

Implementation Plan of the Food Security Roadmap Towards 2030

Thailand 2022

The Food Security Roadmap Towards 2030 will establish open, transparent, productive, sustainable, and resilient APEC food systems that ensure access to sufficient, safe, affordable, and nutritious food to meet dietary needs and food preferences for active and healthy lives.

Introduction

APEC economies remain committed to APEC's mission and its voluntary, non-binding, consensus-building principles as well as its spirit of equal partnership, shared responsibility, mutual respect, common interest and common benefit. In the APEC Putrajaya Vision 2040, APEC Leaders committed to building "an open, dynamic, resilient and peaceful Asia-Pacific Community" by 2040. Further, the implementation plan of the APEC Putrajaya Vision 2040, the Aotearoa Plan of Action stated that "APEC fora and sub-fora would make provisions for implementing the APEC Putrajaya Vision 2040 in their work plans and strategic plans".

Specifically in relation to food security, the Aotearoa Plan of Action emphasized collective actions that economies would take to ensure lasting food security, food safety and improved nutrition for all, as well as reductions in food loss and waste in the region by promoting agricultural food trade, agricultural sustainability and innovation.

The Food Security Roadmap Towards 2030 (Roadmap 2030) addresses the Aotearoa Plan of Action and builds on the earlier Food Security Roadmap Towards 2020, the original 2010 Niigata Declaration, and other related declarations and joint statements issued since the establishment of the Policy Partnership on Food Security (PPFS) in 2011. Several other plans, strategies and roadmaps under APEC fora and sub-fora, including the La Serena Roadmap for Women and Inclusive Growth (2019-2030), the APEC Cross Cutting Principle on Non-Tariff Measures endorsed at APEC Ministerial Meeting in 2018, the APEC Statement on Promoting the Use of Interoperable Global Data Standards at the APEC Ministerial Meeting in 2014, the APEC Guidelines and Best Practices for the Adoption of Global Data Standards, and the Bogor Goals are noted in the Roadmap 2030 targets.

A critical aspect of the Roadmap 2030 is public private partnership, which is also one of the foundational elements of PPFS. The intent behind this partnership is to ensure private sector participation in the development and implementation of relevant workstreams implementing the Roadmap 2030. This inclusion was also supported by the APEC Business Advisory Council (ABAC) in its report to the APEC Economic Leaders in 2021, ABAC called on APEC to support the implementation of a whole-of-system approach to food security, and to ensure the role of the private sector is expanded and enabled to engage in reaching food security goals.

Food security is a complex and cross-cutting issue relevant to the work in multiple APEC fora and projects, including PPFS, the High Level Policy Dialogue on Agricultural Biotechnology (HLPDAB), the Agricultural Technical Cooperation Working Group (ATCWG), the Ocean and Fisheries Working Group (OFWG) and the Sub-Committee on Standards and Conformance (SCSC). Drafting of the Implementation Plan of Roadmap 2030 (2030 Implementation Plan) and monitoring the progress and update of the 2030 Implementation Plan falls to the responsibility of the PPFS.

The 2030 Implementation Plan identifies specific voluntary actions or initiatives that economies may individually or collectively implement to deliver on the Roadmap 2030, as well as how to evaluate progress towards the roadmap's goals. Economies will review and update the 2030 Implementation Plan over time to ensure it remains timely, comprehensive, balanced, and relevant across all elements. It is intended to be a living document and APEC economies will implement it based on their own conditions.

Implementation Plan of Key Action Areas

Digitalization and Innovation has the potential to transform the food system and enhance food security and it is one of the economic drivers of the APEC Putrajaya Vision 2040.

8a) By the end of 2022, appraise existing work by other APEC fora and sub-fora which promotes wider adoption of Global Data Standards for food and agriculture products and other interoperable digital technologies to enhance production-related technologies, supply chain traceability, accessible innovative financial technologies and interoperable digital documentation, including for trade; and identify areas which should be prioritized for further work to achieve region-wide interoperability through the food value chain, with a review of progress by 2025.

Objective: To assess the current capability of other APEC fora and sub-fora to promote, and where applicable, implement policies for wider adoption of Global Data Standards for food and agriculture products and other interoperable digital technologies and inform further work areas to be prioritized.

Individual Action: Economies are encouraged to promote, and where applicable, implement policies for wider adoption of Global Data Standards for food and agriculture products and other interoperable digital technologies to enhance production-related technologies, supply chain traceability, accessible innovative financial technologies, and interoperable digital documentation, including for trade.

Collective Action: Economies are encouraged to:

1. Identify APEC fora and sub-fora that have activities related to food and agriculture products and production, and identify practices that have successfully promoted the adoption of Global Data Standards and other interoperable digital technologies resulting in enhanced production-related technologies, supply chain traceability, accessible innovative financial technologies and digital documentation.
2. Identify targeted areas of work under 8a that are still underdeveloped and should be prioritized for further work.
3. Explore ways to promote wider adoption of Global Data Standards for food and agriculture products and other interoperable digital technologies.
4. Design workstreams dedicated to facilitating capacity building on Global Data Standards literacy.
5. Share best practices on production-related technologies, supply chain traceability, accessible innovative financial technologies, and interoperable digital documentation.

Evaluation of Progress: By the end of 2025, assess the progress made by member economies towards successfully promoting and, where applicable, implementing policies for wider adoption of Global Data Standards and interoperable digital technologies to enhance production-related technologies, supply chain traceability, accessible innovative financial technologies and digital documentation, and identify areas which should be prioritized for further work.

Targets: By the end of 2025

Lead economy: Multiple leads

8b) Identify and actively encourage government schemes which provide access to and promote introduction of innovative products and technologies, including support for the research and development of emerging technologies, for example smart agriculture, and share experiences of successful approaches taken in other economies and international bodies.

Objective: To enable improved access to and promote introduction of innovative products and technologies, including support for the research and development of emerging technologies, for example smart agriculture, and share experiences of successful approaches taken in other economies and international bodies.

Individual Action: Economies are encouraged to identify and actively encourage government schemes which provide access to and promote the introduction of innovative products and technologies, including support for the research and development of emerging technologies, for example smart agriculture.

Collective Action: Economies are encouraged to:

1. Share experiences of successful approaches taken by other economies and international bodies to encourage cooperation on identifying common interests of the APEC region, the review of the related policies and organization of relevant Webinars.
2. Design targeted policies on emerging innovative technologies, such as smart agriculture, which could improve the resilience of APEC Food Systems to climate risks, conserve natural resources and minimize disruptions of agri-food supply chains from shocks and stresses.
3. Promote the data-driven monitoring system for improved compliance of agri-environmental schemes to boost sustainable productivity.

Evaluation of Progress: Economies demonstrate an increase in the number of government schemes that provide access to and promote the introduction of innovative products and technologies, including support for the research and development of emerging technologies.

Targets: 2030

Lead economy: Korea

8c) Promote and encourage increased levels of access to broadband digital infrastructure in underserved areas through necessary investment and structural reforms.

Objective: To promote and encourage increased levels of access to broadband digital infrastructure in underserved areas through necessary investment and structural reforms.

Individual Action: Economies are encouraged to:

1. Pursue structural reforms and sound economic policies to promote digital innovation as a means to improve productivity and dynamism of the food system.
2. Facilitate investment in and financial support, specifically in underserved areas, of sustainable and inclusive growth of broadband infrastructure and innovative digital technologies aimed at incorporating the agriculture and food sectors into the digital economy.
3. Implement policies that promote the inclusion of the private sector and representatives from agricultural production and food systems industries input in the development of broadband infrastructure.
4. Encourage and support the application of innovative digital technology in food systems, including smart agriculture, broadband and Internet of Things (IoT) to optimize food production, storage, processing and increase market access for underserved areas and groups to promote rural development and prosperity for all our people, including farmers, women and smallholders.

Collective Action: Economies are encouraged to:

1. Share good practices and policies for achieving structural adjustments that support digital connectivity and optimum allocation of technical resources.
2. Strengthen digital infrastructure, accelerate digital transformation, narrow the digital divide, as well as cooperate on facilitating the flow of data and strengthening food systems connectivity through broadband services such as 5G and IoT.

3. Drawing on the different approaches of different economies and sharing of good practices and experiences, collectively propose initiatives and projects to improve broadband availability in underserved areas and create universal, affordable and convenient access to innovative digital tools for people in the above areas through increasing investment on infrastructure construction.

Evaluation of Progress: By 2030, individual and community-based access to digital tools and broadband have increased throughout the APEC region. In addition, all member economies have enabled competitive environments with pro-investment policies for the development of digital infrastructure, especially in underserved rural and urban-rural fringe areas.

Targets: 2030

Lead economy: PPFS Working Group 2

8d) Economies to make available and deliver training sessions and/or workshops to improve food system related digital literacy and capability for underserved communities, leveraging existing programmes where possible.

Objective: To provide a forum for both the public and private sectors of APEC Member Economies to share their experiences and expertise on the application, promotion, and accomplishment of smart agriculture through harnessing various new technologies such as IoT, automatic sensors, Artificial Intelligence (AI), Unmanned Aerial Vehicle (UAV), etc.

Individual Action: Economies are encouraged to share knowledge, exchange good practices and lessons learned on the progress and challenges facing the APEC economies to improve food systems through digital literacy campaigns and enhance access for underserved communities, leveraging existing programmes where possible.

Collective actions: Economies are encouraged to:

1. Develop a shared understanding of the application and development of the current smart agriculture systems.
2. Share knowledge on trends and prospects of smart agriculture, R&D and application and the development and application of new technology and good practices of ensuring youth and women have equal access to affordable inputs and improve technology of smart agriculture.

Evaluation of Progress: Increased knowledge on digitalization in agriculture and food systems, capability in promoting and implementing digitalization in agriculture and food systems among the economies and identify opportunities for collaboration.

Targets: 2030

Lead economy: Malaysia

8e) From 2022, via the APIP database¹, voluntarily share information and best practice on digitalisation and innovation in the food supply chain.

Objective: To further progress work in digitalisation and innovation in the food supply chain, update APIP for a more useful information platform with inputs from economies and related fora.

Individual Action: Economies are encouraged to share and update digitalisation information and best practices on the APIP website.

¹ Asia Pacific Information Platform on Food Security

Collective actions: Economies are encouraged to:

1. Update APIP with inputs from economies and related fora.

Examples are

- Best practices in PPFS, ATCWG and HLPDAB projects including webinars.
- Major topics on Private-Public Partnerships (PPPs) and information of related activities.
- APEC Food Security Plans and stock-taking exercises.
- Links on economies' websites, statistics, other related websites on food security.
- Declarations at the APEC Ministerial Meetings on Food Security.
- Other topics

2. Hold a knowledge sharing webinar every year to enhance the function of APIP.

Evaluation of Progress: Increased sharing and updating of information and best practices from economies and related fora on the APIP site.

Targets: 2030

Lead economy: Japan

8f) Promote public-private investment to facilitate the use of innovative technologies for the whole food value chain, including those which improve efficiency and sustainability, and increase investment in micro, small and medium size enterprises (MSMEs), including start-ups, and small-scale producers in the agri-food and fisheries sectors.

Objective: To promote public-private investment to facilitate the use of innovative technologies for the whole food value chain, including those that improve efficiency and sustainability, and increase investment in MSMEs, including start-ups and small-scale producers in the agri-food and fisheries sectors.

Individual Action: Economies are encouraged to:

1. Promote public-private investment to endorse digital transformation and other innovative technologies, including adoption of interoperable digital technologies to enhance food production, storage facilities, and logistics capacity.
2. Recognize the growing significance of innovative technologies and use them in enhancing food security by matching producers with the need of consumers, increasing agricultural productivity, minimizing food loss and waste, and enabling greater resilience in supply chains during times of disruption.
3. Encourage broader work in the format of public-private partnerships and adopt and maintain laws, regulations, and best practices that facilitate investment.
4. Continue supporting MSMEs innovation empowerment by tackling systemic barriers to entrepreneurship and reinforcing capacity building.
5. Improve access to finance for MSMEs, start-ups and entrepreneurs from traditionally-disadvantaged backgrounds.
6. Foster environments that support green MSMEs businesses and provide training opportunities for MSMEs to improve business skills in the digital economy.

Collective actions: Economies are encouraged to:

1. Carry out surveys and studies to identify the obstacles and barriers inhibiting economies' capacity in accelerating digital transformation to optimize food systems and enhance food security.
2. Increase information sharing regarding respective policies and best practices on public-private investment in support of digital connectivity and access and inclusion to innovative technologies across the whole food value chain among economies, relevant sub-fora, and international bodies.

3. Provide assistance to underserved areas to help increase levels of digital and innovation infrastructure, deliver training sessions or workshops to improve food systems-related digital literacy and capacity

Evaluation of Progress: Effective public-private investments are identified to facilitate the use of innovative technologies, help economies achieve food security, growing productivity, high levels of economic development and reduced impact on the environment. Improved business environments for MSMEs with greater MSMEs access to innovation to strengthen business competitiveness and enhanced sustainability across the food value chain.

Targets: 2030

Lead economy: China

8g) Modernize food storage facilities and logistics capacity through increased exchange and cooperation among government agencies, businesses and institutes focusing on post-harvest management and technologies.

Objective: To modernise food storage facilities and logistics capacity through increased exchange and cooperation among government agencies, businesses and institutions focusing on post-harvest management and technologies.

Individual Action: Economies are encouraged, where appropriate, to:

1. Encourage public private partnerships on investment in storage, transportation, processing, packaging, and related technical innovations and infrastructure improvements.
2. Commission research on improved storage techniques and facilities, and create policy environments to facilitate internet companies to assist in constructing consultation and sharing platforms for small holders.
3. Implement innovative technologies, and intelligent, energy saving, green, low-carbon and efficient food storage facilities, to reduce post-harvest food loss and waste, including warehouse, ventilation, dryer, cleaner, fireproofing facilities, intelligent detecting system and cooler facilities.

Collective actions: Economies are encouraged to:

1. Exchange experiences in management measures, regulatory and competition policy issues related to food storage infrastructure in APEC economies.
2. Collect, research and share the best practices, effective methods and relevant standards applied by food storage facilities, micro, small, and medium enterprises (MSMEs), small-holder farmers and retailers in APEC economies.
3. Explore appropriate food storage technologies and facilities for hot and humid areas to reduce food loss and waste.
4. Improve quality of individual and inter-regional logistics and develop a functioning, well-coordinated and low-cost logistics network, which allows smoother and more secure transfer of food across the APEC food and agriculture supply chains, so as to reduce losses and maintain food quality and nutrition.
5. Provide capacity building programs and skill training for the member economies in food logistics and transportation sector.

Evaluation of Progress: Improved efficiency of food storage facilities and logistics capacity in APEC economies is widely adopted with the application of intelligent, energy-saving, loss reducing, environment-friendly, low-carbon and labor-saving management and technology.

Targets: 2030

Lead economy: China

Productivity: *To create inclusive and sustainable growth in the APEC region, to improve the productivity and efficiency of regional food systems, to support the open, fair, transparent, predictable and non-discriminatory multilateral trading system.*

12a) Member economies to explore the implementation of best examples of systems which see perishable goods released through international borders in a timely manner, where this will reduce food loss and waste and remove extra costs for business.

Objective: To improve the border clearance system for perishable goods by exploring the implementation of best examples of systems which see perishable goods released through international borders in a timely manner.

Individual Action: Economies are encouraged to identify and share best practices and examples of systems which see perishable goods released through international borders in a timely manner.

Collective actions:

1. Economies are encouraged to commission a review of the implementation of the RCEP agreement on the release of perishable goods in the shortest possible time and to the extent possible in less than six hours after arrival at port and submission of the information required for release, to assess the benefits and challenges, as well as its relevance to APEC.
2. Economies are encouraged to develop a common plan of key actions and recommendations.

Evaluation of Progress: Consistent and active participation by economies. Opportunities and challenges are well articulated and presented. Actions and recommendations are endorsed by economies and accepted by PPFS.

Targets: 2030

Lead economy: New Zealand

12b) Acknowledging the positive impact on food security of consistency in food trade standards, in appropriate fora member economies will assess best practice case studies of increasing food security through implementation of agreed science-based international standards, guidelines and recommendations.

Objective: To acknowledge the positive impact on food security of consistency in food trade standards, in appropriate fora member economies are encouraged to assess best practice case studies of increasing food security through implementation of agreed science-based international standards, guidelines and recommendations.

Individual Action: Economies are encouraged to identify and share best practice case studies of increasing food security through implementing agreed science-based international standards, guidelines and recommendations. Economies will implement their WTO commitments.

Collective actions: Economies are encouraged to:

1. Carry out a survey on the implementation of agreed science-based international standards, guidelines and recommendations on
 - 1.1 Facilitating trade in food and agricultural products.
 - 1.2 Improving the productivity and dynamism of food system
2. Enhance communication on best practices of ensuring food security through implementation of agreed science-based international standards, guidelines and recommendations.

3. Encourage the implementation of agreed science-based international standards by:

3.1 Promoting the harmonization with and adherence to agreed science-based international standards, as well as capacity building activities and information sharing.

3.2 Sharing information on food standards and labelling related to foods and food ingredients with health and functional value.

3.3 Sharing best practices on voluntary sustainability standards (VSS) in food trade of the APEC region.

Evaluation of Progress: The APEC regional food trade system is more open, fair, transparent, predictable, and non-discriminatory, and the productivity and efficiency of regional food systems are improved, through implementation of agreed science-based international standards, guidelines, and recommendations.

Targets: 2030

Lead economy: China

12c) Member economies to have due regard for the APEC Cross Cutting Principles on Non-Tariff Measures, agreed by APEC Ministers in 2018, in designing and implementing non-tariff measures relating to food.

Objective: To facilitate free and open trade of agricultural and food products in the Asia-Pacific region and ensure the development of non-tariff measures that follow APEC's Cross Cutting Principles on Non-Tariff Measures, and are science-based in the case of Technical Barrier to Trade (TBT) and Sanitary and Phytosanitary (SPS) measures.

Individual Action: When scientifically justified and necessary, economies are encouraged to transparently develop non-tariff measures that are consistent with member economies' WTO commitments and obligations.

Collective Action: Economies are encouraged to refer to the APEC Cross Cutting Principles on Non-Tariff Measures when developing non-tariff measures to ensure that they:

1. Are consistent with member economies' commitments and obligations as members of the WTO;
2. Are not more trade restrictive than necessary to meet a legitimate objective, and where appropriate, should focus on outcomes, rather than mandating prescriptive approaches;
3. Are not burdensome for MSMEs;
4. Are based on relevant international standards, where appropriate, and developed in accordance with the WTO TBT Agreement, the WTO SPS Agreement or recommendations and/or decisions of the WTO TBT Committee or the WTO SPS Committee;
5. Do not arbitrarily or unjustifiably discriminate against imported products and ensure the unimpeded global trade of food as well as the stability of food supply chain; and
6. Do not pose unwarranted, non-scientific and/or non-risk proportionate barriers to the development of new technologies that drive innovation.

Evaluation of Progress: All of Non-Tariff Measures in food agriculture and food products are notified under the WTO Notification System.

Targets: 2030

Lead economy:

[Incomplete]

12d) Commission a review of progress in the food system against the Bogor Goals, and the APEC Putrajaya Vision 2040, including in goods, services and investment.

Objective: To evaluate APEC's progress in facilitating trade and investment in food systems—including goods, services, and investment—since the inception of, and as specified by, the Bogor Goals in 1994. The report will include an analysis of trade and investment liberalization, business facilitation and growth, and development of food systems in the APEC region.

Individual Action:

1. By 2025, economies are encouraged to identify 1994 levels of tariffs and trade facilitation of agriculture and food products, and investment in food systems to establish a baseline for individual reviews against the Bogor Goal.
2. By 2028, economies are encouraged to commission a review of their levels of tariffs and trade facilitation of agriculture and food products, and investment in food systems and measure that status against their pre- 1994 baseline status.
3. By 2028 economies are encouraged to identify unmet objectives under the Bogor Goals as they pertain to agriculture and food systems;
4. By 2028, each economy is encouraged to submit a report of their individual progress in facilitating trade and investment in food systems as specified by the Bogor Goals, to the lead economy for this target. The report will include an analysis of trade and investment liberalization, business facilitation, and the growth and development of food systems in the APEC region.

Collective Action: Economies are encouraged to:

1. By 2026, commission a review of 1994 APEC levels of tariffs and trade facilitation of agriculture and food products, and investment in food systems to establish a baseline for a regional review against the Bogor Goals;
2. By 2029, commission a review of APEC's overall progress facilitating trade and investment in food systems—including goods, services, and investment—since the inception of and as specified by the Bogor Goals. The report will include an analysis of trade and investment liberalization, business facilitation, and the growth and development of food systems in the APEC region. The review will highlight any unfinished business of the Bogor Goals in the context of food systems;
3. By 2029, identify the status of unmet objectives under the Bogor Goals.

Evaluation of Progress:

1. Volunteering economies have determined their 1994 levels of tariffs and trade facilitation of agriculture and food products, and investment in food systems to establish a baseline for individual reviews against the Bogor Goals.
2. Volunteering economies have assessed their own progress in meeting the Bogor Goals as they relate to food systems and have submitted the assessment to the lead economy of this target.
3. Volunteering economies review submissions have been collected and in an overall assessment of APEC's progress facilitating trade and investment in food systems—including goods, services, and investment—since the inception of and as specified by the Bogor Goals.
4. A review of APEC's overall progress facilitating trade and investment in food systems as specified by this target has been commissioned.

Targets: 2030

Lead economy: The United States

12e) Identify strategies for boosting productivity in MSMEs and small-scale producers in the agri-food and fisheries sectors and share experiences and lessons learned.

Objective: To ensure increasing sustainable productivity growth of MSMEs and small-scale producers in the agri-food and fisheries sectors.

Individual Action: Economies are encouraged to develop a supportive environment that helps MSMEs to enhance sustainable productivity in the agri-food and fisheries sectors and to become more agile by facilitating investment and improving regulatory matters like business registration, and issuance of certifications.

Collective Action: Economies are encouraged to:

1. Share strategies and best practices which may support MSMEs and small-scale producers to enhance sustainable productivity in the agri-food and fisheries sector.
2. Promote an enabling environment that drives MSMEs to attain their long-term productivity potential.

Evaluation of Progress: The productivity of MSMEs and small-scale producers in the agri-food and fisheries sectors are increasing.

Targets: 2030

Lead economy: Viet Nam

12f) Work closely with private sector actors in the food system to identify policy barriers which impede progress on hunger and malnutrition, with particular focus on:

- Ending all forms of malnutrition, and especially reducing stunting and wasting among children under five years;
- Increasing productivity and improving the livelihoods of small-scale food producers, especially where APEC has a comparative advantage in systems that maintain ecosystems and improve land and soil quality;
- Increasing access to markets both domestic and international; and
- Reducing food loss and waste.

Objective: To support policy design in the food systems that remove barriers to progress on ending hunger and malnutrition.

Individual Action: Economies are encouraged to:

1. Adopt policies aimed at ending all forms of malnutrition, increasing productivity, increasing access to markets both domestic and international; and reducing food loss and waste.
2. Strengthen the regulation of private sectors for the benefit of consumers.

Collective Action: Economies are encouraged to strengthen multi-stakeholders' cooperation especially the private sector to help identify the policies which impede progress on hunger and malnutrition.

Evaluation of Progress: Increasing number of policies adopted by economies have supported the progress of ending hunger and malnutrition.

Targets: 2030

Lead economy: Viet Nam

Inclusivity: *To promote diversity by encouraging balanced participation in all PPFS meetings, workshops, concept note and associated APEC documentation and panel discussion and forums.*

14a) Implementation of the La Serena Roadmap for Women and Inclusive Growth (2019-2030) in PPFS work.

Objective: To engage in PPFS work that ensures the greater integration and empowerment of women and inclusive growth in the APEC region.

Individual Action: Economies are encouraged to adopt policies that ensure the inclusion of women participation in food and agricultural sectors.

Collective Action: Economies are encouraged to:

1. Advance gender equality and economic empowerment of women in accessing capital and markets.
2. Commission reviews on the gender diversity of APEC leadership history throughout the lifespan of all relevant APEC fora, and when necessary, ensure that chosen APEC leadership, including fora chairs and lead shepherds, add to the gender diversity and capitalize on opportunities to empower women.

Evaluation of Progress: Number of activities where 50% or more of the participants are women and/or policies that enhance decision-making with input from relevant women stakeholders.

Targets: 2030

Lead economy:

[Incomplete]

14b) Economies to share knowledge and experiences and make recommendations to PPFS on how APEC can unlock the economic potential of diverse groups of people, including Indigenous peoples, within the APEC food system.

Objective: To share information and experience amongst self-identified interested economies, including direct participation of those diverse groups, with a focus on practical recommendations to PPFS that help remove/reduce current barriers, increase access to appropriate, current, and relevant information and connect diverse groups into the domestic, regional or global trade environment.

Individual Action: Economies are encouraged, where appropriate, to:

1. Self-identify their interest in participating and inform New Zealand PPFS Lead and their own PPFS Lead.
2. Identify their own priorities for diverse groups to be considered. For example, these might include topics such as soil care and quality, climate change, water care and quality, land access and utilization and traditional knowledge in food systems.
3. Identify case studies that can be shared by them or by the diverse groups themselves.
4. Share information/research/studies relevant to increasing diverse groups participation in the economy and their prioritised areas to contribute to developing recommendations to put forward to PPFS.

Collective Action: Economies are encouraged to:

1. Develop a plan of priority areas from within the 'diverse groups' on which to focus.
2. Decide on how best to share the information and regularity of virtual meetings.
3. Identify key common challenges and unique challenges that will be further considered.
4. Develop and decide on recommendations to PPFS.
5. Present on final presentation of recommendations to PPFS.

Evaluation of Progress: Consistent and active participation by economies. Challenges are well articulated and presented including through case studies to increase APEC PPFS understanding of the challenges that diverse groups face that inhibit them from achieving their full potential. Successful responses are shared to ensure APEC PPFS understanding of the impact. Recommendations are collectively accepted by PPFS and actioned by economies to enable diverse groups to successfully utilise more of their potential.

Targets: 2030

Lead economy: New Zealand

14c) Provide dialogue opportunities to improve economy knowledge of obstacles inhibiting youth participation in the food system and ability to facilitate the collective learnings of youth, experts and policy makers across the APEC region.

Objective: To improve policy makers' understanding of obstacles inhibiting youth participation in the food systems and good practices for mitigating those obstacles, as well as improve their ability to learn from youth through increased dialogues.

Individual Action: Each individual economy is encouraged to:

1. Provide consistent and creative opportunities to engage youth in myriad policy discussions, prioritizing those that allow them to speak directly to policy makers, participate in policy making decisions, and share their knowledge.
2. Elevate youth voices and perspectives to ensure their knowledge, opinions, and perspectives are taken in with the same weight as their older counterparts.
3. Collect data on obstacles inhibiting youth involvement in food systems, being sure to evaluate perspectives, stigmas, resources, regulations, and support systems such as mentors and trainings.
4. Whenever appropriate, reasonable, and feasible, submit all collected data to the PPFS lead for this target; taking care to remove individual identities or identifying details from data as necessary.

Collective Action: Economies are encouraged to:

1. Commission an APEC review of obstacles inhibiting youth participation in food systems.
2. Commission research into how to better include youth throughout the full spectrum of food systems, including in policy decision, development of academic curricula, agricultural entrepreneurial opportunities, agricultural careers, etc. Such research should include a strengths-based approach, such as a look into positive deviance to identify innovative solutions to challenges that have been employed by youth to overcome common obstacles.
3. Host dialogues facilitating discussions between youth, policy makers, private sector, academia, and regulators, and that offer youth the opportunity to showcase their success stories, influence policy and academic curricula, increase access to resources, challenge inaccurate perspectives, and etc.
4. Host webinars intended to increase APEC knowledge of obstacles inhibiting youth participation in, good practices to facilitate youth involvement in, and essential youth contributions to food systems.
5. Whenever applicable/appropriate, involve youth in APEC activities, including webinars, dialogues, drafting groups, working groups, plenary meetings, and so forth as speakers, experts, and participants.
6. Encourage all APEC fora relevant to food systems to dedicate themselves to involving youth in their activities.

Evaluation of Progress:

1. Surveys demonstrating strong understanding within the APEC community of:
 - 1.1 Obstacles inhibiting youth participation in food systems;
 - 1.2 Best practices for facilitating youth participation in food systems;

- 1.3 And appreciation of youth perspectives, opinions, knowledge, and capabilities.
2. Increased youth participation in APEC workstreams, as reported to the relevant secretariat.

Targets: 2030

Lead economy: The United States

14d) Promote greater agri-food financial inclusion by sharing information and successes on lending schemes for business establishment and development, including investment and e-payments; and perform an assessment of existing barriers for financial inclusion by the end of 2022.

Objective: To ensure all diverse groups in agri-food sector can have the ability to access capital for investments in both local and international markets.

Individual Action: Economies are encouraged to promote the access of capital and market in the group of MSMEs, women, youth, and smallholder farmers.

Collective Action: Economies are encouraged to:

1. Promote key successes and best practices on lending schemes for business establishment and development, including investment and e-payments, which support capacity building of agricultural producers.
2. Carry out a study that assesses existing barriers for financial inclusion by the end of 2022.

Evaluation of Progress:

1. Improved capacity building via lending schemes for business establishment and development, including investment and e-payment.
2. The assessment of existing barriers for financial inclusion has been successfully conducted.

Targets: 2025

Lead economy:

[Incomplete]

Sustainability: *To improve the APEC food system's environment including sharing research and practical strategies to reduce greenhouse gas emissions, adapt to climate change, increase sustainable production, processing and consumption and to reduce food loss and waste.*

17a) Facilitate information sharing and utilise developments/best practices on an ongoing voluntary basis, to address biodiversity and natural resources depletion, soil use, and water source/supply issues

Objective: To scale up adoption of sustainable agricultural practices by enhancing APEC members' knowledge of developments in and best practices for conserving biodiversity and natural resources, and improving soil health and water management practices.

Individual Action: Economies are encouraged to:

1. Collect best practices/lessons learned relating to addressing biodiversity and natural resource management, soil use, and water source/supply issues from stakeholders (including but not limited to academia, farmers, private sector, NGOs, youth) in agricultural food systems and relevant government agencies.
2. Regularly assess government policies and practices to ensure they support and encourage use of best approaches and techniques for addressing biodiversity and natural resources depletion, soil use, and water source/supply issues.
3. Convene listening sessions, dialogues, and other meetings with diverse food systems stakeholders (including but not limited to academia, farmers, private sector, NGOs, youth, etc.) with direct knowledge of, practical experience with, and ongoing commitment to sharing and utilizing best practices to addressing biodiversity and natural resources depletion, soil use, and water source/supply issues on both the government- wide and on-farm levels. This creates opportunities for economies to talk to and learn from stakeholders including farmers, agrobusiness representatives, and NGOs leading efforts to restore biodiversity.
4. Ensure efforts are being made to monitor and evaluate practices that meet the objective of this target and will allow economies to determine short- and long-term effects of these practices.

Collective Action: Economies are encouraged to:

1. Host regular APEC events that bring together relevant stakeholders, including academia, think tanks, international fora, policy makers, regulators, youth, farmers, other APEC fora, and industry to share information on developments in and best practices for addressing biodiversity and natural resources depletion, soil use, and water source/supply issues.
2. Ensure that major developments and best practices identified in the process of meeting this objective are highlighted at the yearly Ministerial Meeting on Food Security as well as in relevant APEC high level meetings.

Evaluation of Progress: Increased knowledge within APEC of developments in and best practices for addressing biodiversity and natural resources depletion, soil use, and water source/supply issues; regular dialogues and webinars are held to meet the objective of this target and bring together relevant stakeholders including, but not limited to: academia, think tanks, international fora, policy makers, regulators, youth, other APEC fora, and industry.

Targets: 2030

Lead economy: The United States

17b) Support each other to improve inventories of greenhouse gas emissions from the food system.

Objective: To improve the capability of APEC member economies to monitor improvements to farm production systems overtime and more accurately reflect regional agricultural

practices and management through the improved measurement and reporting for agricultural greenhouse gas emissions inventory.

Individual Action: Economies are encouraged to bring together scientists and policy makers to develop greenhouse gas inventories able to capture agricultural efficiency gains overtime. Improved inventories provide an evidence base to inform decision makers of practices that benefit both agricultural GHG emission management and resilient agriculture.

Collective Action: APEC Members economies are encouraged to report agricultural GHG inventories at a higher tier, where appropriate, for key categories able to:

1. Identify and fill agricultural production data gaps.
2. Monitor agricultural production, efficiency gains, and reductions in greenhouse gas emissions intensity over time.
3. Develop regionally appropriate emissions factors.
4. Build a community of expertise for agricultural greenhouse gas emissions.

Evaluation of Progress:

1. Number of agricultural greenhouse gas inventories reporting at a higher level has increased among APEC members economies.
2. Emission factors developed to better reflect regional farm practices and management.
3. Inventory practitioners and agricultural scientists identified in each APEC economy for a community of experts to be able to share experiences.

Targets: 2025

Lead economy: New Zealand

17c) Share best practice on encouraging responsible investment into environmentally friendly, nature positive and sustainable food production, processing and distribution.

Objective: To increase responsible investment (As defined by the Principles for Responsible Agricultural Investment under the guidance of the FAO², among other frameworks) into environmentally friendly, nature positive and sustainable food production, processing, distribution and commercialization. Investments that support the long-term health of sustainable agriculture and contribute to preserving biological diversity should be prioritized.

Individual Action: Economies are encouraged to:

1. Develop and adopt transparent policies in consultation with all relevant stakeholders, including academia, think tanks, private sector, NGOs, etc., with an emphasis on youth and women that foster responsible investments in the agricultural sector that are cognizant of the long-term financial needs of the investments, and that support technologies and practices that are innovative, environmentally friendly, nature positive, and are supportive of sustainable food production, processing, distribution, and commercialization. When possible, economies will support responsible investment into MSMEs run by women and disadvantaged communities.
2. Develop baseline information on responsible investments in environmentally friendly, nature positive, and sustainable food production, processing, distribution, and commercialization.
3. Track increases or decreases of responsible investments in environmentally friendly, nature positive, and sustainable food production, processing, distribution, and commercialization.
4. Submit baseline and monitoring information on responsible investments in environmentally friendly, nature positive, and sustainable food production, processing, distribution and commercialization to the leader of this target.

² <https://www.fao.org/3/au866e/au866e.pdf>

Collective Action: Economies are encouraged to:

1. Promote capacity building of responsible investment into environmentally friendly, nature positive and sustainable food production, processing, distribution, and commercialization.
2. Host webinars, workshops, and dialogues intended to increase knowledge on how to develop policies that facilitate responsible investment into environmentally friendly, nature positive and sustainable food production, processing, distribution, and commercialization.

Evaluation of Progress: Increased awareness within the APEC community of responsible agricultural investments--as specified by this target--and how to facilitate that investment. Increased responsible investment in food systems resulting in an increase of environmentally friendly, nature positive and sustainable food production, processing, distribution and commercialization, as well as increasing investment into MSMEs run by women and other disadvantaged communities.

Targets: 2030

Lead economy: Peru

17d) Acknowledging that economies use a range of different policy approaches in the food sector, we agree to identify and promote approaches that would support good environmental outcomes while also avoiding and/or minimizing market distortion, including by drawing on work from relevant international organizations.

Objective: To Identify and promote agricultural policy approaches that improve climate change resilience, reduce greenhouse gas emissions, support sustainable growth, increase resource efficiency, promote climate smart agriculture, including through innovative approaches, and are consistent with international obligations.

Individual Action:

1. By 2024, each economy is encouraged to conduct a systematic baseline assessment of their current range of policies formulated to support the sustainable increase of agricultural productivity, climate change adaptation and mitigation, including any that relate to innovation. This baseline assessment will include an overview of policies promoting the measuring and reporting of environmental impacts.
2. By 2025, each economy is encouraged to identify internal policy gaps and opportunities for further policy development, and the appropriate policy measures to bridge them.

Collective Action:

1. Through workshops and educational activities, economies will learn from international organizations and through economy-to-economy dialogue about policy approaches for sustainable agricultural productivity growth, climate change adaptation and mitigation, good practices for measurement and reporting, and the importance of policy continuity.
2. Through workshops and educational activities, economies will share their experiences in developing policies on sustainable agricultural productivity growth and climate change adaptation and mitigation, ensuring that policies take into consideration producer grower economics.
3. By 2030, the lead economy will combine each economy's voluntary baseline and policy gap reports into one published report that assesses and measures changes in APEC policy approaches and their impact on individual economies' efforts to advance towards more sustainable food systems.

Evaluation of Progress:

1. Economies have conducted the recommended baseline assessment of policies formulated to support the sustainable increase of agricultural productivity, climate change adaptation and mitigation, including any that relate to innovation. This baseline assessment

will include an overview of policies promoting the measuring and reporting of environmental impacts.

2. Economies have identified internal policy gaps and opportunities for further policy development, and the appropriate policy measures to bridge them.
3. Economies have held workshops and educational activities, designed to increase learning from international organizations and through economy-to-economy dialogue about policy approaches for sustainable agricultural productivity growth, climate change adaptation and mitigation, and the importance of policy coherency.
4. Through workshops and educational activities, economies will share their experiences in developing policies on sustainable agricultural productivity growth and climate change adaptation and mitigation.
5. Individual economy baseline and policy gap reports have been combined into a published report that assesses and measures changes in APEC policy approaches and their impact on individual economies' efforts to advance towards more sustainable food systems.

Targets: 2030

Lead economy: The United States

17e) Provide capacity building and best practice sharing workshops to support member economies' individual and collective efforts to align with the UN Sustainable Development Goals 12.3 "by 2030, halve per capita global food waste at the retail and consumer levels and reduce food losses along production and supply chains, including post-harvest losses," with specific indicators based on each economy's respective situation such as measured by the UN/FAO Food Waste Index (FWI) or other appropriate index. And promote public-private investment in infrastructure and cold chain to reduce the current levels of food loss and waste and review progress in this area by 2025.

Objective: To provide capacity building and best practice-sharing workshops to align with the UN Sustainable Development Goals 12.3 with specific indicators based on each economy's respective situation. Promote public-private investment in infrastructure and cold chain to reduce the current levels of food loss and waste (FLW) and review progress by 2025.

Individual Action: The following are suggested:

1. *Measurement and regular data collection:* Member economies may adopt the FAO's Food Loss Index, UNEP's Food Waste Index or other appropriate index. However, it may be more suitable to devise or utilize the existing specific indicators and set their own targets based on each economy's respective situation, even if it's on at least one type of food item or on one stage of the food supply chain.
2. *Coordination and communication channels:* Member economies may take collective actions for greater coordination and communication regarding FLW among government agencies (e.g., Agriculture, Environment, Food and Drugs, Social Welfare); with non-profit organizations (e.g., food banks); with private sectors (e.g., agribusinesses, food manufacturers, food-related industries like hotels, restaurants, supermarkets, logistics, exporters, etc.), especially MSMEs; with consumers (including websites dedicated to FLW, and education curriculum); with research institutes; and with other economies in their region.
3. *Legislation:* Member economies may develop legislative FLW schemes, such as food donation non-liability, food labeling, other fiscal incentives, and enhancing international agricultural trade, etc.
4. *Non-legislative projects:* Member economies may promote non-legislative projects such as FLW champions, FLW innovation awards, FLW funding, and FLW roadmaps, etc.
5. *Mid-term economic and social development plans:* Member economies may include FLW reduction objectives in their mid-term strategic plans (every five or six years).
6. *Other infrastructures:* Member economies may improve infrastructure related to FLW issues such as roads, electricity, cold chain, telecommunication and internet services, and

credit access to boost the capacity of actors in the field of food systems across the supply chain to manage FLW.

Collective Action: Economies are encouraged to:

1. Develop, support, and implement complementary projects (APEC-funded or self-funded projects) on reducing FLW within all 21 APEC economies.
2. Hold, where possible, annual APEC-funded or self-funded FLW Workshops in June or in August each year during the APEC Food Security Week to build capacity, share best practices, and deliver each economy's progress report. Main themes for the workshops may include innovation and digitalization and implementation of the standardization process, products, personnel, management on agriculture instruments towards FLW Reduction and along the food value chain, FLW Reduction and Climate Change mitigation strategies, Target-Measure-Act, MSME and Informal Sector, Food Packaging and Food Safety, Food Donation Law and Policy, Coordination within the government agencies, COVID-19, Green Finance, Smart Technology, ICT, Digital and E-Commerce, Supply Chain Dynamics, Storage and Cold Chain, etc.
3. Support and harmonize reducing FLW activities, liaise with other relevant APEC sub-fora and international organizations, and carry out other activities to share best practices on FLW reduction.
4. Support mapping or recognition of non-profit organizations and academic institutions that produce evidence and research regarding FLW.
5. Continuously update APEC-FLOWS platform (URL: <http://apec-flows.ntu.edu.tw/>) for APEC members to share innovative technologies, business opportunities, and best practices on reducing FLW.

Evaluation of Progress: Member economies that have adopted an FLW index, such as the FAO's Food Loss Index, UNEP's Food Waste Index or a domestically developed index.

Targets: 2030

Lead economy: Chinese Taipei

Public Private Partnerships: *To shape and enhance the functioning of the APEC Food systems.*

18a) Promote regular dialogue between public and private sectors within each economy to advise PPFS on how to enhance the business environment for the food sector.

Objective: To promote regular dialogue between public and private sectors within each economy to shape and enhance the functioning of the APEC food system.

Individual Action: Economies are encouraged to:

1. Nominate private sector representatives to become members of PPFS.
2. Encourage options for regular dialogue for Public Private Partnership (PPP) in each economy.

Collective Actions: Economies are encouraged to:

1. Conduct a survey of regular dialogue for PPPs in each economy.
2. Organize a list of best practices for PPPs and share them on APIP website.
3. Update information on PPPs on the APIP platform.

Evaluation of Progress: Promote regular dialogue between public and private sectors within each economy and share good practices.

Targets: 2030

Lead economy: Japan

18b) Review the functioning and terms of reference of the PPFS to ensure a meaningful partnership with ABAC and the broader private sector, which better reflects the priorities and interests of the private sector and seeks to optimize their involvement

Objective: To enable improved cooperation with ABAC and the broader private sector.

Individual Action: Economies are encouraged to:

1. Identify private sector representatives, including ABAC Members, to encourage them to regularly participate in relevant APEC events.
2. Identify a government point of contact to help APEC workstreams find and engage private sector representatives with expertise or practical experience to inform the workstream.

Collective Action: Economies are encouraged to:

1. Review the PPFS TOR for revitalization and improvement opportunities with ABAC and the broader private sector.
2. Reach consensus on changes that will improve the working relationship between APEC economies, ABAC and the broader private sector.
3. Look for opportunities to develop long-term working relationships with industry members;
4. Work to include industry in all APEC workstreams.
5. Create an industry Point of Contact (POC) list, in collaboration with ABAC, identifying members for each economy that can aid in finding industry representatives to participate in various APEC workstreams.

Evaluation of Progress:

1. By 2025, a review of the PPFS TOR as specified by this target has been completed; and
2. By 2025, a list of industry POCs for finding agricultural industry representatives has been created.

Targets: 2030

Lead economy: The United States

SMART Goals and Food Security Roadmap Towards 2030 Implementation: *To implement Food Security Roadmap Towards 2030 efficiently with the specific objective, indicator, target year of success.*

19a) Hold workshops by early 2022 to facilitate the transition from Roadmap 2030 to the implementation plan, including developing specific “next steps” on each of the identified actions

Objective: To organize the PPFS Webinar on Sharing best practices and proposed actions for the Implementation Plan of Food Security Roadmap Towards 2030

Individual Action: Economies are encouraged to participate actively at the Webinar and where appropriate, give the presentation on objectives, measurements, indicators, and targets.

Collective Action: Economies are encouraged to provide related information and inputs in the Webinar that can contribute to the development of the implementation plan.

Evaluation of Progress: The Implementation Plan of the Food Security Roadmap Toward 2030 is adopted at APEC Ministerial Meeting on Food Security

Targets: By the end of 2022

Lead economy: Thailand and the United States

19b) For each action area, develop, in 2022, an implementation plan which identifies specific voluntary actions or initiatives member economies may enact to deliver on Roadmap 2030, reflecting also prioritization that will achieve the most meaningful outcomes for producers and businesses in the food sector.

Objective: To develop an implementation plan that identifies specific voluntary actions or initiatives of member economies and prioritize actions that provide meaningful outcomes for producers and businesses in the food sector.

Individual Action: Economies are encouraged to endeavor to fully implement the Roadmap 2030 by utilizing their various resources.

Collective Action: Economies are encouraged to:

1. Initiate actions or initiatives according to the implementation plan from 2022-2030.
2. Encourage relevant APEC fora to submit proposal for the APEC projects.
3. Implement the Food Security Roadmap Towards 2030.

Evaluation of Progress: The Implementation Plan of the Food Security Roadmap Towards 2030 will be used as the guideline for APEC member economies during the period of 2022-2030.

Targets: 2030

Lead economy: Thailand

19c) Perform review of actions in 2025 (and progress) and a review of the Roadmap in 2030.

Objective: To review the actions in the implementation plan and review the Roadmap in 2030.

Individual Action: Economies are encouraged to promote policies and plans in agricultural and food sector in accordance with the Implementation Plan of the Food Security Roadmap Towards 2030.

Collective Action: Economies will conduct a session in 2025 to progress the implementation plan and conduct a mid-term review of the Food Security Roadmap Towards 2030.

Evaluation of Progress:

1. The assessment of complete action and the review of proposed actions in the implementation plan has been conducted by 2025.
2. The Food Security Roadmap Towards 2030 has been reviewed by 2030.

Targets: 2030

Lead economy:

[Incomplete]