Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. (World Food Summit, 2009)

Food security is a high priority on the international and regional agendas. Several global and regional initiatives have been launched recently to enable better and more reliable food security, especially for vulnerable populations, including by leveraging public and private sector resources. There is recognition of the importance of integrating food safety into these initiatives in order to achieve food security, but concrete linkages have yet to be developed between the efforts of the food safety community and global food security initiatives. In APEC, significant work has been done in the area of building robust food safety systems through the Food Safety Cooperation Forum (FSCF). In general, the development of food safety regulatory systems, including investigating, exploring, generalizing, developing, validating and optimizing food safety systems world wide, which are suitable for the specific social and economic development conditions of each economy, as well as timely capacity building and training, are under-resourced.¹ Donor strategies to reduce food insecurity must integrate efforts to ensure food and water safety. Building robust food safety systems, including investigating, exploring, generalizing, developing, validating and optimizing food safety systems world wide which are suitable for the specific social and economic development conditions of each economy, and food safety training, should be a core element of these strategies. Properly resourced, collaborative partnerships in food safety, to build robust food safety systems, to investigate, explore, generalize, develop, validate and optimize food safety systems and to provide food safety training in APEC, can serve as a viable model for efforts to assure food and water safety in other regions and thus for improving food security globally.

The Food Security Agenda

Food security concerns have increased since 2008 when commodity prices increased sharply, leaving many vulnerable communities unable to access food. The FAO estimates that 1 billion people are now undernourished. As a result, donor organizations and governments are building food security initiatives into their bilateral, regional and global strategies as a matter of priority. This is a critical issue for developing economies. These strategies are well-documented.

At the July 2009 G-8 meeting in L’Aquila, Italy, Leaders committed to act with the scale and urgency needed to achieve sustainable global food security, with the Aquila Food Security Initiative (AFSI) subsequently mobilizing more than $22 billion for sustainable agriculture development over three years.

¹ APEC Food Safety Cooperation Forum (FSCF) Partnership Training Institute Network (PTIN)/World Bank Expert Working Group, May 2010
In April 2010, the Global Agriculture and Food Security Program (GAFSP) was launched as a multi-donor trust fund managed by the World Bank. The $880 million fund has provisions for public and private contributions. Also in April 2010, the Pacific Food Summit issued its Framework for Action for Food Security in the Pacific region following a call to action by Pacific Island Leaders at their 39th Summit in 2008. The Framework will be transmitted to Pacific Island Leaders in August 2010 for endorsement.

In June 2010, the G-20 Finance Ministers welcomed the launch of the GAFSP. At their meeting in Toronto in June 2010, G-20 Leaders reaffirmed their commitment to achieving food security, including through the AFSI and the GAFSP. G-8 Leaders subsequently pledged to include health and food security as a key element of supporting the achievement by developing countries of the Maternal and Child Health components of Millennium Development Goals.

APEC and the APEC Business Advisory Council (ABAC) have long sought to address food security matters. In 1998, ABAC proposed the establishment of an APEC Food System, an omnibus framework to aid rural sector development and growth, increase agricultural trade, and improve dissemination of food-related technologies. The APEC Food System was endorsed by APEC Leaders in 1999. In 2008, following global food price spikes, APEC Senior Officials endorsed a Work Plan on Food Security for the APEC region. In November 2009, ABAC released its proposal for a Strategic Framework for Food Security in APEC. This year, APEC Senior Officials are developing a Food Security Action Plan and Ministerial declaration to be presented to the inaugural meeting of the APEC Ministers Responsible for Food Security in Niigata, Japan, on 16-17 October 2010. There are also plans for an ABAC hosted Food Security Workshop in Bangkok in August 2010.

**Food Safety is an Integral Element in Achieving Food Security**

The production and distribution of safe food is recognized as integral to achieving food security, but concrete linkages have yet to be made between the efforts of the food safety community and the global food security initiatives. Guideline 9 of the FAO Voluntary Guidelines to support the progressive realization of the right to adequate food in the context of national food security (adopted by the 127th Session of the FAO Council, November 2004) discusses the need for food safety and consumer protection. “In situations of food shortages and hunger, it is not enough to provide food, it is essential to provide safe food.”

In May 2010, the 63rd World Health Assembly (WHA) in 7th Plenary Session urged members to “enhance the integration of food-safety considerations into food aid, food security and nutrition interventions in order to reduce the occurrence of foodborne diseases and improve the health outcomes of populations in particular the vulnerable groups.” The WHA further requested the Director General to promote the inclusion of food safety into the international debate on food crises and hunger emergencies, and provide technical support to Member States and international agencies for considering food safety, nutrition and food security issues in a comprehensive, integrated manner.

At the regional level, ABAC, as the official private sector advisory group to APEC Leaders, in February 2010 said they will focus this year on achieving food security in the region. ABAC’s “Strategic Framework for Food Security in APEC” states that “enhancing food safety and dietary health” is one of three key pillars of the strategic framework. Specifically, ABAC called for a broader, more extensive collaboration among food scientists and regulators; the adoption of a system-wide approach to food safety; technology development; science based food safety systems; and best practices in food handling.

The APEC Work Plan on Food Security, endorsed by APEC Senior Officials in 2008, acknowledges the work of APEC’s food-related sub-groups, including the FSCF. In particular, the Work Plan commended the FSCF’s efforts to ensure access to safe food supplies.
The 2010 Pacific Food Summit Framework for Action recognized public-private partnerships to assures the quality and safety of food as one of its seven key themes.

The Food Safety Imperative: Public Health and Economic Impact

The importance of food safety has increased significantly in recent years following a series of global events associated with incidences of contamination (dioxin, melamine, MCPD) and outbreaks of pathogens such as *Escherichia coli* O157:H7, Foot and mouth disease, and Bovine Spongiform Encephalopathy (mad cow disease). Food and waterborne diseases are leading causes of illness and death in the developing countries, with a mortality rate of some 2.2 million each year, mostly children. Under-nourished children and vulnerable populations are at particularly severe risk. Many of these illnesses and deaths are preventable, and are exacerbated in situations of food insecurity. At an ASEAN Regional Meeting on Food Safety convened jointly with the FAO and WHO, the group recognized that food safety is an essential public health issue.

The economic impact of food safety incidents can also be severe. Food incidents negatively impact both the private sector and governments. Governments face macroeconomic effects, including losses due to productivity, declines in trade and increases in health costs. Small and medium enterprises in the agri-business sector are disproportionately affected by post-harvest losses, loss of domestic and export markets, absenteeism and loss of productivity. One incident can have significant economic impact, such as losses due to food recalls of $200 million from tomatoes/peppers (salmonella); $66 million from peanut butter (salmonella); $25-60 million from spinach (E.coli); and $40+ million from pet food recalls (melamine).

Building the capacity of countries to produce, access, and distribute safe food to their citizens can contribute significantly both to trade facilitation and poverty alleviation. Greater collaboration among food scientists and regulators and science-based food safety systems can help ensure that regulatory systems do not constitute disguised restrictions on trade. Further, the 2008 World Bank World Development Report states that “with the right policies, supportive investments at the local, national and global level, today’s agriculture offers the opportunity for millions of rural poor to move out of poverty.”

Current donor strategies to reduce global and regional food insecurity are predicated on investment in the establishment of local, sustainable agri-business and the facilitation of food trade. Ensuring food safety is a pre-condition to successful agribusiness and trade on all levels – local, regional and global. Given that developing economies account for 80% of the world’s population, the successful establishment of sustainable agri-business is a particularly compelling need at the local level. While improved food safety in developing economies is influenced by many factors, training is at the core of successful strategies to improve food safety. Training in the provision of safe supplies of wholesome, nutritious food must be an integral element of investment in agri-business under the GAFSP and other donor food security initiatives.

APEC’s Role as a Global Model

As food security initiatives look to develop strategies to ensure safe food, the success of food safety partnerships in APEC can serve as a viable model for other regions. The APEC region is culturally and ethnically diverse and the level of development of the APEC member economies spans a wide range. While the 21-members of APEC² account for 55% of the world’s GDP and 50% of world trade, the region experiences many of the same issues related to food security that are found in other regions of the world. The prevalence of childhood malnutrition is unacceptably high in several APEC economies. Food safety is of particular focus in APEC because of the potential for

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² The 21 economies are: Australia; Brunei Darussalam; Canada; Chile; People’s Republic of China; Hong Kong, China; Indonesia; Japan; Republic of Korea; Malaysia; Mexico; New Zealand; Papua New Guinea; Peru; The Philippines; Russia; Singapore; Chinese Taipei; Thailand; The United States; and Viet Nam.
contaminated food to cause illness and death and to interrupt global food supply chains.

The APEC FSCF, Co-Chaired by Australia and China, was established in 2007 to enable a cooperative approach among food safety regulators to build robust food safety systems in the region that are consistent with the Agreements on Sanitary and Phytosanitary Measures (SPS) and Technical Barriers to Trade (TBT) of the World Trade Organization. Cooperative efforts in the FSCF have also included the identification and prioritization of food safety capacity needs, with interventions designed and implemented to address these priorities. Since 2007, the FSCF has undertaken significant capacity building throughout the APEC region in areas of risk analysis; development of food laws, standards and enforcement systems; microbiological risk assessment; management of food safety incidents and food recalls. The FSCF Partnership Training Institute Network (PTIN) was established in 2008 to enhance the work of the FSCF, by providing a tri-partite foundation for specific food safety training for APEC member economies, with input from a network of regulators, and industry and academic experts. In cooperation with the World Bank Group, workshops on hot topics in risk analysis and on best practices for the development and delivery of food safety training were held in 2009 and 2010 respectively. The first sustainable training module is under development for November 2010, and is focused on managing safety through the food supply chain.

In May 2010 in cooperation with the World Bank Group, the FSCF PTIN held an Experts Working Group meeting in Washington to determine a road map for improving the accessibility and content of food safety training in the APEC region. Among other things, this road map will address needs associated with building more robust food safety systems, including investigating, exploring, generalizing, developing, validating and optimizing food safety systems world wide which are suitable for the specific social and economic development conditions of each economy, and the development of reproducible training modules in critical areas of food safety as identified by the FSCF. It will include training for growers, producers and processors in Good Aquaculture Practices (GAqPs), Good Manufacturing Practices (GMPs) and Good Agriculture Practices (GAPs). The FSCF PTIN is developing a website to broaden the accessibility and use of training materials based on international standards and best practices. While there is a diverse range of training materials available, in general, food safety training itself is under-resourced in the region, and accessibility of training materials is limited particularly for small and medium-sized enterprises not currently participating in global supply chains. A plan for leveraging available resources together with the World Bank Group is under development. This plan could help provide guidance to donors as they move forward with additional agri-business investments under the global food security initiatives. Training modules and delivery mechanisms would be developed that could be customized for other regions of the world, once they had been trialed in APEC economies.

**Conclusions**

There is a critical need to ensure reliable sources of safe food in order to achieve global food security outcomes. Donor strategies to combat food insecurity through agri-business investment activities should address the need to develop robust food safety systems, including investigating, exploring, generalizing, developing, validating and optimizing food safety systems world wide, which are suitable for the specific social and economic development conditions of each economy, as well as food safety training, to be carried out in a timely, efficient and effective manner. Public-private partnerships can significantly contribute to increasing the efficiency and effectiveness of these efforts. The APEC Food Safety Cooperation Forum (FSCF) and its Partnership Training Institute Network (PTIN) can be used as a resource to investigate, explore, generalize, develop, validate and optimize food safety systems and enhance communication networks, to develop and strengthen food safety systems and to develop and test food safety training modules and methods of delivery. The FSCF and its PTIN taps expertise in the region through its network of regulators, academic experts and industry experts to provide all aspects of food safety systems, including investigating, exploring, generalizing, developing, validating and optimizing food safety systems world wide and food safety training in multiple settings. Through its initiatives, the FSCF and its PTIN can serve as a model for global initiatives in building food safety and food security.