

## **Draft Strategic Plan for 2021-2025**

### **Agricultural Technical Cooperation Working Group (ATCWG)**

#### **Introduction**

Agriculture substantially contributes to the economy of most APEC member economies, and the issues of food security and food safety, and sustainable agricultural development are of critical importance to the region. In this light, ATCWG was established in 1996, first as an Expert Group and then renamed as a Working Group in 2000, to serve as a forum for APEC member economies to enhance the capacity of agriculture and its related industries to contribute to the economic growth, food security and social well-being in the region. Considering the challenges facing agriculture including the impact of the COVID-19 pandemic, climate change, deterioration and shortage of natural resources, increasing demand for foods brought by growing population, labor shortage in farming, major animal and plant pests and diseases issues, APEC member economies need to strengthen their cooperation in the innovation and harnessing of agricultural technologies, and the facilitation of agricultural trade and investment for attaining a sustainable agri-food system in the region including to help economies' COVID-19 recovery efforts.

#### **APEC's Mission:**

*"APEC is the premier Asia-Pacific economic forum. Our primary goal is to support sustainable economic growth and prosperity in the Asia-Pacific region.*

*We are united in our drive to build a dynamic and harmonious Asia-Pacific community by championing free and open trade and investment, promoting and accelerating regional economic integration, encouraging economic and technical cooperation, enhancing human security, and facilitating a favorable and sustainable business environment. Our initiatives turn policy goals into concrete results and agreements into tangible benefits."*

The ATCWG will implement its activities consistent with the vision statement and action plans incorporated in the Osaka Action Agenda and relevant subsequent directions, including those identified by the First, Second, Third, Fourth, Fifth and Sixth APEC Food Security Ministerial Meeting (FSMM) held during 2010-2021, and follow the guidance of the Putrajaya Vision 2040 to foster "an open, dynamic, resilient and peaceful Asia-Pacific community by 2040, for the prosperity of all our people and the future generations" as well as the implementation plan of the Putrajaya Vision, Aotearoa Plan of Action, to "ensure lasting food security, food safety and improved nutrition for all, as well as reducing food waste and loss in the region by promoting agricultural and food trade, agricultural sustainability and innovation, and implementing the Food Security Roadmap Towards 2030" and "cooperate to further develop APEC's work on other groups with untapped economic potential, such as those from remote and rural communities" as well as the La Serena Roadmap for Women and Inclusive Growth.

The ATCWG provides strong technical expertise that also supports other related APEC fora. In 2010, the ATCWG provided support and recommendations to the 1st Food Security Ministerial Meeting (FSMM), which contributed to the Niigata Declaration on APEC Food Security. ATCWG seeks to increase interactions with other APEC fora. It also provides direct advice and support to other APEC fora, Senior Officials Meetings (SOMs), Ministers and APEC bodies aimed at improving the food security of the region. Other APEC fora include the APEC Food Safety

Cooperation Forum (FSCF) and its Partnership Training Institute Network (PTIN), High Level Policy Dialogue on Agricultural Biotechnology (HLPDAB) as well as the Policy Partnership on Food Security (PPFS).

## **1. Vision Statement**

APEC member economies have effectively addressed the issues of food security, sustainable development, climate change, animal and plant pests and diseases and wealth creation in their food and agricultural sectors.

## **2. Mission Statement**

ATCWG's mission is to enhance agriculture's contribution to the region's economic growth and social well-being by

- promoting technical cooperation among APEC member economies to enhance the capacity of agriculture and its related industries. ATCWG seeks to strengthen agriculture's contribution to the region's economic growth, sustainable agriculture, food security, food safety, sustainable development, and enhanced social well-being of the rural populations.

ATCWG will harness officials and experts from academia who are available to work with member economy officials, agricultural experts, the business community and as part of a dynamic network to effectively address the issues of food security, sustainable development, climate change, and wealth creation in the food and agricultural sectors through capacity building, studies, workshops, information sharing, and promoting collaborations with other APEC working groups and other regional and international organizations.

## **3. Critical Success Factors**

- Facilitate dialogue and create opportunities to exchange views, share knowledge, information and experience among APEC member economies.
- Enhance capacity building in food security and sustainable agriculture through workshops and projects at individual level and institutional level in terms of knowledge, skills, attitudes, and uptake of innovation outputs.
- Improve linkages, networking capability and knowledge sharing among different groups of private and public stakeholders.
- Facilitate agricultural trade and promote technologies where appropriate to accelerate the development and prosperity of agriculture in the region.
- Adopt new tools of science to address agricultural production and distribution problems.
- Develop strong working relationships with other relevant APEC fora such as the PPFS, TPTWG, SMEWG, OFWG, EPWG, PPSTI, HWG, HLPDAB and PPWE (Appendix 1). Likewise Promote collaboration with other regional and international organizations to jointly address issues on food security.
- Commitment to and participation in ATCWG activities and implementation of its recommendations.
- Provide adequate funding for ATCWG proposed activities.

- Provide special focus on the agriculture of the poor to address food security and rural poverty problems.
- Give urgent attention to the agriculture in fragile environments to adapt to climate change and mitigate its effects, reduce the chemical fertilizer dependency and increase the resilience to natural disasters in accordance with international agreements.
- Contribute to global efforts to prevent future pandemics.

#### 4. Priority Areas, Objectives and Key Performance Indicators (KPIs)

The ATCWG seeks to strengthen technical cooperation among APEC member economies to enhance their capacity in agriculture and its related industries through conducting joint researches, capacity building seminars, workshops and training courses, ultimately to contribute to the region's economic growth, food security and safety as well as social wellbeing.

In line with ATCWG's mission statement and considering the challenges facing agriculture including the impact of COVID-19 pandemic, climate change, deterioration and shortage of natural resources, increasing demands for food due to population growth, labor shortages in farming, major animal and plant pests and diseases, the ATCWG will focus on the following priority areas for its Strategic Plan 2021-2025:

- **Strengthening regional food security & food safety** by promoting activities and regional cooperation to strengthen food security and food safety in the APEC region, such as through the reduction of food losses and waste; empowering farmers to improve their productivity and quality of product; facilitation of agricultural trade and investment and promoting sustainable land management;
- **Promoting conservation and utilization of animal and plant genetic resources** by means of new technologies to develop new breeds or varieties that are tolerant or resistant to biotic (pests and diseases) or abiotic (heat, cold, draught, flood) stresses, or with high nutritious value, and better quality;
- **Enhancing the research and development (R&D) and extension of Smart Agriculture (Agriculture 4.0)** by harnessing cutting-edge digital technologies, such as Internet-of-Things (IoT), automatic/wireless sensors, Artificial Intelligence (AI), Unmanned Aerial Vehicles (UAV), agricultural robotics and others, to increase agricultural productivity, to resolve the problem of manpower shortage, and to cope with and adapt to the challenges of climate change;
- **Building agricultural value chain and marketing channels** by: (1) promoting the R&D and extension activities of post-harvest handling, processing, and cold-chain technologies to ensure product quality, safety, and shelf-life; and (2) providing agricultural finance, product traceability, value chain management through block-chain and other information communication technologies (ICTs) for small scale farmers to enhance their income and also increase their inclusiveness in and connectivity to global

market;

- **Building climate smart and resilient agricultural systems** to cope with the challenge of climate change through the cooperation on the following: (1) food security and agricultural risks, (2) production resilience and adversity adjustment, (3) production environment and knowledge platform, (4) value addition of weather information and disaster prevention by establishing early warning systems, and (5) pests analysis and adaptive management;
- **Fostering sustainable agriculture systems** including preserving natural resources and creating environmentally friendly working conditions for farmers, conducting agricultural resources recycling and reuse; development of green energy; greenhouse gas reduction; environmental benefit assessment and economic value addition under the practices of circular agriculture, sustainable materials management, and other resource efficiency systems;
- **Strengthening cooperation on prevention and control of animal and plant pests and diseases** including sanitary and phytosanitary (SPS) issues, integrated pest management (IPM), biosecurity, biodiversity, control of Invasive Alien Species (IAS) and antimicrobial resistance (AMR), particularly focusing on control and prevention of quarantine pests and diseases to facilitate agricultural trade; and
- Other areas identified and adopted by APEC Members.

The collective objectives of ATCWG and Key Performance Indicators (KPIs) are enumerated below, and the KPIs will be tracked annually to measure the effectiveness and performance of the ATCWG in meeting the collective objectives of the above-mentioned priority areas:

**Objective 1:** To promote collaborative activities and regional cooperation between the APEC members.

#### **KPI**

Directives carried out through projects implemented by ATCWG, and number of economies participating.

**Objective 2:** To improve agricultural production and distribution through increased use of the new scientific tools accompanied by institutional innovations.

#### **KPIs**

- i. New tools of science and institutional innovations introduced by 2025;
- ii. Average agricultural production increases from 2021 to 2025 and agricultural trade flows also increases over the same time period among APEC economies.

**Objective 3:** To strengthen human and institutional resource capacities in agriculture through education and training.

**KPIs**

10 workshops with at least 500 participants, including private sector and civil society, by 2025; a follow up survey shows that 90 percent of the participants in the workshop use the knowledge gained in their jobs;

**Objective 4:** To strengthen agricultural information systems including their analysis and utilization.

**KPI**

Developed further the new APIP initiated by Japan by 2025.

**Objective 5:** To improve the capacity of member economies on preparedness for natural disasters, economically important cross border animal and plant pests and diseases.

**KPI**

Together with EPWG, HWG and other fora appropriate international organizations, train 50 experts on the use of early warning systems, sharing of best practices on emergency preparedness and response to mitigate the effects of natural disasters and cross border pests and diseases problems.

**Objective 6:** To strengthen capacity of member economies in reducing damage and loss in agriculture and fisheries from extreme events through capacity building activities such as seminars, workshops and training courses on climate and disaster risk assessment, vulnerability assessment, risk mapping, climate change adaptation, surveillance and preparedness for mitigating the risks and disaster risk reduction strategies. The baseline is the year 2020, and this target should be reached by 2025.

**KPI**

The entire APEC region aims to reduce 10 percent damage and loss to agriculture and fishery and strengthening capability of these sectors by 2025. The baseline of the evaluation is set to be 2020.

**5. Prioritized Implementation Schedule**

ATCWG will take a holistic and committed approach to implementing the priority areas in this Strategic Plan. APEC member economies, with the support of the APEC secretariat will work together and with relevant partners to develop a schedule of activities for the next five years, between 2021 and 2025 to achieve the objectives of the Strategic Plan. The detailed implementation schedule is enumerated as follows and will be updated annually, in line with the ATCWG’s annual Work Plan:

S/N	Priority Areas	Objectives	Activities	Lead Economy / Fora
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S/N	Priority Areas	Objectives	Activities	Lead Economy / Fora
1.	Strengthening Regional Food Security & Food Safety	Promote activities and regional cooperation to strengthen food security and food safety in the APEC region, such as through the reduction of food losses and waste; empowering farmers to improve their productivity; facilitation of agricultural trade and investment and promote sustainable land management	<ul style="list-style-type: none"> <li>• Virtual Workshop on a Greater Understanding of Food Loss Reduction Practices at the Farm/Producer Level (2022)</li> <li>• Workshop on Sustainable Material Management (2021)</li> <li>• Reducing Food Loss and Waste along the Food Value Chain in APEC During and Post COVID-19 Pandemic (2021)</li> <li>• TBC</li> </ul>	United States  United States  Chinese Taipei  TBC
2.	Promoting Conservation and Utilization of Animal and Plant Genetic Resources	Strengthening the cooperation among APEC members on conservation and utilization of animal and plant genetic resources by means of new technologies, to develop breeds or varieties that are tolerant or resistant to biotic (pests and diseases) and abiotic (heat, cold, draught, flood) stresses, or with high nutritious value, and better quality.	<ul style="list-style-type: none"> <li>• (TBC)</li> </ul>	(TBC)
3.	Enhancing the R&D and Extension of Smart Agriculture (Agriculture 4.0)	Enhancing the R&D and extension of Smart Agriculture (Agriculture 4.0) by harnessing cutting-edge technologies such as Internet of Things (IoT), automatic	<ul style="list-style-type: none"> <li>• Virtual Workshop on Agricultural Technological Cooperation for Improving Soil Quality and Food Productivity</li> </ul>	China

S/N	Priority Areas	Objectives	Activities	Lead Economy / Fora
		sensors, artificial intelligence (AI), Unmanned Aerial Vehicles (UAV), agriculture robotics and others, to increase agricultural productivity, to resolve the problem of manpower shortage, and to cope with and adapt to the challenges of climate change.	<p>(2022)</p> <ul style="list-style-type: none"> <li>• Virtual Workshop on Agricultural Youth Entrepreneurship and Innovation in the Digital Economy Era (2022)</li> <li>• APEC Workshop on Sustainable Rural Development and Human Development Enhanced by Informatization under the COVID-19 Pandemic (2021)</li> <li>• Workshop of APEC Cooperation in Agricultural Production and Technological Improvement During and After the COVID-19 Pandemic (2021)</li> <li>• APEC Workshop on the R&amp;D and Promotion of Smart Agriculture (2020)</li> <li>• Inclusive Modern Agricultural Development Driven by Big Data Training and Workshop (2020 or 2021) [China]</li> <li>• (TBC)</li> </ul>	<p>China</p> <p>China</p> <p>China</p> <p>Chinese Taipei</p> <p>China</p> <p>(TBC)</p>
4.	Building Agricultural Value Chain and Marketing	<ul style="list-style-type: none"> <li>• Promoting the R&amp;D and extension activities of</li> </ul>	<ul style="list-style-type: none"> <li>• Training Course on Theory and Application of Crop Growth</li> </ul>	China

S/N	Priority Areas	Objectives	Activities	Lead Economy / Fora
	Channel	<p>post-harvest handling, processing, and cold-chain technologies to ensure product quality, safety, and shelf-life.</p> <ul style="list-style-type: none"> <li>Building the agricultural value chain and marketing channels, and also providing agricultural finance, product traceability, and supply chain management through block-chain and other ICTs for small scale farmers to enhance their income and also increase their inclusiveness and global market connectivity.</li> </ul>	<p>Model (2020 or 2021) [China]</p> <ul style="list-style-type: none"> <li>(TBC)</li> </ul>	(TBC)
5.	Building Climate Smart and Resilient Agricultural Systems	<p>Building climate smart and resilient agricultural systems to cope with the challenge of climate change through the cooperation on the following: (1) food security and agricultural risks, (2) production resilience and adversity adjustment, (3) production environment and knowledge platform, (4) value addition of weather information and disaster prevention by establishing early warning systems, and (5)</p>	<ul style="list-style-type: none"> <li>Virtual Workshop: Tackling Climate Change Challenges with Agricultural Innovation (2022)</li> <li>APEC Joint Workshop on enhancing Livestock GHG Inventory Methodology (2022)</li> <li>APEC-GRA Virtual Farm Study Tour (2021)</li> <li>(TBC)</li> </ul>	<p>United States</p> <p>New Zealand</p> <p>New Zealand</p> <p>(TBC)</p>



S/N	Priority Areas	Objectives	Activities	Lead Economy / Fora
		pests analysis and adaptive management.		
6.	Fostering Sustainable Agriculture Systems	Preserving natural resources and creating environmentally friendly working conditions for farmers, conducting agricultural resources recycling and reuse, including development of green energy; greenhouse gas reduction; environmental benefit assessment and economic value addition under the practices of circular agriculture, sustainable materials management, and other resource efficiency systems.	<ul style="list-style-type: none"> <li>• Promote Rural Development and Prosperity for All Our People in APEC region (2022)</li> <li>• Workshop on Sharing Good Practices on Sustainable Agricultural Development through the Principle of Sufficiency Economy (2022)</li> <li>• APEC Workshop on Practices and Promotion of Circular Agriculture (2021)</li> <li>• APEC survey on Economies' development and practices of green energy and circular agriculture including the early or anticipated impact and costs of various practices (2020)</li> <li>• (TBC)</li> </ul>	<p>China</p> <p>Thailand</p> <p>Chinese Taipei</p> <p>Chinese Taipei</p> <p>(TBC)</p>
7.	Strengthening Cooperation on Prevention and Control of Animal and Plant Pests and Diseases	Strengthening cooperation on sanitary and phyto-sanitary (SPS) issues, Integrated Pest Management (IPM), biosecurity, prevention of future pandemics, biodiversity, and control of invasive alien species (IAS) and antimicrobial resistance (AMR)	<ul style="list-style-type: none"> <li>• Quarantine Detector Dog Operation (2023)</li> <li>• APEC Workshop on the Application of Electronic Veterinary and Phytosanitary Certificate (2022)</li> <li>• OIE Veterinary Statutory Body</li> </ul>	<p>Chinese Taipei</p> <p>Chinese Taipei</p> <p>Australia</p>

S/N	Priority Areas	Objectives	Activities	Lead Economy / Fora
		particularly focusing on control and prevention of quarantine pests and diseases to facilitate agricultural trade.	Twinning: Improving trade and market access in animals and animal products by strengthening veterinary statutory standards (2020/21) <ul style="list-style-type: none"> <li>• (TBC)</li> </ul>	(TBC)
8.	Other areas identified and adopted by APEC Members	(TBC)	<ul style="list-style-type: none"> <li>• (TBC)</li> </ul>	(TBC)

## 6. Interim Review

To make sure that the Strategic Plan 2021-2025 of ATCWG is carried through; there will be an interim review in the first half of 2022 via correspondence. APEC member economies can update and amend their plans if necessary and to ensure alignment with a new APEC Food Security Roadmap.

## Appendix 1

### Glossary

#### E

EPWG: Emergency Preparedness Working Group

#### H

HWG: Health Working Group

HLPDAB: High Level Policy Dialogue on Agricultural Biotechnology

#### O

OFWG: Oceans and Fisheries Working Group

#### P

PPFS: Policy Partnership on Food Security

PPSTI: Policy Partnership on Science, Technology and Innovation

PPWE: Policy Partnership on Women and the Economy

**S**

SMEWG: Small and Medium Enterprises Working Group

**T**

TPTWG: Transportation Working Group