Strategic Framework for Food Security in APEC

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ABAC

NATIONAL CENTER FOR APEC
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International
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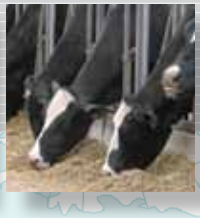
Preface on Food Security

Food security is achieved through sufficient availability of food and the ability to access that food. Food insecurity leads to hunger and malnutrition and often to economic and political instability. Achieving food security requires:

- ***Adequate, reliable and sustainable supplies of crop and livestock products, through increased agricultural productivity and more efficient regional and global markets linking demand and supply;***
- ***An open rules-based trading system that allows food to flow from areas experiencing surpluses to those experiencing deficits;***
- ***Efficient and safe distribution systems throughout the supply chain;***
- ***Efficient agricultural research, extension and education systems, plus adequate agricultural infrastructure and property rights; and***
- ***A recognition that both public and private sectors have appropriate roles to play and can achieve more if they work together.***

These policies must naturally be pursued together because each contributes to the effectiveness of the others.


Executive Summary

The Asia Pacific Economic Cooperation (APEC) region represents a cross-section of food needs, with rising incomes and transforming diets alongside subsistence agriculture and urban poor. Historically within APEC, food issues have been addressed separately, in an atomized and less-than efficient manner. In 1999 the APEC Business Advisory Council (ABAC) proposed a unified APEC Food System, and APEC Leaders endorsed it. For a variety of reasons, however, the APEC Food System failed to gain sufficient traction within governments, and, while some steps forward were taken, a comprehensive APEC-wide approach was not implemented.

This paper, prepared at the request of ABAC, revisits the original rationale of the APEC Food System (rising demand in the face of limited resources) in the context of today's realities, which include increased food insecurity, a rise in biofuel production, and climate change challenges. It concludes that APEC should again focus on a comprehensive APEC Food System approach that promotes food security through:

- ***increasing access to food, availability of food, and supply reliability;***
- ***enhancing food safety and dietary health; and***
- ***strengthening environmental security and sustainability.***

APEC's Senior Officials have already taken important steps by developing a "Work Plan on Food Security" in 2008. Recommending that this work plan become part of a much more comprehensive and strategic food system approach, this paper calls for a Strategic Framework for Food Security in APEC, under which APEC economies commit to:

- **Undertake a Food System Approach.** ***APEC Leaders commit unequivocally to a "food system" approach for the region. A piecemeal approach will be less effective in achieving the desired goals.***
- **Establish a High-level Food Dialogue.** ***APEC economies establish an ongoing mechanism at a high level to ensure the policy and technical cooperation necessary to achieve an integrated food system. This mechanism should include direct input and participation from the private and research sectors, as well as the public sector, in the form of a formal, institutionalized "Food Dialogue."***
- **End Export Restrictions.** ***APEC Leaders commit to formally ending export embargoes, quantitative restrictions and export taxes for all food products traded with other APEC member economies so as to establish greater regional food security by guaranteeing all APEC economies affordable access to the food production of all other APEC economies. APEC Leaders pledge to provide purchasing power assistance for the poor.***
- **Advance Doha Agricultural Negotiations through the APEC Caucus.** ***The pursuit of an APEC Food System can also be instrumental in making greater progress at the multilateral level: APEC economies should use their collective voice to strengthen the call for conclusion to the Doha Round and work to uphold the G20 commitment to reach a WTO agreement in 2010.***

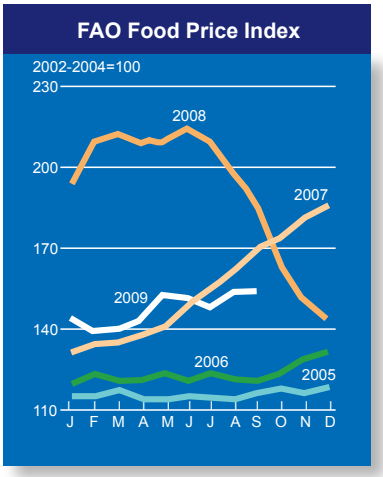
We are deeply concerned about the impact that volatile global food prices, combined with food shortages in some developing economies, are having on our achievements in reducing poverty and lifting real incomes over the last decade. We support a fully coordinated response and a comprehensive strategy to tackle this issue… Individual and collective policy responses to expand food and agricultural supply in the region should strengthen market forces to encourage new investment in agricultural technology and production systems."

- 2008 Leaders' Declaration

Background

The APEC region represents a cross-section of food needs. Some economies or regions still experience extreme poverty, with the rural poor heavily dependent on subsistence agriculture and the urban poor exposed to hunger from rising and periodically spiking food prices. Other economies and regions are undergoing rapid gains in per capita incomes, which transform diets and increase food demand and resource stress. Still other economies have high per capita incomes, with consumers demanding healthier diets and more sustainable food-production systems. See Appendix Table 1 for per capita incomes, poverty levels, and child malnutrition levels in APEC economies.

Historically, these different food issues have been addressed separately, resulting in a mix of policies that (a) discourages agricultural and rural development where it is most needed; (b) forces economies back into costly self-reliance measures in the face of crises when cooperation would yield less costly and more mutually beneficial outcomes; (c) blends science and politics in regulatory frameworks that can disrupt trade flows without enhancing food safety; and (d) protects local interests instead of advancing a local and regional approach to food security in conjunction with one another.



Recognizing the high costs of dealing with food issues disjointedly, the APEC Business Advisory Council (ABAC) proposed a unified approach more than a decade ago. They called it the APEC Food System (AFS), which was finalized and officially endorsed by the APEC Leaders at their 1999 meeting in Auckland.

The AFS recognized the challenges of ensuring food security in the APEC region, with pockets of absolute poverty alongside rising and high incomes elsewhere, population and income growth driving a more resource-intensive diet and environmental pressures on scarce land and water resources. It also acknowledged the political sensitivity of food, from the role of farming in each economy and culture to the importance of secure food supplies at reasonable prices for political stability, human development and economic competitiveness. And it recognized that the members of APEC account for more than half the world's exports of wheat, rice, corn and pork and around 40 percent of soybean and beef exports (FAOSTAT). AFS constituted an integrated approach to feed more people, better, and with less environmental stress.

The AFS was a coherent and appealing concept, but for a variety of reasons it failed to gain sufficient traction within governments of the member economies. For example, the 9/11 terrorist attack in the United States undermined the commitment to a Leaders' Declaration to end food export restrictions, which was to have been accepted at the 2001 APEC Leaders Meeting. The launch of the Doha Development Round shifted the focus on liberalizing agricultural trade to that venue. Controversies around consumer acceptance of agricultural biotechnology impaired progress for other technological collaborations. Limited public and international financial support for agricultural research and rural development has impeded progress in this vital area.

Food price spikes in 2008 and a strong ABAC request to revisit food issues led the APEC Senior Officials to draft a "Work Plan on Food Security." This work plan importantly addresses many of the same issues as the AFS. However, it does not set forth a cohesive strategic framework and does not sufficiently recognize the important role of the private sector and research institutions.

Current Situation

The original challenges AFS was designed to address remain, and the reasons for an integrated strategic framework addressing the region's food system are still compelling. Accelerating rural development through improving production capacities while reducing the real (i.e., inflation-adjusted) cost of food and food cost spikes is essential to rooting out hunger and poverty. Food and farm policies remain highly distortive, slowing economic growth, impeding the alleviation of poverty and inequality and raising the costs of securing food staples, which negatively affects the entire region's economies and businesses.

Since more than two-thirds of member economies' food trade is with other members of APEC, and since most economies are both food exporters and importers, cooperation offers great potential to stimulate development and ease adjustment burdens in both production and consumption. Moreover, the member economies of APEC separately and collaboratively can lead other regions toward more food-secure approaches, both through their "open regionalism" approach and by

their involvement in global trade and financial institutions.

Additional challenges make it all the more important to re-focus and re-energize the idea of treating the APEC region as a coherent food system. The food crisis of 2008 demonstrated that excessive food price volatility is particularly costly for the poor, and exacerbated when economies take independent, self-protective action rather than collaborate to manage through the problem. We witnessed how a sense of food insecurity at the national level leads to a unilateral scramble to secure reliable food supplies and disrupts regional — and global — growth, development and economic integration.

Similarly, the stalled Doha Development Round negotiations highlight the need to strengthen support for food trade reform. The APEC region can play an influential role in such an initiative, since it includes some of the largest and most efficient food exporters, some of the largest and most dependent food importers and some of the most rapidly growing sources of food demand. The recent pledge at the Group of 20 (G20) summit to target concluding the Round in 2010 gives this issue greater urgency.

The important role of science and technology in maintaining growth in the quantity, quality and variety of safe, secure food supplies also has been sharply highlighted since the initial launch of the AFS. Concerns over avian influenza and the H1N1 virus, as well as sickness and deaths related to contaminated foods, are continuing reminders of the need for effective cross-border scientific collaboration in detecting and regulating food-borne diseases. On the technology front, biotechnology and other advances have demonstrated their capacity to contribute to a more food-secure world. World cereal yields increased nearly 13 percent from 1997-2007 while harvested area decreased slightly (FAOSTAT), demonstrating the importance of improved agricultural technology.

Finally, continuing population growth in many developing countries and the pressure for more resource-intensive diets as per capita incomes rise across the APEC region, promise to double food demands globally by mid-century. The U.N.'s Food and Agriculture Organization and the World Bank estimate that only 10 percent of this increased demand can be met in an environmentally responsible way from new cropland. Some 20 percent could come from more intensive farming using existing methods. The other 70 percent must come from innovation.

Moreover, rapid urbanization in the region will concentrate population and divert land and water from agricultural to industrial and other uses. Rising industrial use of grains and oilseeds for fuel and the looming impact of climate change on agricultural productivity place additional pressures on the food system.

Very simply, there are substantial challenges facing the APEC region's food system. APEC's economies, if they are to meet these challenges, need to advance food security by:

- ***increasing the availability of and reliable access to sufficient and affordable food supplies for all populations without fear of political interruption by helping the world double food production by mid-century while continuing the downward trend in real food prices seen over the last 50 years;***
- ***enhancing food safety and dietary health by meeting the burgeoning demand for greater safety and healthfulness of food supplies while shaping more integrated supply chains and reducing risks of food-borne illnesses; and***
- ***strengthening environmental security and sustainability by producing and sourcing food with less stress on land and water resources, improving adaptability to a changing climate and creating a greater mitigation role for agriculture while transitioning perhaps a billion people out of farming and into manufacturing or service activities in ways that increase the quality of life both for those who leave agriculture and those who remain.***

Table 1

Per Capita Income, Poverty and Malnutrition

	Purchasing Power Parity *(International Dollars)* [1]	Population below $1/day %[2]	Child malnutrition -children under age 5 underweight %[2]
Australia	34,040	n/a	n/a
Brunei Darussalam	50,200a	n/a	n/a
Canada	36,220	n/a	n/a
Chile	13,270	<2	.8
China	6,020	16.6	10
Hong Kong, China	43,960	n/a	n/a
Indonesia	3,830	7.5	27.3
Japan	35,220	n/a	n/a
Republic of Korea	28,120	<2	n/a
Malaysia	13,740	<2	19
Mexico	14,270	9.9	7.5
New Zealand	25,090	n/a	n/a
Papua New Guinea	2,000b	n/a	n/a
Peru	7,980	18.1	7.1
The Philippines	3,900	15.5	31.8
Russia	15,630	<2	5.5
Singapore	47,940	n/a	3.4
Chinese Taipei	n/a	n/a	n/a
Thailand	5,990	<2	17.6
United States	46,970	n/a	n/a
Vietnam	2,700	<2	33.8

[1]*Source: World Development Indicators database, World Bank, 7 October 2009*
[2]*Source: World Bank 2005 World Development Indicators*

Notes: PPP is purchasing power parity; an international dollar has the same purchasing power over GNI as a U.S. dollar has in the United States. a. 2008 data not available. b. Estimate is based on figures extrapolated from the 2005 International Comparison Program benchmark estimates.

Objective I: Ensuring Availability and Reliable Access

Globally, some eight million people die each year of hunger-related causes, and more than half of these are children. While the APEC region has made good progress in lifting millions of people out of poverty and food insecurity, there are still tens of millions within the region who suffer hunger and malnutrition, with many reaching adulthood with impaired physical and mental capabilities. This constrains their ability to support themselves, their families and their communities and to contribute as productive employees and citizens.

Food insecurity expresses itself in three ways. Some people are so poor that they are chronically hungry or malnourished. Others may have enough to eat in normal times but are vulnerable to supply interruptions or sharp price increases, throwing them into food crisis. A third group, which is comprised primarily of child-bearing women and children, faces nutrient deficits that stunt physical and mental development and increase vulnerability to disease.

Chronic hunger often is a result of extreme poverty, especially in rural areas. Rapid urbanization occurring in APEC increases the risk of acute or crisis hunger, since these populations are very vulnerable to price spikes and supply interruptions in their imports, as witnessed in the first half of 2008, when global staple food prices doubled. The UN Population Office projects that two-thirds of Asia's population will be urban by mid-century, so the number of people vulnerable to volatile commodity prices or trade disruptions is growing rapidly. The table at right shows urbanization data for the 21 APEC economies in terms of urban population as a percentage of total population.

> **"We will fight protectionism. We are committed to bringing the Doha Round to a successful conclusion in 2010."**
>
> *- G20 Leaders' Statement, September 2009*

Rooting out chronic hunger, especially in rural areas, requires increases in agricultural productivity — most importantly in poor regions — to meet rising demand without increasing real prices and to provide improved income opportunities for rural households.

Real prices for grains and rice — the staples of most low-income diets — declined rapidly during the 20th century. The causes and effects of this price decline were largely responsible for bringing down the share of the global population suffering chronic hunger. This trend has been disrupted in the first decade of the 21st century, for a variety of reasons. Rising per capita incomes among an emerging global middle class have increased demand for meat, milk, eggs, fats and oils, fruits and vegetables. These are more agricultural-resource-intensive calories than from grains alone. At the same time, investment in agricultural research has declined as a share of the value of production in many economies, China being a notable exception (ASTI/IFPRI/CGIAR). An increasing rate of demand and a decreasing rate of productivity gains are now exerting upward pressure on long-term real prices of basic commodities in contrast to the long-term trend over the twentieth century.

Table 2

Urban Population – Percent of Total Population		
	2005	2015
Australia	88.2	88.9
Brunei Darussalam	73.5	77.6
Canada	80.1	81.4
Chile	87.6	90.1
China	40.4	49.2
Hong Kong, China	100	100
Indonesia	48.1	58.5
Japan	65.8	68.2
Republic of Korea	80.8	83.1
Malaysia	67.3	75.4
Mexico	76.0	78.7
New Zealand	86.2	87.4
Papua New Guinea	13.4	15.0
Peru	72.6	74.9
The Philippines	62.7	69.6
Russia	73.0	72.6
Singapore	100	100
Chinese Taipei	n/a	n/a
Thailand	32.3	36.2
United States	80.8	83.7
Vietnam	26.4	31.6

Source: World Bank 2009 World Development Report

Total Agricultural R&D Spending-Public Sector for Select APEC economies	
(million $2005 PPP)	
Chile	98.1
China	2,663.0
Indonesia	204.2
Malaysia	446.5
Mexico	517.6
Papua New Guinea	19.9
Philippines	141.4
Vietnam	55.9

Source: Agricultural Science and Technology Indicators (ASTI), facilitated by IFPRI.

Even where hunger and malnutrition have largely been overcome, food price trends are a development concern, especially for economies seeking to stimulate their development by exporting labor-intensive manufactured products and services. Their competitiveness depends on their relatively lower wage rates, and this competitive edge can be eroded by rising food costs, which still constitute a large share of total living costs (and thus real wages) in many developing economies.

These longer-term trends have been aggravated by some more immediate factors. Industrial use of grains has spurted upward since 2000, reaching 15 percent of global grain consumption now (FAOSTAT). The United States now uses about one-third of its corn crop to produce ethanol, and ethanol usage mandates for corn and cellulosic ethanol over the next decade will nearly triple. Indonesia and Malaysia have expanded palm oil production for biodiesel, including for export to the European Community in response to escalating biofuel targets there. Unless agricultural productivity rises as rapidly as these mandates, these policies will reduce the share of crops available for food or feed uses.

At the same time, a number of key grain-exporting or -consuming nations have imposed export or price controls on grains and rice when their prices began to rise in an attempt to avert social unrest in their own economies. However politically expedient from each country's perspective that might have been, the cumulative effect constrains the available supply of commodities for food and feed uses elsewhere and raises international prices of these products. Improving reliability of access requires that we reduce the episodic declines in access to food and the magnitudes of price spikes as occurred most recently in 2007 and 2008. Such events can do untold harm to vulnerable people even as long term trends are favorable and other supply objectives are being met.

Strategy for Meeting Objective I: Availability and Reliable Access to Food

Providing Policy Environment for Access and Availability. One of the primary ways APEC cooperation could enhance food security in the region would be to forswear export controls on food crops except in time of war or pursuant to a UN Security Council resolution. This idea should be expanded through a commitment to provide "purchasing power assistance" to economies and people harmed by price increases or supply uncertainties.

More open trade and reliable access, buttressed with targeted assistance to purchase foodstuffs, is the lowest-cost means of achieving food security. It is much less costly than self-sufficiency, which involves both the high costs of inefficiency and the high risks of localized crop problems. Accumulating food reserves also is a more costly strategy; they typically cost 20-25 percent of the commodity's value annually for interest, storage and provision for loss. By contrast, transport costs for food imports are typically 10 percent or less of the commodity's value and would be expended anyway if more imports are needed to increase stockpiles. While the high costs of physical reserves make them an inefficient strategy on their own, a small, coordinated international reserve — possibly a virtual one — could help assuage importers' concerns about availability.

At the national level, such targeted financial assistance could address purchasing power erosion from a surge in food import costs,

> **"We, together with the leaders of Australia, Indonesia and Republic of Korea and in the presence of the Director General of the World Trade Organization, are committed to seek an ambitious and balanced conclusion to the Doha Development Round in 2010, consistent with its mandate, building on the progress already made, including with regard to modalities."**
>
> *- G8 and G5 Joint Statement, July 2009*

an increase in other essential import costs (e.g., energy) or a decline in currency value. At the community level, it is important to avoid price controls, which do not distinguish between rich and poor consumers, dampen the incentives needed to prompt production increases or curtail non-essential consumption locally, and increase adjustment

burdens for others. Such measures also reduce employment, adding another drag to economic growth. Targeted assistance, provided through low-price shops, food-stamp and school feeding programs are all preferable alternatives that the APEC region could work on jointly.

At the household level, it is important to ensure that vulnerable population groups have their nutritional needs met. Enrichment with vitamins and micronutrients and feeding programs targeted on women, infants and children are initiatives with high social and economic returns.

Purchasing power assistance should be a multinational endeavor so that any adjustment burden is shared by all and not just a developing-country economy. Wealthier economies and food-exporting economies would benefit from contributing to such targeted assistance efforts because they will help sustain usage in tough times and avoid disruptive market interventions that feed back into their own markets in stressful ways. All APEC members would gain by replacing unilateral interventions that amplify and shift adjustment burdens with collaborative strategies that minimize and share those burdens. They also could provide a new paradigm for global approaches to this problem.

Curbing the Rise in Food Prices and Enhancing Agricultural Productivity. In addition to smoothing price volatility and easing supply uncertainty, it is important to moderate the long-term upward pressure on food prices while facilitating a smoother transition from an agrarian to an industrial and service economy. Agriculture's core role in an economy is to produce food, feed, fiber and (sometimes) fuel while providing adequate jobs and incomes for farm families. That role is best enhanced by public and private investment in increased agricultural productivity.

Through the 1980s, the United States and other developed countries provided strong levels of funding for agricultural development overseas, but these levels diminished in subsequent decades. It took the food price spikes in 2007 and 2008 to refocus attention on the need for investment in agricultural research and development — particularly in developing countries. More investment in agriculture, particularly from the public sector, is vital if agricultural output is to meet the needs of the 21st century. Rising productivity is the only means of holding down real commodity prices in the face of growing demand. It also is the only means of achieving real increases in farm income and well-being.

Strengthening Rural Infrastructure. Rising factor productivity in agriculture, however, uncovers two other roles that this sector plays in economic development. One is as an engine of demand for products from the rest of the economy. The transformation from subsistence to commercial farming generates demand for inputs (e.g., fertilizers, seeds, agricultural R&D services, implements, tractors, etc.), marketing services (e.g., warehousing, processing, transportation, financing, risk management, distribution, etc.) and consumer goods (e.g., refrigerators, TVs, phones, trucks, etc.). This stimulates economic diversification and growth of the non-farm economy. Some of this specialization also feeds back into production agriculture, making it more efficient.

The other role is as a source of labor and capital in jumpstarting development and supporting the growth of manufacturing and service industries. Agriculture-dependent economies often have 60-70 percent of their workers engaged in low-yield, low-paying farming activities. By contrast, developed economies typically have less than five percent of their jobs on farms, and the positions are generally more productive and financially rewarding.

Unfortunately, agricultural and rural development policies seldom focus effectively on these developmental roles. Specialization often is resisted as bringing in new competitors for the consumer's dollar rather than as value-adding agents. And policymakers too often pursue the objective of "saving small family farm households" rather than easing the transition of some of their members into more remunerative work.

APEC could help accelerate the development process in many of its member economies and ease the transitional burdens involved by developing non-trade-distorting agricultural research and rural development initiatives. Agriculturally reliant economies within APEC like New Zealand and Australia have much experience in using such approaches, rather than commodity- and income-support policies. Greater collaboration along these lines could both smooth the development path and pave the way toward the kind of agricultural trade reform that needs to be negotiated globally.

Global Hunger Index Severity in APEC Economies

- **Serious:** *Indonesia, Philippines, Vietnam*
- **Moderate:** *China, Peru, Thailand*
- **Low:** *Chile, Malaysia, Mexico, Russia*
- ***The Global Hunger Index decreased more than 50% in China, Malaysia, Mexico, Peru, Thailand and Vietnam from 1990-2009***

Source: IFPRI 2009 Global Hunger Index

Objective II: Strengthening Food Safety and Dietary Health

As commercial agricultural and food systems replace subsistence agriculture, as per capita incomes rise and as societies become more urban-centered, food supply chains lengthen and become more complex and diets become more resource- and calorie-dense even as personal physical activity declines.

A food economy based on food markets presents different challenges than commodity-based farm self-sufficiency, which poses hunger, malnutrition or food/wage competitiveness issues as well as food safety concerns. Final product prices are more distant from commodity markets and more dependent on labor, packaging, transport/logistics and preparation costs. Supply chains have grown and become more diversified, separating the producer from the consumer by a growing army of specialized marketers. And simple caloric or nutritional needs have been replaced by demands for safety, convenience and healthfulness.

Safety concerns arise in a variety of ways. Even though evidence is lacking imports are often perceived as riskier because of weak standards or lax enforcement in the exporting economy. Headlines about specific cases exacerbate the perception that imports pose greater risks than domestic products. Regardless of whether such risks are real or perceived, or motivated by protectionism, as in the demand for country-of-origin labeling, they lead to an increase in trade disruptions.

Broader, more effective collaboration among food scientists and regulators to prevent contamination of foodstuffs and to allay consumers' concerns about such risks would decrease such trade disruptions. A system-wide approach is critical from both a food security and trade standpoint because differing standards, customs practices, regulatory requirements, and frameworks jeopardize food safety objectives and create unnecessary hurdles to food production, processing and distribution.

Strategy for Meeting Objective II: Strengthening Food Safety and Dietary Health

Food Technology Transfer. Collaboration across APEC on this front could take many forms. Often, new production or handling technologies are developed in wealthier countries, where research spending is higher and consumer expectations more advanced. Helping to transfer such technologies while protecting their underlying intellectual property would streamline emerging supply chains in safe, trade-promoting and environmentally sound ways. As the experience with agricultural biotechnology has demonstrated, this kind of technology sharing also may be necessary to lay the foundation of direct experience and support essential for consumer acceptance of new technologies abroad.

Science-based Food Regulation. Animal diseases pose special challenges. Often, transmission among animals is rapid and hard to contain. There also are concerns that animal diseases can modify and attack humans; H5N1 avian influenza and the H1N1 virus have highlighted such worries.

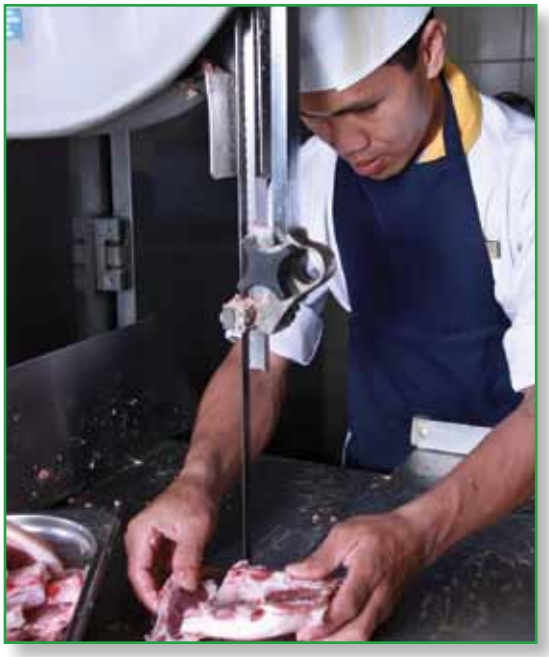
This is an especially ripe area for collaboration. Early detection of outbreaks can help contain them at lower cost. Quick response from experts and ready access to needed drugs or other control technologies can avoid needless spreading of risks. And agreed regulatory approaches to containment, suspension and resumption of trade flows and consumer alerts and education can help prevent unnecessary trade disruptions or panic among users.

Along with food safety and quality, come issues of food traceability. Consumers are demanding more information about how and where their food is produced. This was easy when the supply chain was within a farm or village, but it is more complex as food is shipped throughout a region. Furthermore, loss of traceability with global shipments may mean loss of access to redress from suppliers if something goes wrong. The lack of traceability to farms or other primary producers engenders a lack of trust while reducing the incentive for suppliers to comply with accepted standards of safety and purity.

All of this requires new forms of collaboration to capture the benefits of food trade while avoiding unnecessary trade blockages. On food safety, there are tensions between scientific risk assessment and consumer risk perceptions that will need to be addressed at policy and other levels. More cooperation among national safety regulators, academic scientists and industry to improve the early detection of food-borne-illnesses, to speed the delivery of appropriate skills, drugs or other remedies where problems are detected and to increase the overall safety level of the food supply serve the interests of consumer, brand, and industry protection alike.

Some of this collaboration already is occurring, especially around animal diseases. For example, the USDA Animal and Plant Health Inspection Service has long participated in disease eradication efforts in other countries in order to reduce the risk of disease spreading to the United States. But everyone is coming to recognize that prevention of disease transmission in a transnational marketplace is both a cross-border challenge and a compelling reason to share best technologies and practices among trading partners.

Food-handling Best Practices. Related to this detection and regulatory focus on food safety is the transfer of best practices and technologies in the areas of food production, processing, handling and preparation. When AFS was launched, much of the attention on the technology front was on agricultural biotechnology and often in a confrontational manner. Today, many more economies and producers have experience with that rapidly emerging technology and are facilitating more collaboration around the sharing and protecting of intellectual property. Those efforts could be strengthened and extended to new technologies coming to market, such as nanotechnology.



More generally, the food industry has become more internationalized in the intervening decade. Brand-name manufacturers are moving into all of the economies in APEC, sourcing from local producers and therefore spreading new techniques and technologies. The same is happening with retailers and food service companies, most notably through the global supermarket revolution. Supply chain integrity requires the kind of transmission of technologies envisaged by the original AFS's call for "domestic champions" in each economy to catalyze transfers. Today, the focus may be more appropriately placed on partnerships among APEC members in academia, the private sector, international organizations, and regulatory communities. A prominent example of multi-stakeholder cooperation in food safety is found in the SSAFE (Safe Secure Affordable Food Everywhere - www.ssafe-food.org), whose mission is to "identify, support and facilitate activities that address the association of animal health, wildlife, agriculture, aquaculture, fisheries and beverages with food safety, human health, plant health and environmental sustainability on a global basis."

Dietary Health (Nutrition Security). Alongside food safety concerns are issues around dietary health. There is a distinction between food security (i.e., access to food) and nutrition security (access to the right kinds of food), and both are necessary to stop the overall cycle of food insecurity. Most poor people who battle hunger deal with chronic undernourishment and vitamin or mineral deficiencies, which result in stunted growth, weakness and heightened susceptibility to illness. Poor nutrition and calorie deficiencies cause nearly one in three people to die prematurely or have disabilities, according to the World Health Organization.

Another prominent phenomenon of poor dietary health is obesity, which is on the increase in both developed and developing economies. Obesity also seems to be correlated with certain diseases, like diabetes, some cancers and heart disease. As a result, diet and even some specific food ingredients are being targeted as sources of health risks.

Diets also are being reshaped by an emerging global nutrition industry that appears to be growing three to four times faster than food consumption generally. Components include nutritional supplements, functional foods and the rising interest in natural, organic and locally produced foods and wine. Nor is this phenomenon confined to rich economies; in fact, the fastest growth seems to be in developing economies.

Consumer perceptions about what constitute healthy, safe or environmentally friendly foods or food-producing techniques vary widely and often lack a solid factual or scientific foundation. Much could be gained from a more vigorous APEC effort on collaborative educational initiatives around health and nutrition, both to promote better consumer decision-making and to avoid misguided regulations or unnecessary restrictions on trade.

Objective III: Preserving Environmental Security

Virtually all of the projected population growth within APEC over the next four decades will occur in the developing economies of the region. Moreover, as per capita incomes rise, these same economies are likely to see dramatic shifts toward more resource-intensive diets. Yet, many of the most populous developing economies lie predominantly in tropical zones that are either inhospitable to grain production for climatic reasons, have pest and disease issues that are more difficult to manage than those in temperate zones, or have fragile ecosystems to be preserved.

Perhaps more problematic, the ratio of land and water to population militates against agricultural production sustainability in many developing regions. For example, the member countries of the OECD have 26 percent of the world's arable land but only 14 percent of the world's population (and virtually none of its anticipated population growth or income-driven demand growth). By contrast, East Asia possesses 14 percent of the arable land with 31 percent of the world's population and faces the prospect of large demand increases from population and income growth. In places like China's northern plain, the water table is falling dramatically because of irrigation. Yet, industrialization and urbanization will draw even more water away from agriculture in coming decades.

Strategies for Meeting Objective III: Ensuring Environmental Security

Agricultural Research and Development. Neglect of agricultural research at national and international levels has reduced the growth of knowledge that can be drawn upon to increase agricultural productivity while reducing land and water inputs per unit of output. Research budgets need to be increased substantially to capture the high economic and environmental returns from such work. But with resources constrained for all, a collaborative approach would help avoid wasteful duplication and accelerate useful knowledge transfer from one setting to another.

Trade Reform and Sustainability. At the same time, APEC could help develop an approach toward agricultural trade negotiations that would break out of the largely ineffective historical approach of seeking to disassemble protectionist devices through reciprocal concessions. Instead, a new AFS points toward building a food system that meets poverty, equity, efficiency and sustainability goals.

Such an approach would marry economic and environmental comparative advantage. It would enable land- and water-intensive food products to flow from land- and water-rich regions to regions with degraded or scarce natural resources and labor-intensive food products to flow from regions of abundant low-skilled labor to regions where such labor is scarce.

Resource-constrained economies would in effect borrow the climate advantages and more abundant water of better-endowed economies through imports of resource-intensive foodstuffs. In turn, many of them would use some of those inputs and their labor advantage to export labor-intensive food products. Freer foreign investment also would enable food-importing economies to take a larger financial stake in the region's production base and in the process reduce their food insecurity concerns.

Complementing this liberalization thrust would be an adjustment strategy that would use non-trade-distorting measures (i.e., "green box" measures) to achieve agricultural and rural commercialization by developing, sharing and protecting the intellectual property of technologies. This underlying strategy would seek to increase production on existing good cropland, reverse degradation on poorer or abandoned lands and preserve fragile or virgin lands, while using less fossil fuel-based materials in an effort to moderate climate change and leaving less residue on crops or in the land or water supplies, thereby moderating health risks.

Biofuels. This food security strategy also needs to include a reconsideration of the role of biofuels in the food system. Favoring the use of good cropland to produce fuel rather than food and feed impinges on food supplies, pressures food prices upwards and shifts

some production onto marginal or sensitive lands, with unwanted environmental consequences. The best response is to raise the level of agricultural productivity to accommodate both food and fuel demands at reasonable prices and with minimal environmental stress.

If sufficient productivity increases cannot be achieved fast enough, it may be necessary to call into question policies that favor fuel production over food output. China has focused on using farm resources for food while the United States and several other food exporting countries have mandated the use of fuels made from agricultural feedstock. APEC would be a useful forum in which to strive for a balance between these two attitudes, as there is room for improving biofuels policies so that they exert less pressure on food production and prices. This could be part of a larger dialogue designed to discipline or end the use of production- or trade-distorting subsidies and regulations, including those related to biofuels.

Climate Change. There also is the emerging issue of climate change, which will have serious ramifications for the agricultural sector, both in terms of long-term changes to agricultural productivity and production disruptions due to increased extreme weather events. Moreover, the sector is also a significant emitter of greenhouse gases and a potential source of mitigation through adoption of better agricultural practices.

Although there is no certainty on how climate change will impact specific regions, the APEC region will likely face substantial adaptation needs. Policymakers should promote greater collaboration in technology development and transfer; a comprehensive, integrated approach will lead to a more efficient allocation of resources and lower the costs of adapting to climate change. Moreover, a more open trade system will reduce the risk of food-supply disruptions.

At the same time APEC economies should also be mindful about the potentially detrimental impact of climate change policies on food security (i.e. emission caps may lead to an increase of fertilizer prices) and be mindful about how to address such consequences. A reduction in agricultural greenhouse gasses should only be pursued if it can be done without jeopardizing food security.

Moreover, APEC should push for policy coherence among climate change and international trade policies. Safeguards will be required to ensure that protectionist trade measures cannot be disguised as climate change measures.

Non-border Trade Barriers. The AFS also creates an opportunity for APEC collaboration on specific impediments to food trade flows. Food products are often highly regulated, with local standards and procedures creating confusion or unnecessary trade blockages. Trade-facilitation and standards harmonization initiatives would make important contributions here.

Another, more ambitious area would involve negotiation and collaboration to remove avoidable food trade impediments from sanitary and phytosanitary standards and address the lack of mutual recognition of standards even when they have been shown to have comparable safety benefits. Additionally, private standards around production practices (e.g., natural, organic, free range, etc.) or food attributes (e.g., chemical-, hormone- or biotechnology-free) can pose barriers to consumer acceptance or market penetration that do not contribute to safety or health. Facilitating FDI in the food processing and retailing parts of the value chain could ease excessive private standards.

The original AFS also proposed to address two fundamental problems in food trade: the use of export controls and export subsidies. A reinvigorated AFS could prompt another run at eliminating both of these practices for food trade within the APEC region and ultimately at the WTO.

Table 3

Cereal Production, Imports and Exports

Country	Cereal Production (metric tons)	Cereal Imports ($1000 USD)	Cereal Exports ($1000 USD)
Australia	21,998,000	94,377	4,560,335
Brunei Darussalam	1200	28,986	64
Canada	48,111,900	732,708	5,602,994
Chile	2,822,878	836,918	242,310
China	457,443,111	1,942,422	2,182,824
Hong Kong, China	n/a	277,481	18,078
Indonesia	70,444,963	1,985,049	39,623
Japan	12,026,460	6,636,851	75,731
Republic of Korea	6,312,115	2,854,524	7515
Malaysia	2,280,700	1,315,944	23,128
Mexico	34,311,135	3,106,248	256,095
New Zealand	926,928	148,837	2769
Papua New Guinea	12,300	104,261	2
Peru	4,207,190	817,275	14,621
The Philippines	22,977,354	1,393,966	6441
Russia	80,500,600	307,314	4,178,163
Singapore	n/a	238,142	52,341
Chinese Taipei (Taiwan)	n/a	n/a	n/a
Thailand	35,964,179	344,574	3,597,937
The United States	415,165,682	1,734,667	21,255,222
Vietnam	39,976,600	508,633	1,490,208

Source: FAOSTAT

Conclusions

The food security agenda of the APEC region is large, diverse and compelling. Some population groups and economies still face the challenges of ending hunger, malnutrition and rising food prices, for which purchasing-power assistance and investments in agricultural productivity and rural development are essential. They also share with other food-importing economies in the region a desire to remove the threat of export embargoes from food trade, making imports a more reliable source of needed supplies.

The increasing flow of food products across borders and the tighter integration of the APEC food economy have also pushed food safety and dietary health issues front and center. Because of the rapid transmission of food-borne illnesses in today's inter-connected world, collaboration among regulators, academics and industry in detecting and addressing such issues has become essential. Tighter integration of food systems is both abetted by technology transfers and calls for greater cooperation in spreading useful systems. Changing lifestyles and diets make shared study and education important in this field.

Finally, the pressure of food, feed and fuel demand on the agricultural resource base makes harnessing trade reform to capture its economic and environmental comparative advantage benefits increasingly attractive. Alongside trade reform, steps should be taken in research and regulation to align efficiency, equity and environmental responsibility more closely as the APEC food system evolves.

Each of these challenges could be addressed separately, but there is tremendous value in treating them in an integrated manner. Food security concerns are best addressed holistically and jointly, rather than in a compartmentalized fashion.

Food remains both a vital issue for member economies of APEC and an area in which limited progress has been made toward the regional cooperation that is the purpose behind APEC and the explicit promise of the Bogor goals. The idea of a new strategic, broad, integrated APEC Food System is both necessary and timely for re-focusing and re-energizing APEC efforts in the vital area of feeding its growing, more prosperous population while dealing with looming environmental stress and alleviating poverty and inequality.

Recommendations:

Under a Strategic Framework for Food Security in APEC, APEC economies would commit to:

- **Undertake a Food System Approach.** ***APEC Leaders commit unequivocally to a "food system" approach for the region. A piecemeal approach will be less effective in achieving the desired goals.***
- **Establish a High-level Food Dialogue.** ***APEC economies establish an ongoing mechanism at a high level to ensure the policy and technical cooperation necessary to achieve an integrated food system. This mechanism should include direct input and participation from the private and research sectors, as well as the public sector, in the form of a formal, institutionalized "Food Dialogue."***
- **End Export Restrictions.** ***APEC Leaders commit to formally ending export embargoes, quantitative restrictions and export taxes for all food products traded with other APEC member economies so as to establish greater regional food security by guaranteeing all APEC economies affordable access to the food production of all other APEC economies. APEC Leaders pledge to provide purchasing power assistance for the poor.***
- **Advance Doha Agricultural Negotiations through the APEC Caucus.** ***The pursuit of an APEC Food System can also be instrumental in making greater progress at the multilateral level: APEC economies should use their collective voice to strengthen the call for conclusion to the Doha Round and work to uphold the G20 commitment to reach a WTO agreement in 2010.***

Contributors

The International Food & Agricultural Trade Policy Council promotes a more open and equitable global food system by pursuing pragmatic trade and development policies in food and agriculture to meet the world's growing needs. IPC convenes influential policymakers, agribusiness executives, farm leaders, and academics from developed and developing countries to clarify complex issues, build consensus, and advocate policies to decision-makers. More information on the organization and its membership can be found on our website: www.agritrade.org.

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