APEC Food Security Roadmap Towards 2020
(Version 2014)

Purpose: Consideration
Submitted by: PPFS
APEC Food Security Roadmap Towards 2020 (Version 2014)
(Endorsed in the PPFS 2014 Plenary meeting, August 15, 2014, Beijing, China)

I The Challenges

1. Food security has become an increasing concern among many APEC economies due to rising food prices and periods of price volatility. Food security is a multi-dimensional and complex issue consisting of many social, economic, environmental, physical and political factors. The commonly accepted definition of food security is: “Food security exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”.

2. However, APEC economies are faced with both demand and supply of food security challenges. On the demand side, APEC economies must deal with global population that will reach an estimated 9.6 billion in 2050. Income growth and urbanization resulting in the change in food consumption pattern, in term of variety and quality, and safety, and nutritional issues. Increased demand for food as energy feedstock and for other industrial uses will also become more prominent drivers of increasing demand for food.

3. On the supply side, natural resources constraints will become more stringent in the coming years, adversely impacting crops, fisheries, and aquaculture yields as well as the capacity to expand food production, including capture fishing. Agricultural land per capita is projected to decline from its 2012 level of 0.22 hectares in use per person to 0.18 in 2050, while the proportion of the population living in urban areas is forecasted to rise from 50% to 70%. In addition, increased cycle of adverse weather condition associated with climate change will cause yield declines from some important staple food crops, especially rice, wheat and fish products. Hence, in the absence of any policy intervention, the cost of food could rise substantially as a result of increasing demand and reduced production. Producers will also pass on the higher costs of climate adaptation measures to consumers [APEC PSU, 2012].

4. APEC economies are faced with different food security issues in their agricultural and fisheries sectors as well as in their approaches to address food insecurity due to different characteristics in each member economy. Another important challenge, especially in APEC economies how to improve the involvement of the private sector in strengthening economies’ and global food security.

5. Considering that establishing a comprehensive food system-based food security environment in APEC is a complex and long term effort, APEC created the Policy Partnership on Food Security [PPFS] in 2011, and welcomed Niigata Declaration in 2010 and Kazan Declaration in 2012 on APEC Food Security

II The vision and Goal

6. The PPFS vision is “APEC economies that are free from hunger and malnutrition, and contribute to the efforts of improving the living standard of all, especially the poorest and small holder, in an economically, socially and environmentally sustainable manners”.

7. The long term goal of the PPFS, as mentioned in its Term of Reference, is the attainment of a food system structure by 2020, sufficient to provide lasting food security to APEC
member economies. Enhance food supply efficiency, provide more affordable food for lower income consumers. APEC economies will strive to reduce food loss and waste by 10% compared with the 2011-2012 levels by 2020 in the Asia-Pacific economies aim to advance beyond the Millennium Development Goals 2015 hunger goals.

III The Missions

8. The PPFS is the primary mechanism for APEC economies to address food security policy concerns and should oversee all issues related to, and affecting food security. The first mission of the PPFS is the development of a food sector that is economically efficient and profitable, socially acceptable, and environmentally sound. The important role of the private sector in achieving food security is fully recognized as a necessity. Hence, public-private partnerships will become the main approach in any APEC PPFS activity. Therefore, the PPFS 2014 theme is “Strengthening Partnership for Food Security”, which also echoes to the APEC 2014 theme - “Shaping the Future through Asia-Pacific Partnership. PPFS should strengthen exchanges and coordination with other APEC fora, such as the Agricultural Technology Cooperation Working Group, the Committee on Trade and Investment, the Food Safety Cooperation Forum and its Partnership Training Institute Network, the Ocean and Fisheries Working Group and High-Level Policy Dialogue on Agricultural Biotechnology, to contribute to greater overall benefits.

9. In line with the awareness of the important role of trade in achieving food security, the second PPFS mission, using the spirit of partnership as mentioned in the Niigata Declaration, is to develop mechanism that encourage food production and trade, as well as to improve food stocks and safety nets for the poor; considering the level of development and resource endowment in each economy, and the role of trade in stabilizing food prices.

10. With full awareness that most APEC economies are dominated by small scale farmers and small scale fisheries and that poverty and food insecurity are highly correlated, the third mission of the PPFS considering how to improve farm efficiency for all farmers, including small holders, in accordance with the PPFS 2013 theme “Aligning Farmers into the Achievement of Global Food Security”, which was designated by Indonesia as the APEC host economy as the APEC host economy.

IV The Strategies

11. Several APEC sub-fora are already working directly on topics relating to food security, including the Committee on Trade and Investment [CTI] and its subgroup the Food Safety Cooperation Forum [FSCF], the Agricultural Technical Cooperation Working Group [ATCWG], the Ocean and Fisheries Working Group [OFWG], and the High Level Policy Dialogue on Agricultural Biotechnology [HPLDAB].

12. Closely linked to other APEC fora, the PPFS has following paths or strategies to achieve its goals. They are:
   a. Sustainable Development of the Agricultural and Fishery Sectors,
   b. Facilitation of Investment and Infrastructure Development, and
   c. Enhancing Trade and Markets.
   d. Reducing food loss and waste,

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1 It is an average level for all economies. Specific indicator can be developed based on each economy’s situation.
e. Improving food safety and nutrition.

13. The spirit of mutually beneficial partnership between public and private entities, including farmers, as well as between developed and developing economies will always be firmly held in implementing PPFS activities.

14. The Road Map to achieving the goals of the PPFS should be strategic, result-oriented and comprehensive to achieve the long term goal of setting up a food system structure by 2020 sufficient to provide lasting food security to APEC economies, as instructed by ministers. The Road Map provides guidance for the PPFS Working Groups [WGs] that were established in line with the strategic issues mentioned above. And PPFS is willing to work with other APEC foras on food security to take appropriate measures to strengthen food security. The WGs are WG on Sustainable Development of the Agriculture and Fishery Sectors, WG on Facilitation of Investment and Infrastructure Development, and WG on Enhancing Trade and Markets.

15. Members of each WG are encouraged to set up an implementation plan which details, in the style of a multiyear business plan, integrating the private sector in very specific ways, including who exactly will do what, when, where and how, and how those actions will be funded.

16. In developing sustainable agricultural and fishery sectors, the PPFS will hold the principle of development that “meets the needs of the present without compromising the ability of future generations to meet their own needs”. Research and development, technology dissemination, management of marine ecosystem and aquaculture, farmer organization empowerment, and sustainable management of natural resources and knowledge sharing and technical cooperation will become the core issues to address.

17. In facilitating investment and infrastructure development, the PPFS may refer to the Principles for Responsible Agricultural Investment in Agriculture and Food Systems which is expected to be endorsed at the Committee on World Food Security in October, 2014. This will also include infrastructure development and analyzing impact of Foreign Direct Investment [FDI]. Efforts are generated to realize the long-term plans to promote food security, along with close coordination between public and private sectors and ensuring a favorable climate and improving private sector input into government decision-making for investments into food production, distribution and infrastructure development that allows to stimulate development of economically efficient, productive and sustainable agricultural sector and fisheries.

18. In enhancing trade and markets, APEC economies believe that trade can support food security when it improves incomes and improves availability or access to nutritious food, and improve price stability. Therefore, the PPFS shall facilitate international trade, where the gains can be distributed among players in a more equitable manner and, in such a way that can improve small holders’ income. This is in line with the sub-theme of APEC 2013 “Achieving Sustainable Growth with Equity”. The priority toward 2020 will include trade facilitation in food and agricultural products, and improving governance frameworks. It is an important task to resist protectionism, eliminate trade distorting policies and promote harmonization of standards and adherence to internationally recognized, science-based standards.
19. In improving food supply, APEC economies should focus on promoting effective management of the food supply chains, reducing food losses and waste; sharing experience and information on reducing food losses and sharing effective models of food supply chains.

20. In improving food safety and nutrition, it is necessary to build convergence in food standards and regulatory systems across the region, including safety and technical requirements, to assure safety, enhance productivity, build capacity and reduce barriers to food trade.

V Plan of Activities Towards 2020

21. The following are priority activities of each WG agreed to in the APEC PPFS Plenary meeting in January 2013, in Jakarta, Indonesia. Details are presented in the appendix.

1) Priority activities of WG on Sustainable Development of the Agricultural and Fishery Sectors
   a. Promoting research and development and technology dissemination.
   b. Promoting effective management of marine ecosystems, fisheries, and aquaculture.
   c. Strengthening farmer’s organizations and cooperation, strengthening resilience of smallholders, promoting the welfare of women in farming, empowering smallholder farmers into the food supply and value chain, and enhancing services and training for small holders.
   d. Ensuring sustainable management of natural resources such as land and water, enhancing positive externalities and minimizing negative social and environmental externalities of agriculture and fisheries, increasing resilience to natural disasters and global climate change, and providing food safety net, including proper nutrition for vulnerable communities.

2) Priority Activities of WG on Facilitation of Investment and Infrastructure Development
   a. Promoting investment in agriculture including by supporting negotiations of the Principles for Responsible Agricultural Investment (PRAI).
   b. Infrastructure development and analyzing the impacts of Foreign Direct Investment (FDI).

3) Priority activities of WG on Enhancing Trade and Markets
   a. Facilitating trade in food and agricultural products.
   b. Reducing food losses and waste.
   c. Improving governance frameworks.
   d. Promoting, studying and sharing of best practices of risk management methods among stakeholders in order to strengthen food security.
   e. Incentivizing trade and production to encourage increased output and yields in a sustainable manner.

VI Appendix. Detailed Activities and Goals 2020

22. WORKING GROUP ON SUSTAINABLE DEVELOPMENT OF THE AGRICULTURAL AND FISHERY SECTORS

A. Promoting Research and Development and Technology Dissemination

Promotion of scientific research and development (R&D) and dissemination of technologies is of crucial importance. There is considerable potential for further advances in R&D in the fields of agriculture and aquaculture by means of public and private investment in developing economies.
**Goals 2020:**
1) Promoting private and public R&D spending in agriculture and fishery.

2) Creating an attractive investment climate to encourage more private sector R&D investment in agriculture and fishery.

3) Promoting interaction between research institutes and innovation centers in APEC economies by means of establishing a regional network of such institutions and centers.

4) Developing effective public technology dissemination systems to enhance capacity-building and promoting agricultural knowledge sharing and transfer, while ensuring that gender-sensitive dissemination systems are created.

5) Promoting effective mechanisms to facilitate voluntary public-private technology transfer, while respecting intellectual property rights.

6) Developing policy environments for the use, regulation and trade of innovative and emerging technologies.

7) Developing technologies for efficient use and sustainable management of agricultural and fishery resources.

8) Developing agricultural technologies to adapt to or mitigate the impact of climate change.

9) Providing open access to publicly funded agricultural relevant data.

10) Supporting initiatives to drive sustainable productivity gains, such as the G20 Meeting of Agricultural Chief Scientists whose goals are to identify global research priorities and targets, facilitate collaboration between public and private sector organizations in key areas, and track progress on established goals over time.

11) Conducting an analysis on agricultural and fishery areas and resources under stress and determine means and ways to return its potentials into full recovery or regenerate.

**B. Promoting Effective Management of Marine Ecosystems, Fisheries, and Aquaculture**

The APEC region accounts for two-thirds of the world’s wild capture fisheries and more than 80% of the total world share in aquaculture production. Population in APEC member economies consumes around 70% of the world’s fish products and fish provides a significant portion of animal protein consumption in the region, especially for low-income, food-deficit economies. For the past 50 years aquaculture has been the fastest growing food production sector in the world, with an annual growth rate of 8.9%. Most of aquaculture production in Asia, or 85%, are small-sized farms.

On the other hand, in recent decades, wild fisheries around the world have faced serious problems, namely degradation of the marine and freshwater environments, over-exploitation of marine resources, and illegal, unreported and unregulated (IUU) fishing. These have caused damage to ecosystems and depleted fisheries resources.
Goals 2020:
1) Improving fisheries management and sustainable aquaculture practices.
   c. Combating illegal, unreported and unregulated (IUU) fishing and associated trade and improving fisheries management,
   d. Sharing best practices and ensuring capacity building, information exchange and the provision of technical and financial assistance between APEC member economies on combating IUU trade in living marine resources and trade in illegally obtained fish production,
   e. Improving traceability of fish and fish products for consumer protection,
   f. Encouraging APEC economies to take voluntary measures, as appropriate, regarding certification of sustainable fishery and aquaculture products used directly as foodstuffs and indirectly as feed products, and

2) Promoting sustainable aquaculture practices.
   Sharing best practices between APEC member economies in technologies and innovations on disease management, promoting sustainable, environmentally and socially responsible feed production systems, recognizing the special circumstances and requirements of developing economies in aquaculture production.

3) Promoting contributions of sustainable managed small scale fisheries and aquaculture to food security.
   Creating greater market access for sustainable harvested fish products of small and medium enterprises (SMEs), small-scale fishers, and small scale aquaculture farmers.

4) Increasing investment in fishery human resources through trainings on technical capacity to foster more rapid implementation of best practice fishery management and legislative measures.

5) Improving gender equality in fishery development and ensuring that modernization and efficiency measures in this sector do not discriminate against women.

C. Strengthening Farmer’s Organization and Cooperation, Strengthening Resilience of Smallholders, Promoting the Welfare of Women in Farming, Empowering Smallholder
Farmers into the Food Supply and Value Chain, and Enhancing Services and Training for Small Holders.

Small farmers provide around 80% of food consumed in developing regions of Asia. Farmers’ organizations and cooperatives play an important role in providing small farmers need on a wide range of services. These organizations play also a critical role in empowering farmers, including women, by providing training in the various fields, such as on natural resource conservation, as well as providing greater access to information, technologies, and innovations.

**Goals 2020:**
1) Providing easy and simple access for small holders to agricultural financial sources.

2) Supporting small holder farmers’ participation in agricultural insurance in order to reduce farming risks.

3) Empowering farmers and farmer groups or organizations through agricultural education and training, access to information, and technology transfer.

4) Providing small holder farmers and farmer organizations, including women farmers and traders, equitable access to markets and information on production, supply, demand, and prices of agricultural and fishery products in order for them to effectively participate in the markets.

5) Facilitating agricultural and fishery best practices sharing through training, extension services, and technology transfers.

6) Expanding access of women to local and regional agricultural associations, noting that women’s groups and cooperatives are often the most difficult to form and sustain.

7) Conducting the targeting programs for women in agriculture by using gender-based analysis of programs’ impacts to ensure these women receive maximum benefits from the efforts to achieve sustainable food security.

**D. Ensuring Sustainable Management of Natural Resources such as Land and Water; Enhancing Positive Externalities and Minimizing Negative Social and Environmental Externalities of Agriculture and Fishery; Increasing Resilience to Natural Disasters and Global Climate Change; and Providing Food Safety Net, Including Proper Nutrition, for Vulnerable Communities.**

Soil degradation, desertification, accumulation of salts in soils, overuse of chemical fertilizers, pollution of underground water, the growth of cities; all of these factors have decreased the world’s arable land by 51 million hectares since 1992. Agriculture is also particularly vulnerable to climate change. Many APEC economies are prone to natural disasters. Agriculture has positive externalities such as flood and soil erosion prevention. On the demand side, there is still exist a sizable proportion of population in APEC member economies consumes food and nutrition below daily recommended. Meanwhile proper nutrition consumption is important during early child development, especially during the first 1,000 days. Evidence has shown that optimal nutrition during this time can have a lasting impact on a child’s growth, learning, and future productivity.
**Goals 2020:**

1) Promoting agricultural production practices that assist in adapting to, and mitigating of the impact of climate change.

2) Promoting sustainable crop diversification and agricultural production practices which contribute to enhancing land conservation while reducing chemical fertilizer dependencies.

3) Developing and introducing effective conservation systems to maintain soil fertility.

4) Developing sustainable agriculture by encouraging the use of environmentally low impact resources.

5) Facilitating technology transfers and best practices sharing in the area of sustainable management of land and water resources.

6) Increasing public-private investments in the construction of land-reclamation programs in APEC economies.

7) Promoting the sustainable use of natural resources by all people and societies.

8) Developing universal and voluntary guidelines on natural disaster preparedness for farmers and industries.

9) Facilitating data and information sharing as well as best practices to expand natural disaster preparation and recovery.

10) Building a coherent public-private cooperation system framework in the food and market supply chain for natural disaster management.

11) Facilitating investment for agriculture and fishery infrastructure construction and renovation to prevent and prepare for natural disasters.

12) Improving sustainable irrigation by greater investments in water infrastructure.

13) Promoting technical cooperation in order to improve water resources management in developing economies.

14) Promoting water management and renovation of old facilities for more efficient use of limited water resources.

15) Promoting Participatory Irrigation Management (PIM) and the understanding of multi-functionality of paddy fields and agricultural water in cooperation with the International Network for Water and Ecosystem in Paddy Fields (INWEPF).

16) Identifying policy options and market approaches that give sufficient incentives to farmers, agri-food sector, and consumers to better react to market changes and contribute to taking positive measures such as soil erosion prevention and flood prevention.
17) Identifying food insecure communities and taking targeted steps to overcome the problems, including provision of proper nutrition mainly for pregnant women and children.  
18) Facilitating date and information on the comparative nutritional value of foods and on the necessity of adequate nutrition during childhood development.

**23. WORKING GROUP ON FACILITATION OF INVESTMENT AND INFRASTRUCTURE DEVELOPMENT**

**a. Promoting Investment in Agriculture including through supporting the Principles for Responsible Investment in Agriculture and Food Systems which is expected to be endorsed at the Committee on World Food Security in October, 2014.**

**b. Infrastructure Development and Analyzing the Impact of Foreign Direct Investment (FDI)**

Low levels of public and private investment in agriculture and infrastructure can lead to low productivity and stagnation of production of many major crops. The lack of infrastructure, institution, policies and services facilitating the free flow of goods need to be addressed, such as market access, border administration, telecom and transport infrastructure, and business environment.

Establishing the food supply chain with a cold chain infrastructure, transport and communications infrastructure/services through a strong PPP (Public and Private Partnership) scheme could be strongly effective in reducing food losses and wastes and may also lead to the development of food manufacturing industries which are important for the sustainable economic growth of economies.

**Goals 2020:**

1) Increasing public investments in agriculture.

2) Creating an attractive business environment to encourage more private sector investments in agriculture.

3) Ensuring a high level of investor protection, including safeguarding and enforcing the rights and claims of investors and protecting robust intellectual property rights including Plant Variety Protection (PVP).

4) Consolidating information on the Asia-Pacific Information Platform on Food Security (APIP).

5) Sharing good practices of agricultural investments through APIP.

6) Creating lists of prospective infrastructure projects for development using the mechanisms of state-private partnership in the framework of the PPFS.

7) Developing a functioning, well-coordinated transport and logistics network in APEC economies.

8) Reducing post-harvest losses through infrastructure development of food markets and supply chains, including the use of public/private partnerships.
9) Developing a framework of activities/business plans with reference to the Principles for Responsible Investment in Agriculture and Food Systems which is expected to be endorsed at the Committee on World Food Security in October, 2014 for APEC economies.

10) Forming a policy/roadmap in the development of the food industry utilizing a cold chain infrastructure and starting several pilot projects for building the cold chain infrastructure in the selected economies through public-private partnerships.

11) Promoting responsible agricultural investments that contribute to food security and nutrition.

12) Supporting investment programs aimed at strengthening the food security of APEC economies within a framework of cooperation with international financial institutions (banks, funds, etc.).

13) Disseminating knowledge on the use of information technology to enable the use of “precision farming” techniques.

14) Addressing supply chain barriers to trade, such as market access, border administration and telecom and transport infrastructure.

**24. WORKING GROUP ON ENHANCING TRADE AND MARKETS**

**A. Facilitating Trade in Food and Agricultural Products**

Trade in agricultural products plays a key role in ensuring food security. All trade-related measures need to be in consistent with current WTO regulations on the trade of agricultural products and should take into account APEC and WTO efforts to encourage trade in so-called “Green Goods”.

**Goals 2020:**

1) Ensuring an affirmation of the pledge to end protectionist measures in trade of agricultural products.

2) Studying the impact of trade-related measures, especially export measures that impact food security.

3) Promoting development of regionally integrated markets.

4) Strengthening confidence in agricultural markets and establishing effective systems of collecting and disseminating market information.

5) Promoting harmonization of standards and adherence to international, science-based universally accepted standards, i.e. Codex, World Organization for Animal Health (OIE), International Plant Protection Convention (IPPC) and initiatives of the FAO, WHO and specialized WTO-Technical Barriers to Trade (TBT) and WTO-SPS Agreements.

6) Ensuring compliance with the WTO regulations in order to enhance transparency.
7) Reaffirming our pledge to refrain through the end of 2015 from imposing new export restrictions (Declaration of APEC leaders, 2012).

8) Improving effective global data standards for the connectivity of the food supply chain in support of APEC’s existing supply chain objectives and in coordination with the CTI:
   a. Reviewing deployment of data standards in the framework of APEC and taking into account the interests of the food industry,
   b. Bringing the benefits of using global data standards to the attention of economies’ food authorities, and

9) Analyzing food market information such as price levels and the impact of price volatility throughout APEC economies.

10) Increasing transparency of the market by means of:
   a. Obtaining more accurate data on production, consumption and trade in APEC region, and
   b. Continuing maintenance and upgrading of APIP, creating links between APIP and the G20/AMIS as well as the ASEAN Food Security Information System (AFSIS)

B. Reducing Food Losses and Waste

Loss and waste of food occurs at all stages of the food supply chain because of deficiencies in infrastructure, training, and education and includes actions by farmers, suppliers, and consumers. Data on food loss are very limited and requires greater research.

**Goals 2020:**
1) Developing unified methodologies to estimate food losses and waste.

2) Identifying major sources of food loss and waste in the distribution channel (farm storage, food harvesting, food processing industries, transportation, retailers, and households), and compiling regional strategies for specific products in both developing and industrialized economies

3) Introducing a plan for striving toward a targeted rate of food loss and waste reduction

4) Facilitating the sharing of best practices in the APEC region.

5) Strengthening food supply chains and reducing food losses in developing economies through public-private partnerships:
   a. Providing farmers with necessary technologies and managerial knowledge in handling and storage through improved extension services,
   b. Enhancing investments in modern agricultural machinery and equipment, storage facilities and transportation infrastructure,
c. Facilitating programs that encourage smallholder farmers to organize, diversify and scale up their production and marketing, and

d. Enhancing investments in the food supply chain with cold chain infrastructure in order to develop the food manufacturing industry and help increase revenues for farm producers.

C. Improving Governance Frameworks

A number of separate public agencies deal with the various aspects of food security. A few economies in the APEC region have a centralized agency as a coordinating body which is tasked to deal with food security as a whole. Various communication strategies with stakeholders, including the private sector, are undertaken in APEC economies with regards to food security policies.

Goals 2020:
1) Sharing strategies and experiences among APEC economies regarding their food security policy governance frameworks and their food security communication strategies with the private sector.

2) Encouraging each APEC economy to establish the best or, at least, better governance framework for food security policy and communication strategies in each APEC economy, for example by establishing policy deliberating council with private sector and civil society membership for the purpose of incorporating external stakeholders’ viewpoints at the policy planning stage; soliciting opinions from private sector and civil society before important policy decisions are made.

D. Promoting Studying and Sharing Best Practices in Risk Management Methods among Stakeholders in order to Strengthen Food Security

Goals 2020:
1) Evaluating the likelihood and impact of food security threats, with soliciting stakeholder input during the evaluation process.

2) Creating diversified strategies to respond to various potential economic and environmental risks for each of the APEC member economies.

3) Sharing best practices in risk management methods to strengthen food security in APEC economies.

Ⅶ Annex  Compilation of Working Group’ Proposed Activities
See attached Annex Compilation of Working Group’ Proposed Activities