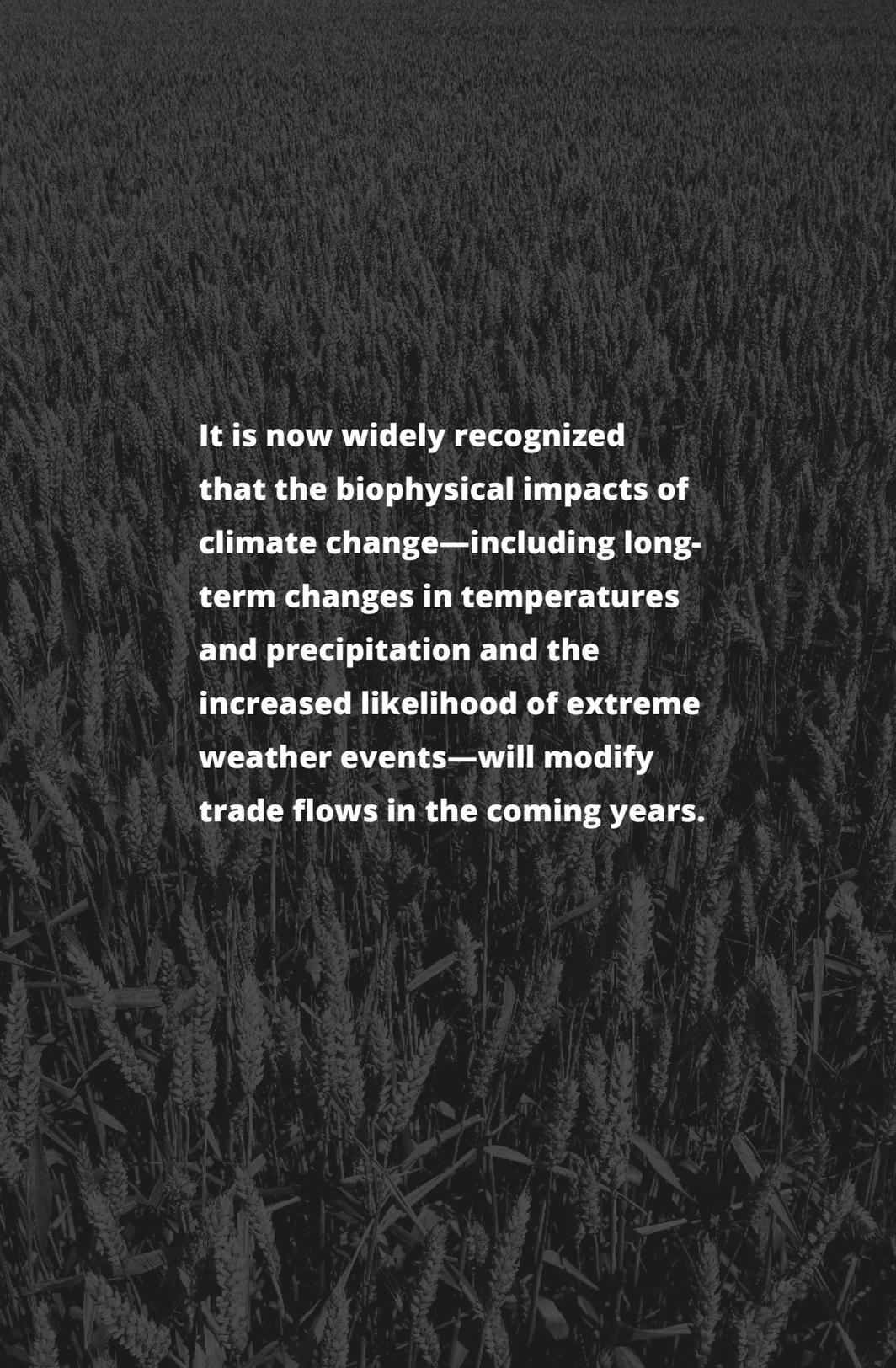
These measures encourage feedstock consumption in the energy markets. They can introduce distortions and disincentives to the production of feed stocks by more efficient producers in other parts of the world, and they can also leave consumers exposed to higher food prices and higher food price volatility—especially when energy prices are high and feedstock yields fail.

In the longer term, if the trend toward a more supply-constrained world is confirmed, there could be deeper implications for global agricultural trade governance. By and large, the Doha Development Agenda negotiations still focus on protecting producers. Measures to protect consumers have not received the attention that the shift to the new market environment may warrant. Given this reality, a fundamental question is whether the agenda negotiated under the Doha Development Agenda should be revisited with a view to addressing not only trade distortions that put a downward pressure on international prices but also to introducing binding disciplines that help reduce international price hikes and excessive price volatility.

Agriculture and Climate Change

It is now widely recognized that the biophysical impacts of climate change—including long-term changes in temperatures and precipitation and the increased likelihood of extreme weather events—will modify trade flows in the coming years. The impact on individual countries will depend on their trade exposure and the effect of climate change on their specific agricultural production.

Agriculture is, of course, also a significant source of global greenhouse gas (GHG) emissions, although it can contribute to carbon sequestration. From a trade perspective, a key issue is whether policy measures that are emerging to promote mitigation or adaptation in the sector are consistent with GATT/WTO disciplines. In this respect, it is argued that the pursuit of climate change policies for agriculture opens up the possibility of conflicts with existing international trade disciplines.



It is now widely recognized that the biophysical impacts of climate change—including long-term changes in temperatures and precipitation and the increased likelihood of extreme weather events—will modify trade flows in the coming years.

The challenge will be to allow countries flexibility in reducing agriculture's environmental footprint and promoting greater sector participation while experiencing the benefits of freer trade. There is a need for an international consensus on domestic policy measures that are likely to be effective in tackling the effects of climate change in agriculture while, at the same time, bypassing trade distortion. Also needed are mechanisms for enhanced monitoring and scrutiny in order to avoid trade disputes. With all of this in mind, the following priorities relating to climate change measures could be addressed in the current Doha Round.¹⁷

Addressing Food-related Challenges: Four Examples

EU activists have focused in recent years on a reformed Common Agricultural Policy that would require farmers to respect additional environmental requirements as a condition for financial support. The United States, on the other hand, has introduced subsidized insurance programs for price and revenue that are largely built around the countercyclical payments and Average Crop Revenue Program set up under the previous farm bill.

China's fast-growing farm support schemes are designed, in part, to rectify problems arising from historical under-investment in the agricultural sector. This is the legacy, as in many developing countries until quite recently, of a tendency to tax rather than subsidize farming. Supports are also intended to address the large and growing disparity between rural and urban incomes. China's farm support is heavily focused on payment for "general services" such as farm infrastructure.

Agricultural domestic support in India has also grown rather dramatically in recent years, with a particular emphasis on input and investment subsidies. Under WTO provisions, these enable payments for fertilizers, irrigation, electricity, and seeds. Food purchases at administered prices are also important in the country's overall policy framework, with growing risks of breaching ceilings on trade distortion.

Changing Global Agricultural Markets and the Emergence of "Mega-regional" Free Trade Negotiations

Another striking feature of the recent evolution in global trade has been the emergence of so-called "mega-regional" free trade negotiations. Regional trade agreements (RTAs) are not a new phenomenon, but the latest mega-regional initiatives are much larger in scale. The three largest "mega" initiatives—the Transatlantic Trade and Investment Partnership (TTIP), the Transpacific Partnership (TPP), and the Regional Comprehensive Economic Partnership (RCEP) in Asia and the Pacific—represent over three-quarters of global GDP and two-thirds of world trade. They are effectively developing the roadmap for trade regulation regimes of the future, with results that involve deeper integration and WTO+ disciplines or liberalization.

Even though these negotiations are still unfinished, Singh¹⁸ argues that—given their size and the possible increase in their membership over time—they have already changed the

background for the Doha Round. In this respect, over the medium term, a TTIP agreement could well affect the EU's position in the multilateral negotiations. If the United States' access to EU markets for agricultural products and foods is significantly improved under the TTIP, it would be difficult to argue that the EU should not also open its markets more widely to exporters, particularly those from developing countries. Giving up on the possibility of export subsidization in trade with the US might well be a precursor to the elimination of export subsidies overall. Implications regarding domestic support, though, are less clear as it is unlikely that any disciplines in this area will be included in the TTIP.

In the context of a TTIP, the US and the EU could conceivably agree to a determined joint push in the WTO for significantly more stringent commitments on domestic agricultural support. If that were to materialize, then even the EU's position on domestic support might be affected in a way that is helpful for the Doha negotiations on agriculture. For others, current RTAs are already on a path that moves beyond the existing multilateral rules in a wide range of areas. Regional arrangements are not a comprehensive response to today's more interconnected markets because they are not global. However, the new mega-regionals have the potential to address today's essential trade policy questions across a geographical scope that moves closer to a truly global reach.

Regionalism may naturally evolve toward a comprehensive multilateral system. Promoting consistency and coherence across mega-regional negotiations and exploring how best to maximize synergies with the multilateral regime could reduce transaction costs for businesses, ease policymaking, and maximize global welfare.

Such a regional commitment should not be simply replicated in the multilateral trading system. However, despite the political sensitivity of the agricultural sector, a number of RTAs have made important strides in liberalizing measures beyond the levels of the AoA. Their actions could be easily applied or replicated, at least from a purely technical point of view, at the multilateral level. Tariff-cutting exercises have been the centerpiece of WTO+ efforts in agriculture, advancing the elimination of agricultural tariffs beyond existing multilateral concessions. Interestingly, South-South RTAs have been moving faster and farther on tariff cuts than North-South RTAs.

Another area that has yielded perhaps the most widespread WTO+ measures relates to exports. In due course, this may be where multilateral efforts can be taken up. Many RTAs have developed commitments on export taxes that go beyond those of the WTO. These instruments are often applied to raw materials and other agricultural products (basic grains, oil seeds, etc.). It is worth noting that the regional approach to discipline flexibilities has been to impose a set of conditions on the use of exceptions so that when export measures are implemented, they do not adversely affect other WTO members or alter world prices. Many RTAs also contain provisions prohibiting the use of agricultural export subsidies in regional trade.

Finally, in the case of special measures, most WTO+ requirements relate to improvements in transparency. RTAs can be credited for introducing obligations that strengthen the ex-ante and ex-post transparency requirements related to the design and application

of standards and for establishing improved web-based information systems and consultation processes that include interested foreign parties. Since transparency displays the characteristics of public goods—non-excludable and non-competitive—it would appear likely, at least in purely technical terms, that the multilateral extension of these commitments would come at no additional economic cost for countries that have already implemented them unilaterally or regionally.

Keeping these fundamental changes in mind, several options can be envisaged for the crafting of a meaningful post-Bali agenda. To achieve more in agriculture negotiations, the range of issues under discussion must be encompassing. Secondly, given the wide divergence of WTO members' views, it will be necessary to share ideas and explore new options if the current impasse is to be overcome. Finally, key points that need to be addressed will have to be identified in order to achieve re-engagement and momentum in the negotiations.

Addressing Global Food Demand through Multilateral Trade

Food and Trade:

- Trade can play a crucial role in linking food-surplus and food-deficit regions.
 - Contributes to improve food security by making food more readily available and easier to access (by lowering costs to consumers).
 - Reduces volatility in local markets by diminishing exposure to localized production shocks, improving food security by addressing supply stability.
- Food and agricultural exports can support rural development if low-income producers benefit from increased revenues and new employment opportunities that arise from integration into global markets.
- A reduction in agricultural trade distortions can help improve the efficiency of global markets, although better regulatory frameworks are also needed (in areas such as climate, poverty, etc.) to ensure that markets are sustainable and equitable.

Market Context:

- The world is moving from a period of persistent downward trends in food prices to a new paradigm characterized by higher and more volatile prices.
- There is a shift from a “demand-constrained” to a “supply-constrained” world.
- New linkages have arisen between agriculture and larger energy markets due to biofuel policies.
- Markets are feeling the effects of recurrent weather-related production shocks.

Regulatory Context:

- Price spikes exposed weaknesses in the multilateral framework of rules on trade.
- There is a lack of meaningful disciplines addressing the needs of poor food-importing countries in areas such as agricultural export restrictions.
- New emerging controversies in the WTO, such as public stockholding, can be seen as symptoms of failure to update global trade rules.
- Governments are increasingly exploring avenues for advancing economic integration through regional trade negotiations.
- The inability of these frameworks to address issues such as agricultural domestic support means that the multilateral framework is likely to continue playing an important role.

Way Forward:

- 2015 is a critical year for achieving progress on sustainable development.
- Upcoming meetings in New York (Sustainable Development Goals), Paris (climate), and Nairobi (trade) should enable governments to make the global agricultural trading system more efficient, equitable, and sustainable.
- Domestic policy reforms and regional integration could also ensure that trade addresses global food demand and helps low-income producers and consumers benefit from changing patterns of supply and demand.

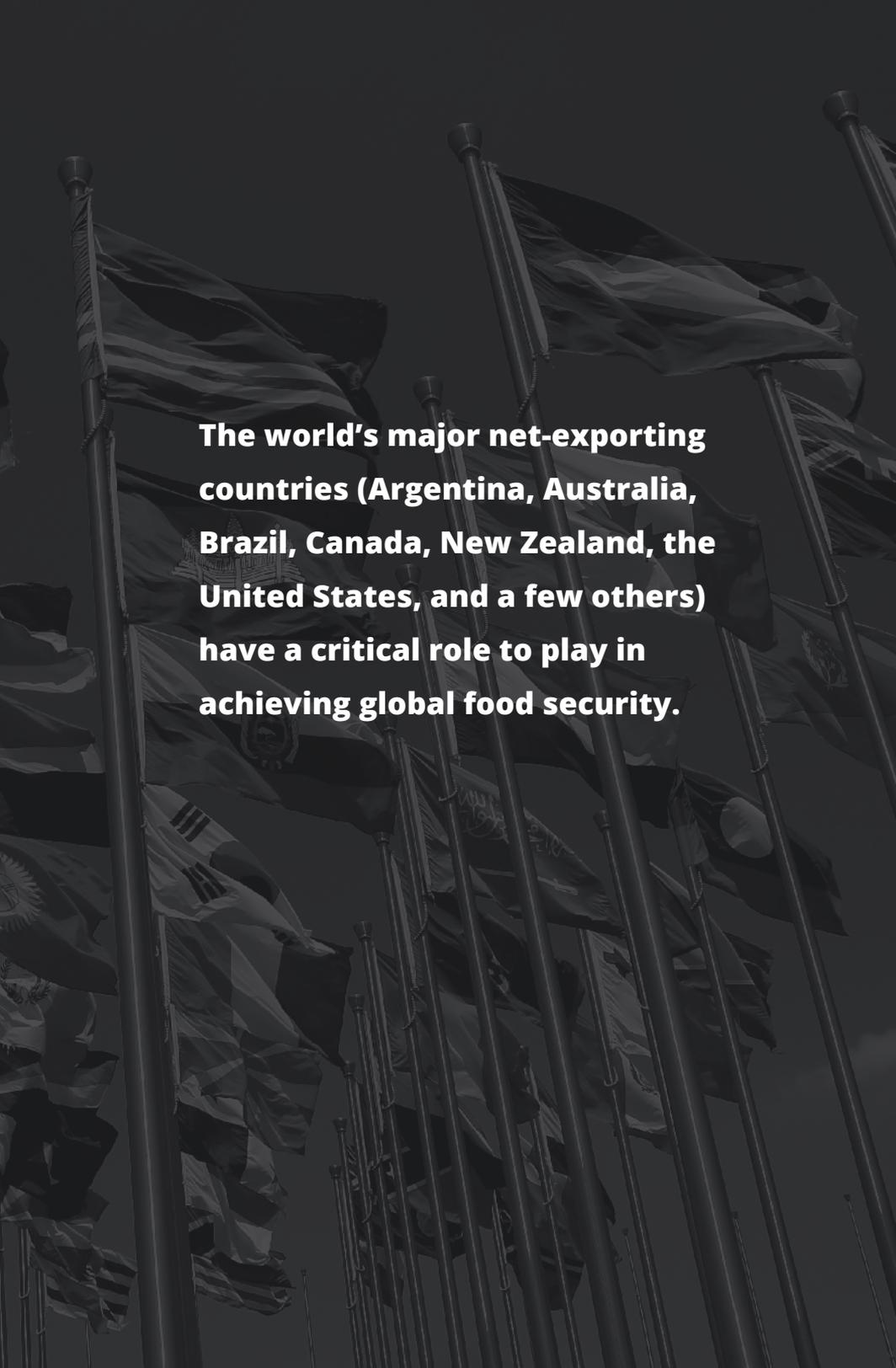
Conclusion

The mission presented to trade negotiators in Bali—to prepare “a clearly defined work program on the remaining Doha Development Agenda issues”—offers a unique opportunity. It could allow WTO members to take the first tentative steps toward updating global rules on trade in order to address the new global challenges affecting food and agriculture. This mission also urges negotiators to make progress on a number of long-standing problems that, over decades, have undermined investment in farming, especially in the world’s poorest countries.

Despite some setbacks, the WTO has proven to be relatively robust. The organization’s framework of rules and its dispute-settlement mechanisms have persisted amid dramatic shifts in the economic landscape of the last two decades. Negotiators must avoid complacency, however, about the strength of the institution and the set of rules it oversees. Like any institution engaged in global governance, its rules and decision-making processes will require constant investment and maintenance if they are to continue to be seen as credible and legitimate. Recent tensions over issues such as public food stockpiling are symptomatic of slow progress in updating global rules in critical areas such as farm subsidies.

The 2008 financial crisis revealed the global economic system’s sensitivity to sudden shocks and the limited ability of existing governance and coordination structures to address them.

Agricultural markets will encounter ever-growing pressure in the years ahead as a larger and increasingly wealthy global population demands more—and more varied—food and farm goods even as climate change alters global productive capacities. In a world where food supply will become increasingly scarce, global governance arrangements are a critical, if imperfect, solution.



The world's major net-exporting countries (Argentina, Australia, Brazil, Canada, New Zealand, the United States, and a few others) have a critical role to play in achieving global food security.

Ensuring Global Food Security: The Political Dimension

The IAD-GPS Conference opened to the public with a final session on the political dimension of global food policy. The discussion featured former Brazilian Minister of Agriculture, Roberto Rodrigues, Mike Moore, former director-general of the World Trade Organization and current New Zealand ambassador to the United States, and US Special Representative for Global Food Security Nancy Stetson. Panelists emphasized the importance of placing food security and nutrition at the top of global and domestic political agenda, as well as creating an enabling environment for strengthening food security and nutrition through adequate investment, improved policies, new legal frameworks, and coordinated efforts.

Despite ongoing productivity challenges and commercial constraints, Rodrigues indicated that Brazil has made progress toward increasingly efficient agricultural production and awareness of growing resource constraints.

- Brazilian agribusiness has grown at unprecedented rates in recent years. Brazilian agribusiness exports almost quadrupled from USD 25 billion in 2002 to USD 100 billion in 2013, largely the result of booming Chinese demand. In the last 20 years, Brazilian grain farmland grew by 50 percent and grain production swelled 234 percent.
- As agribusiness booms, Brazil's public and private sectors are seeking innovative ways to address related sustainability challenges. Technology, Rodrigues explained, plays a critical role in Brazil's agro-sustainability efforts. The ABC Program for Low Carbon Agriculture was designed to reduce national emissions of greenhouse gases through six strategies, ranging from the recovery of degraded pasture to a program of crop-livestock-forest integration. The program includes provisions for direct planting and for biological nitrogen fixation to strengthen crops.
- Brazil's cash transfer programs have been an important tool for social protection and poverty reduction, Rodrigues noted. They enhance the productive capacity of farming households, which typically have few assets and limited access to financial services.
- Brazil's rural producers have some influence on domestic agricultural policy. Cooperatives, which are responsible for 50 percent of Brazil's agricultural production and animal husbandry, have cultivated best practices and advanced innovative technologies and policies. Brazil's farmers are also strong advocates for the preservation of natural resources. Their impact in other areas, such as commercial policy, rural insurance provision (only 6 percent of Brazil's cultivated land is now covered), labor, the environment, fiscal and taxation issues, and laws regarding access to land, is minimal, however.

- Brazil has the capacity to produce considerably more grain, biofuels, and other land-intensive products (up to 40 percent of the world's total in the next five years), but progress in its agricultural sector—as in other sectors in Brazil—is compromised by poor infrastructure and logistics. Recent rapid increases in agricultural production were not accompanied by corresponding investments in those two areas. The income of agricultural producers is greatly degraded by high costs of transportation from remote areas to consumer centers. Brazilian farmers' competitiveness vis-à-vis producers in other countries is also negatively impacted.

Despite ongoing challenges, there are efforts to address these issues. Brazil's 2012 farming plan contained provisions for enhancing crop storage capacity. The government has also entered into partnerships with private investors for the construction of railways, highways, ports, and airports in agriculture-producing areas.

Moore focused his comments on the effects of climate change and trade policy on agricultural production in New Zealand.

- New Zealand seeks to double its agricultural exports over the next decade. But Moore said climate change will have direct and indirect effects on New Zealand. Directly, for example, agricultural production will alter as weather patterns shifts and drought risk increases. Indirect effects include changing trade patterns resulting from climate-induced production shifts and the introduction of global greenhouse gas (GHG) mitigation measures. Climate change-induced production variation is expected to be less severe in New Zealand than in other major food-producing regions, however. This could contribute to growth in exports in the coming decades, Moore indicated.
- Moore said New Zealand's government agencies have been actively looking for ways to improve trade and other policy to promote agricultural sector development. International connections remain critical to New Zealand's future prosperity. The country recently established a free trade agreement with China that is now delivering substantial benefits for New Zealand's growers. Other policies seek to improve domestic productivity and attract valuable foreign investment in agricultural logistics and technology.

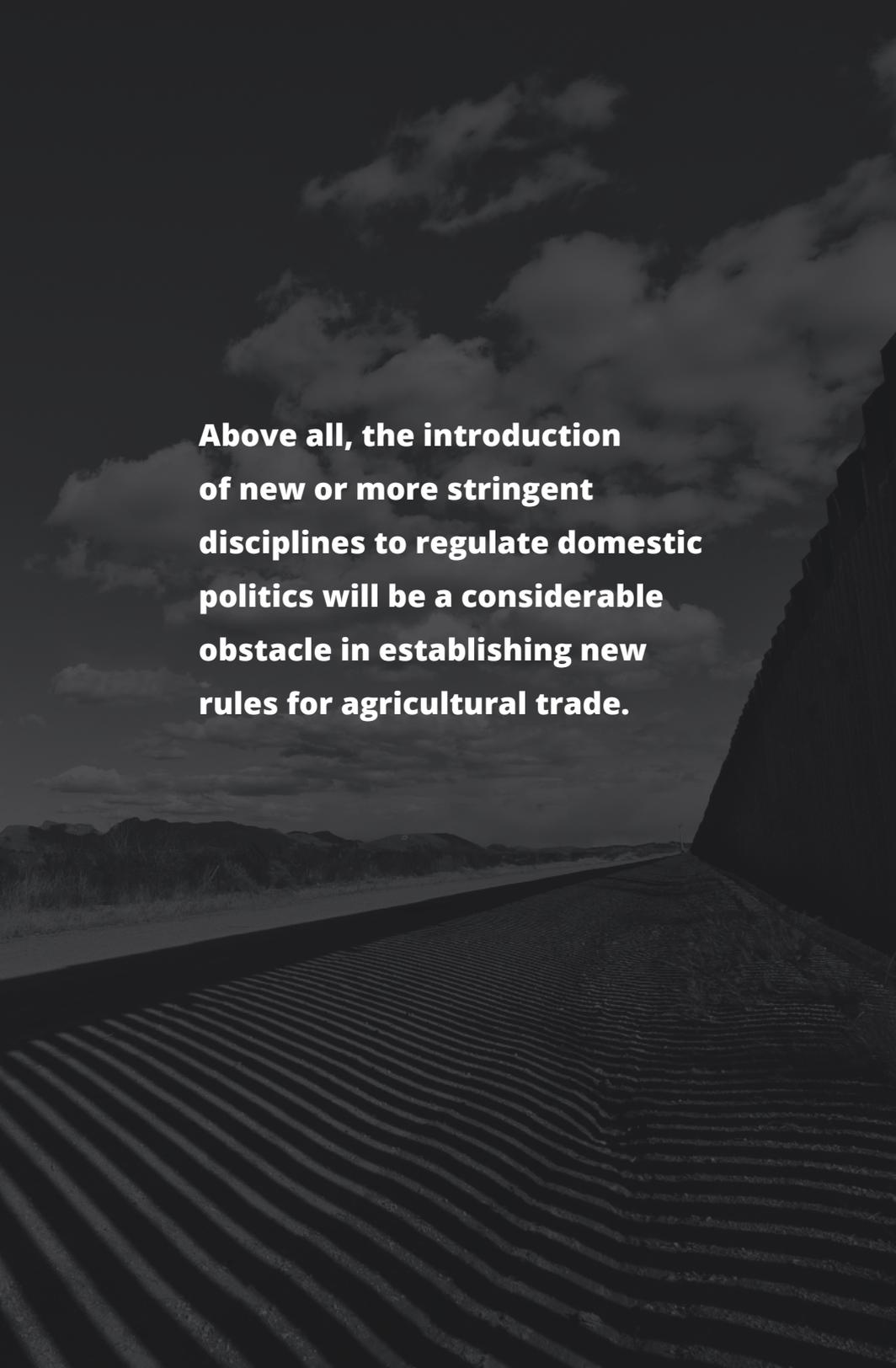
Stetson emphasized the role of US partnerships in fighting global food insecurity and malnutrition.

- For the US government, climate change, nutrition, and public and private sector investment are at the core of efforts to address global food insecurity. In 2013, the US government's Feed the Future initiative provided new technologies to nearly 7 million small farmers and, together with the United States' Global Health Initiative, provided nutritional services to 12.5 million children across the globe. The government also launched eight projects in 2014 supporting new seed and other technologies in Africa, Asia, and Latin America and the Caribbean. In addition, in October and November 2014, the US Department of State led a US government delegation that successfully negotiated the Rome Declaration on Nutrition and

the Framework for Action, which was adopted by global consensus at the Second International Conference on Nutrition co-convened by the World Health Organization and the FAO. Food security and nutrition will continue to be at the forefront of US diplomatic efforts in 2015 and beyond, Stetson said.

- Stetson also emphasized the need for a coordinated approach to combating global food insecurity and malnutrition. This will require political commitment and integrated leadership. Growing political commitment to food security on the part of the United States and other countries is already producing results, Stetson said. For instance, the LAC regional commitment to end hunger by 2025 is underpinned by the Millennium Development Goals' hunger target as well as aims articulated in the World Food Summit. Governments in various regions have also responded to the call made by United Nations Secretary-General Ban Ki-moon in his Zero Hunger Challenge to build a future in which all people enjoy a fundamental right to food and in which livelihoods and food systems are resilient and able to withstand the pressures induced by climate change and other resource and environmental challenges. Eradicating hunger will contribute to poverty reduction as well as to global peace and stability, Stetson concluded.

All speakers said sustainable agricultural production that meets the needs of the global population requires innovative global, regional, and national commitments to agricultural investment, rural development, and social protection. Investment in sustainable family farming is also critical, as evident in the cases of Brazil and New Zealand. Small-scale farmers produce a considerable portion of the world's food, and family farming is among the most important sources of employment globally. Farmers are also the custodians of much of the world's land and natural resources.

A dark, atmospheric landscape with a cloudy sky and a body of water in the distance. The foreground shows a textured surface, possibly a field or a path, leading towards the water. The overall tone is somber and dramatic.

Above all, the introduction of new or more stringent disciplines to regulate domestic politics will be a considerable obstacle in establishing new rules for agricultural trade.

Some Final Comments

This report presents the results of a meeting organized by the Inter-American Dialogue and GPS that hosted an in-depth discussion on global food security in Washington, DC. The Dialogue and GPS brought together representatives from key international agricultural and trade-related organizations to discuss the interests of net food importers and exporters and a plausible policy agenda for addressing global food shortages and nutritional deficiencies.

Global food security is a major goal of the international community. It has been included in the Millennium Development Goals in a prominent way and even more so in the existing draft of the SDGs. It has also been recognized at innumerable international meetings and in declarations as a major concern and a development objective. The food security situation will become more serious in the coming decades as food demand increases in countries like China, with large and growing populations, and as climate-related and other factors threaten food supply. Rising and volatile food prices have led many countries to take measures to ensure domestic food supply and to reduce price volatility in recent years. Some of these policy measures have focused domestically, with minimal effect on other countries or on international trade. Other measures have negatively affected agricultural trade either because of their distorting effect on local production or because they disrupt exports and, consequently, international food supply. The political rationale behind these measures has also been disruptive to multilateral negotiations in the WTO, as evidenced during the most recent Doha Round.

The world's major net-exporting countries (Argentina, Australia, Brazil, Canada, New Zealand, the United States, and a few others) have a critical role to play in achieving global food security. These countries' commitment to global food supply, the policies they implement, and their productive capacity will be of great consequence to global food security. But achieving stable food supply should also be a central tenet of multilateral trade negotiations. Effective multilateral trade negotiations and intergovernmental agreements can help to establish more secure and stable international markets by enabling net-importing countries to confidently rely on trade for food supply, without the need for measures that could exacerbate food supply or price volatility. It is in this overall context that the proposal presented by Pérez del Castillo, which was the central theme of the seminar, has to be analyzed.

Despite general agreement on the main issues presented by Pérez del Castillo and the need to better incorporate food security challenges in global governance frameworks, Meléndez and other contributors discussed the many challenges of his proposal specially in reference to the difficulties it would likely encounter in the WTO. Above all, the introduction of new or more stringent disciplines to regulate domestic politics will be a considerable obstacle in establishing new rules for agricultural trade.

Finally, participants in a public session called for a new set of trade regulations and policies that are supportive of global food security. Michael Moore commented on distortionary trade policies' negative effects on global food security. He mentioned, in particular, the need to prevent widespread use of agricultural export restrictions. Roberto Rodrigues, Brazil's former minister of agriculture, called for more extensive discussion of global food security in the Doha Round. And Nancy Stetson from the US State Department remarked on the many ways in which the global community can work together to address what will be an increasingly critical food security environment.

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