



# **ACTION PLAN FOR SUSTAINABLE AGRICULTURE IN ASEAN**

ASEAN Headquarters

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The Action Plan for Sustainable Agriculture in ASEAN is developed by the ASEAN Member States in consultation with the Food, Agriculture, and Forestry Division (FAFD) of the ASEAN Secretariat.

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## **I. EXECUTIVE SUMMARY**

The ASEAN Member States (AMS), recognizing the crucial role of agriculture in regional development and its contribution to achieving sustainable economic growth, poverty eradication, food security, mitigating climate change impacts, and environmental sustainability, have put forward the Action Plan on Sustainable Agriculture in ASEAN. The plan was developed through a holistic and integrated approach that balances social, economic, and environmental needs to transform ASEAN agriculture toward carrying out its vital role in the region's development for generations to come.

The Action Plan on Sustainable Agriculture in ASEAN will serve as a roadmap for enhancing cooperation, coordination, and knowledge sharing on sustainable agricultural transformation in the ASEAN region. It advocates the development of high-impact pilot projects for the key priority areas for sustainable agriculture in the region and places high consideration on funding investments and technical resources, monitoring of progress and adaptive planning, and the continuous engagement of stakeholders from both private and public sectors to foster collective action and support.

## **II. ACKNOWLEDGEMENT**

The development of the Action Plan on Sustainable Agriculture in ASEAN is the AMS response to the instructions from the 45<sup>th</sup> ASEAN Ministers of Agriculture and Forestry (AMAF) Meeting in October 2023. This has been a collaborative effort, drawing upon the expertise and dedication of the numerous individuals and organizations from the AMS, as well as the regional development partners from the private and public sectors.

Sincere gratitude is extended to all who contributed to this important undertaking, including the invaluable guidance from Lao PDR as ASEAN Chair and Malaysia as the AMAF Chair, the ASEAN Secretariat through the ASEAN Economic Community led by DSG Satvinder Singh, and the commitment of the AMS, whose diverse perspectives and contributions shaped the Plan's regional focus and ambition.

We are grateful to the Food, Agriculture, and Forestry Division (FAFD) of the ASEAN Secretariat for their unwavering support and efficient administrative coordination throughout the Plan's development process. We express our heartfelt appreciation to ASEAN's dialogue partners such as ERIA and GIZ and the numerous technical experts, practitioners, scientists, and representatives from diverse stakeholder groups who participated in consultations, workshops, and expert meetings.

With this, we are confident that the Action Plan on Sustainable Agriculture in ASEAN will serve as a valuable roadmap for building a more resilient, productive, and inclusive agricultural sector in AMS.

## **III. BACKGROUND**

The Action Plan on Sustainable Agriculture in ASEAN builds upon the ASEAN Guidelines on Sustainable Agriculture that were adopted by the ASEAN Ministers on Agriculture and Forestry (AMAF) in 2022. These guidelines provide a comprehensive framework that encompasses the social, economic, and environmental aspects of sustainable

agriculture. It emphasizes the necessity of adopting holistic and integrated approaches to ensure food security, while conserving resources, protecting biodiversity, and mitigating climate change impacts.

The Action Plan outlines specific strategic priorities, key activities, and an implementation framework, which aligns with the principles and strategies of the ASEAN guidelines. It aims to guide the ASEAN Member States (AMS) in initiating and accelerating their sustainable agriculture efforts while providing a coherent and coordinated approach to achieving the goals set forth by AMAF.

#### **IV. CHALLENGES AND OPPORTUNITIES FOR SUSTAINABLE AGRICULTURE**

The agricultural sector in the AMS faces a range of challenges in promoting sustainable agriculture based on the AMS' current level of actions and identified gaps, which include among others, knowledge, skills, technologies, and capacities, that need to be filled to make the transformation sufficient. The AMS' concerns generally point to their respective agricultural systems and the characteristics that these systems comprise make a coordinated response a necessary consideration.

The successful implementation of this Action Plan requires the active engagement and collaboration of AMS, relevant government agencies, stakeholders, and the agricultural community at large. By working collectively and implementing the plan in a coordinated manner, ASEAN can pave the way for a more sustainable, resilient, and inclusive agricultural sector that addresses food security, environmental concerns, and socio-economic wellbeing.

The rapidly growing population, changing climate patterns, and the need to ensure food security, among others are recognised challenges that must be addressed. But amidst these bottlenecks for progress are opportunities that lie in knowledge, policies, capacities, technologies, and investments when addressed could lead to high-impact pilot projects. This section examines the key challenges faced by the sector and highlights the potential opportunities for promoting sustainable agriculture in ASEAN.

##### *Challenges:*

In implementing sustainable agriculture in the ASEAN, the challenge involves the balancing of many competing needs and concerns that encompass social, environmental, and economic development. These include the following.

1. Climate change impacts such as rising temperatures, changing rainfall patterns, and extreme weather events have adverse effects on crop productivity, water availability, and overall ecosystem health, capture fisheries and marine aquaculture.
2. Agricultural expansion, improper land management practices, and deforestation to land degradation resulting from soil erosion, soil nutrient depletion, and loss of biodiversity and environmental sustainability.
3. Water scarcity due to climate change, population growth, and inefficient water management practices.
4. Excessive and improper use of pesticides and chemical fertilizers have negative impacts on human health, pollinator populations, and environmental quality.
5. Occurrence of food loss and waste from agricultural production and food systems.

### *Opportunities:*

Sustainable agriculture interventions can focus on increasing the efficiency of using natural resources or changes in patterns of practices such as the use of agricultural inputs that can benefit from technological advancements, agricultural innovations, and value chain improvements. They can include:

1. Embracing precision farming technologies, remote sensing, data analytics, and Internet of Things (IoT) devices can help optimize resource use, reduce input wastage, and monitor crop health.
2. Adhering to internationally recognized sustainable agriculture certification standards to access premium markets, enhance market competitiveness, and create economic incentives for farmers to adopt sustainable practices.
3. Promoting agroforestry practices that integrate trees and shrubs into agricultural landscapes can enhance biodiversity. Improving soil fertility, water infiltration and carbon sequestration contribute to sustainable agriculture and landscape restoration efforts.
4. Reducing methane in rice cultivation through alternate wetting and drying, controlled irrigation, aerobic rice, and biochar production and prioritizing the development of sustainable, circularized, cost-effective inputs such as feeds and fertilizers from valorised agriculture and food waste production in the region are examples.
5. Investing in agricultural research and extension services and increasing involvement of higher education institutions (HEIs), which is essential to support sustainable farming practices, can provide funding and technical assistance to strengthen research institutions, promote knowledge-sharing platforms, and facilitate the transfer of sustainable agriculture technologies and practices, such as cost-effective Biological Control Agent (BCA), to farmers and industries.
6. Improving food consumption patterns of consumers that are impacting the agri-food sector. Increasing concerns about healthy diets and environmental sustainability are driving growing interest in alternative food sources, greater transparency on agricultural production and food systems, and sustainable food markets.

## **V. OBJECTIVES OF THE ACTION PLAN ON SUSTAINABLE AGRICULTURE**

The key objectives of this Action Plan are centred on promoting the widespread adoption of sustainable agricultural practices that will elevate resource efficiency, mitigate and adapt to climate change, ensure food security, empower rural livelihoods, expand knowledge, foster partnerships, and monitor the progress of the transition to sustainable agriculture. ASEAN can pave the way to eradicate hunger, improve farmer's living conditions, increase income, provide nutritious food to all, and reduce food loss and waste.

Similarly, sustainable food production systems for livestock, fisheries and aquaculture have the potential to contribute to the preservation of biodiversity and natural ecosystems and decarbonisation efforts to contribute to climate mitigation while providing protein sources and livelihood activities. Through concerted efforts and dedication by the public and private

sectors, ASEAN will create a sustainable agricultural system that is environmentally responsible, economically viable, and socially inclusive.

## VI. KEY STRATEGIC PRIORITIES (SPs)

In promoting sustainable agriculture in ASEAN, AMS must recognize the five (5) key priority areas, namely, **decarbonisation, reduction of harmful agrochemicals, digitalisation, climate change adaptation and mitigation, and public and private partnerships**. These areas collectively address the multifaceted challenges faced by the agricultural sector and can pave the way toward a more sustainable and resilient agricultural system when concrete measures and programs are implemented accordingly.

Recognizing that these key priorities address cross-cutting issues essential for sustainable agriculture from production to consumption, it is agreed that the AMS' agriculture sector should concentrate on these areas to align with current ASEAN policies like the ASEAN Strategy on Carbon Neutrality. The 45<sup>th</sup> AMAF Meeting, adopted the Statement of ASEAN Ministers on Agriculture and Forestry to Reduce the Use of Harmful Agrochemicals to Ensure Food Safety, Public Health, Occupational Safety and Environmental Protection with the aim to safeguard the health and well-being of farmers, agricultural workers, and consumers by reducing exposure to harmful agrochemicals.

Meanwhile, to address the challenges related to food security and nutrition, the ASEAN Leaders' Declaration on Strengthening Food Security and Nutrition in Response to Crises recognised the need for collaboration and partnership at various levels and therefore encouraged international organisations, the private sector, civil society, and economic institutions to leverage expertise, resources, and innovations for the region.

Through existing guidance documents such as the ASEAN Guidelines on Promoting the Utilisation of Digital Technology for the ASEAN Food and Agricultural Sector and the ASEAN Guidelines on Promoting Responsible Investment in Food, Agriculture and Forestry (ASEAN-RAI), ASEAN can likewise achieve sustainable food system transformation.

These interventions range from building knowledge, adopting technologies, implementing policies, increasing capacities, and sustaining investments, which can be collectively considered in developing high-impact pilot projects that will contribute to the achievement of the objectives of the key priority areas.

<b>Priority Area 1. Decarbonisation</b>		
<b>Strategic Objective:</b> Contribute to the reduction in greenhouse gas emissions from the agricultural sector through the enhancement of ecosystem resilience, boosting agricultural economies, strengthening regional collaborative partnerships, renewable energy adoption, and efficient food production and supply chain optimization.		
<b>Outcomes</b>	<b>Initiatives</b>	<b>Timeframe</b>
1. Enhanced ecosystem resilience	<p>Promote low-carbon farming practices such as organic farming, agroforestry and integrated pest management</p> <p>Encourage the adoption of regenerative agricultural practices that improve soil health and biodiversity</p>	Short-term

2. Boosted agricultural economies through carbon markets	<p>Establish carbon-offsetting programmes and payment for ecosystem services</p> <p>Establish carbon markets and certification schemes to create market opportunities</p>	Medium-term
3. Strengthened regional collaborative partnerships that will support sustainable programs	<p>Foster knowledge exchange platforms that promote innovations and technologies</p> <p>Encourage resource sharing, research with research and development organizations on new decarbonization strategies</p>	Long-term
4. Renewable energy adoption	Promote the transition to renewable energy sources such as solar, wind, and biogas for powering agricultural operations.	Short term
5. Efficient food production and supply chain optimization	<p>Reduce food loss and waste along the agricultural supply chain, through optimization strategies and circular approaches.</p> <p>Valorise agriculture and food wastes into sustainable production inputs for biochar from residual rice straw/ rice husks</p> <p>Improve storage facilities, make efficient logistics, develop effective cold chain, and implement value-added processes</p>	Medium-term
6. Reduced GHG emissions by improving techniques for efficient use and management	<p>Reduce GHG emissions by promoting sustainable land management practices, precision farming techniques, efficient use of fertilizers and feeds, renewable energy adoption, and climate-smart livestock, and fisheries management</p> <p>Encourage sustainable land management practices such as conservation agriculture, ecological agriculture, agroforestry, and soil conservation techniques</p> <p>Promote the sustainable management of water resources, forests, and biodiversity in agricultural landscapes such as (i) sustainable forest management, restoring forest landscapes, conserving cross-border biodiversity and promoting the multi-use value of ASEAN regional forest ecosystems, and forest fire warning and prevention capacity in AMSs</p> <p>Apply innovative technology and practice in terms of reduction of GHG emission</p>	Medium-term

	such as alternate wetting and drying (AWD) for rice cultivation	
<b>Priority Area 2. Reduction of Harmful Agrochemicals</b>		
<b>Strategic Objective:</b> Safeguarding food safety and fostering agricultural ecosystems that promote natural and bio-based control agents and reduce reliance on harmful chemicals		
<b>Outcomes</b>	<b>Initiatives</b>	<b>Timeframe</b>
1. Reduced human and environmental health risk by lowering exposure to harmful agrochemicals	<p>Consolidate the list of highly hazardous pesticides using the criteria developed based on the significant risk to people and the environment</p> <p>Develop and implement policies and regulations that restrict the registration, trade and use of harmful agrochemicals and incentivize alternative practices</p> <p>Encourage the registration and use of new generation of agrochemicals with low toxicity and minimal environmental impact as alternative pest management tools through policy incentives and farmer outreach programme</p> <p>Provide adequate support and resources to help farmers adopt new practices to transition away from harmful agrochemicals</p>	Short term
2. Reduced reliance on harmful synthetic pesticides while fostering innovation in bio-based solutions and creating new green jobs	<p>Diversify pest control approaches and foster healthier ecosystems for agricultural production activities</p> <p>Provide supportive investment in research and development of effective and affordable bio-based solutions</p> <p>Encourage the development of the biocontrol agents (BCA) industry in ASEAN by enabling the seamless importation of BCA materials</p>	Medium-term
	<p>Widespread adoption of new systems achieved through education, training, financial and market incentives for farmers that use safe chemicals and alternative methods and increase their participation to transition away from harmful agrochemicals</p> <p>Propose the development and promotion of application of international and regional standards, guidelines and best practices on the registration, trade and use of plant protection chemicals, to ensure safety for</p>	Short term

	<p>producers, consumers and the environment.</p> <p>Strengthen monitoring, evaluation and risk management of agrichemical use, including strict monitoring and control of chemicals imported and used in ASEAN</p>	
<p><b>Priority Area 3. Digitalisation in Agriculture</b></p>		
<p><b>Strategic Objective:</b> Leveraging digital technologies like precision agricultural, AI, remote sensing, IoT, and data analytics in achieving enhanced productivity and efficiency and resilient agricultural value chains</p>		
<p><b>Outcomes</b></p>	<p><b>Initiatives</b></p>	<p><b>Timeframe</b></p>
<p>1. Improved connectivity through enhanced digital tools and infrastructures</p>	<p>Enable access to reliable and high-speed internet that will provide farmers and communities with real-time and up-to-date agricultural information</p> <p>Develop digital tools, platforms, marketplaces, and applications tailored to the specific needs of farmers to access market and inputs</p> <p>Create an enabling regulatory environment for digitization in agriculture that likewise consider data security and network security issues</p>	<p>Short-term</p>
<p>2. Improved agricultural production through empowered farmers, improved markets and value chain systems</p>	<p>Conduct capacity-building programs and training sessions to educate farmers on the use of digital tools and technologies and improve their digital literacy</p> <p>Introduce precision farming technologies such as remote sensing, drones, and GPS systems to optimize resource use, improve crop yields, and reduce environmental impacts</p> <p>Encourage farmers and support them in using up-to-date technologies such as Controlled Environment Agriculture (CEA) and Recirculating Aquaculture Systems (RAS)</p> <p>Streamline the marketing and distribution process, reducing intermediaries through blockchain technology and ensuring fair market access for farmers through digital tools and platforms</p> <p>Foster collaborations between public institutions, private companies, and technology providers to support</p>	<p>Medium-term</p>



	digitalization efforts in the agricultural sector	
<b>Priority Area 4. Climate Change Adaptation</b>		
<b>Strategic Objective:</b> Enhancing the resilience of agricultural systems, ensuring food security, and protecting the livelihoods of farmers through targeted adaptation measures.		
<b>Outcomes</b>	<b>Initiatives</b>	<b>Timeframe</b>
1. Improved ability of agricultural systems to withstand and recover from climate-related shocks	<p>Encourage adaptation measures, such as improved water management systems, crop diversification, and the use of climate-resilient crop varieties and livestock breeds that can withstand harsh climates, as well as smart and circular models that will support farmers transition to adaptive farming models</p> <p>Develop and implement training programs for farmers to raise awareness about climate change impacts and equip them with knowledge and skills for climate-resilient farming practices and diversification strategies</p> <p>Disseminate timely climate information to farmers, including early warning systems for extreme weather events, to enhance preparedness and adapt farming practices accordingly</p>	Short-term
<b>Priority Area 5. Public and Private Partnerships</b>		
<b>Strategic Objective:</b> Leveraging public and private sector expertise, resources, and networks through effective, transparent and fair partnerships mechanisms that can enable coordinated and integrated efforts to enhance agricultural productivity, resilience, and sustainability of ASEAN agriculture that will ensure farmers' benefit from clear cooperation projects		
<b>Outcomes</b>	<b>Initiatives</b>	<b>Timeframe</b>
1. Synergized collective learning, action, and adaptation towards sustainable agriculture in ASEAN	<p>Facilitate knowledge sharing, learning, and innovation in sustainable agriculture through collaborative platforms, such as research and development networks, farmer field schools, demonstration farms, and extension services</p> <p>Contribute to the mobilization of resources needed to support sustainable agriculture by bringing together different stakeholders that can attract funding, investments, and technological support to advance sustainable agriculture initiatives</p> <p>Develop effective regulatory frameworks that ensure transparency, accountability, and equitable mechanisms for all stakeholders</p>	Medium-term to Long-term

## VII. TARGET STAKEHOLDERS

Since the Action Plan is influenced by various stakeholders, their perspectives tend to inform the priority programs and practices. In this regard, the influential stakeholders' viewpoints on the implementation of high-impact projects as a means for either incremental or transformative changes that will lead to achieving sustainable agriculture in the ASEAN must be considered.

**This Action Plan expressed interest in establishing mechanisms of public and private governance in promoting sustainable agricultural practices.** To obtain a high degree of acceptance, which is particularly important in private governance, such mechanisms need to build on a consensus around sustainable management measures, perspectives, and concerns of different stakeholder groups. Moreover, governance of sustainable agriculture programs is most effective when the measures are agreed upon by a varied set of stakeholder groups.

**By identifying and understanding stakeholders and their interests, sustainable agriculture initiatives can better address the diverse needs and concerns of those involved, fostering greater support and success in the long term.** In the Action Plan, among the stakeholders, farmers are of vital importance, as they are responsible for implementing measures and will be directly affected by any proposed interventions. The other relevant stakeholder groups include policymakers and public institutions, the agriculture and food industries, development partners and research institutions, and environmental and social nongovernmental organizations (NGOs). As for government institutions, AMS has identified them mainly according to their respective mandates for sustainable agriculture.

Stakeholders	Expected Roles
Governments	Setting policies, regulations, and frameworks that support sustainable agriculture  Provide an enabling environment through supportive policies, incentives, and capacity-building initiatives  Ensure effective coordination among relevant ministries, facilitate knowledge sharing, and promote regional cooperation to address common challenges and opportunities
Farmers and Farmer Organizations	Implement sustainable practices such as organic farming, agroforestry, and conservation agriculture  involve in decision-making processes, inclusion in value chains, and access to training and technical support
Civil Society Organization	Advocate for sustainable agriculture, promote community engagement, and amplify the voices of marginalized farmers and rural communities  Raise awareness of sustainable practices, facilitate knowledge exchange platforms, advocate for policy reforms, and monitor the implementation of the Action Plan to ensure accountability and transparency

Academia and Research Institutions	<p>Generate knowledge, conduct research, and provide evidence-based guidance on sustainable agricultural practices</p> <p>Contribute to capacity building by offering training programs, supporting technology transfers, and facilitating demonstration farms</p> <p>Promote applied research and innovation in accordance with farmer's needs</p>
Private Sector and Agribusiness	<p>Drive the adoption of sustainable practices, promote sustainable supply chains, and support smallholders in accessing markets</p> <p>Facilitate resource sharing, technology transfer, and create economic opportunities for all actors</p> <p>Invest in research and development, developing sustainable business models</p>
International and Regional Organizations	<p>Provide technical expertise, resources, and financial support to implement the Action Plan</p> <p>Facilitate policy dialogues, foster regional cooperation, and share best practices across ASEAN</p> <p>Enhance capacity-building initiatives, promote knowledge exchange, and support the implementation of sustainable agriculture</p> <p>Monitor and evaluate implementation progress of projects and initiatives</p>

## VIII. RESOURCE MOBILITY

The effective implementation of the Action Plan on Sustainable Agriculture in ASEAN requires the mobilization of diverse resources at various levels, from financial investments to technological innovations, research collaborations, capacity-building initiatives, and knowledge-sharing platforms. AMS will explore new innovative finance mechanisms such as carbon markets and agricultural insurance systems, and will encourage private sector participation in technology investment. AMS will promote the role of the civil society organizations in learning and sharing knowledge with the community, and enhance farmer organizations and cooperatives' participation in the decision-making process.

By mobilizing these resources, ASEAN, through these developmental processes, can drive the transition towards a sustainable agricultural sector and achieve its shared goals for food security, environmental preservation, and rural development.

### 1. Financial Resources

Ensuring adequate financial resources is vital for implementing sustainable agriculture practices. Governments, development institutions, and the private sector should invest in sustainable agriculture initiatives, provide grants, loans, and subsidies, and create innovative

financing mechanisms. These resources will support farmers, research institutions, and civil society organizations in adopting sustainable practices, promoting innovation, and developing robust agricultural value chains.

## 2. Technological Innovations and Research and Development

The advancement and deployment of agricultural technologies play a crucial role in enhancing resource efficiency, improving productivity, and reducing environmental impacts. Governments and private sector entities should invest in promoting sustainable technology innovations tailored to the needs of ASEAN agricultural systems. ASEAN will ensure that the innovations that include among others precision agriculture tools, agroecological approaches, biotechnology applications, and climate-smart solutions will be promoted and adopted by recipient farmers and cooperatives.

Investment in research and development is critical for identifying sustainable agricultural practices adapted to local contexts and promoting innovation in the sector. Governments, research institutions, and private sector entities should collaborate to support research on sustainable farming systems, climate-smart agricultural practices, and resilient crop varieties. Furthermore, partnerships between research institutions and farmers should be fostered to promote participatory research and knowledge co-creation.

## 3. Knowledge Sharing and Capacity Building

Promoting knowledge-sharing and capacity-building initiatives is pivotal for implementing sustainable agriculture practices. Collaboration between academia, research institutions, agricultural extension services, and farmers should be strengthened to facilitate the exchange of best practices, lessons learned, and successful case studies. Capacity-building programs should empower farmers with the skills and knowledge required to adopt sustainable practices and enhance their resilience to climate change.

## 4. Policy Support and Enabling Environment

Creating a supportive policy framework and enabling environment is essential for the successful implementation of sustainable agriculture practices. Governments should develop and enforce regulations that promote sustainable agriculture practices such as land use, conservation, soil management, water resource management, ecosystem services, and biodiversity conservation. Policy coherence, coordination among ministries, and alignment with international commitments, such as the Sustainable Development Goals (SDGs), are crucial for driving sustainability across the agricultural sector.

## 5. Collaboration and Partnerships

Collaboration among stakeholders is fundamental for resource mobilization. Governments, international organizations, private sector entities, and civil society organizations should forge partnerships to leverage resources, expertise, and knowledge. Public-private partnerships can attract investment, facilitate technology transfer, and promote sustainable agricultural value chains. Similarly, regional and international collaborations can foster knowledge sharing, harmonize standards, and accelerate the adoption of sustainable practices.

## 6. Farmer Empowerment

Empowering farmers through access to credit, markets, information, and training is essential for successful implementation. Financial institutions, agribusinesses, and cooperatives should provide affordable credit and market access to small-scale farmers. Farmers' organizations and cooperatives should be strengthened to ensure their participation in decision-making processes and to enable collective action for sustainable agricultural practices.

## IX. IMPLEMENTATION

**The backbone of a well-coordinated, business-centred transition to sustainable agriculture is governmental support form AMS.** This will align many actors and ensure that the Action Plan will be translated into real improvements. Multi-stakeholder mechanisms such as platforms could help in fostering linkages between these stakeholders to contribute to local innovation and stronger value chains.

The key factors essential for ensuring the feasibility of high-impact pilot intervention include effective governance, the comparative advantage of products, access to markets and trade opportunities. AMS must acknowledge that sustainability and quality assurance can be challenging for smallholder agriculture enterprises. Given quality interventions on product development, governments can play the facilitating role of business deals and ensure fair share by making the value chains more inclusive and sustainable.

Likewise, **cooperation with the private sector is needed to deliver the benefits of the Action Plan to its intended stakeholders.** This collaboration can scale up access to sustainable financial services and broaden coverage for the agriculture sector by enhancing productive social safety nets and employing risk-mitigating mechanisms. These efforts can unlock investments in sustainable agriculture and off-farm value chain businesses.

Sustainable agriculture interventions can also focus on existing agriculture markets, and could also **cater to the development of new ones using branding strategies in nature-based tourism, environmental services, carbon credit businesses, agroforestry, and others.** The interventions could explore the development and testing of new insurance products and delivery models that use the latest technological developments such as remote sensing or blockchain. The insurance products will be designed with consideration of a market-based and customer-centric approach to encourage market uptake through the adoption of adequate practices and technologies.

Post-2025, this is expected to stimulate the ASEAN community while each AMS chooses a customized path toward agricultural and food systems transformation that is scalable and measurable at all levels. **The ASEAN Secretariat will assist in the facilitation and conduct of reviews and meetings and will liaise and coordinate among AMS and with other dialogue partners** on matters related to the implementation of the Action Plan, including the sharing of relevant information and activities with ASEAN sectoral bodies.

## X. CONCLUSION

The ASEAN Action Plan on Sustainable Agriculture encompassed strategies aimed at both optimizing existing approaches ("more and better") and exploring innovative initiatives ("different and new"). The former focuses on refining established practices and leveraging known information to enhance outcomes. This includes prioritizing high-value commodities

and promoting products and services that drive positive change and development. Conversely, the latter category addresses emerging trends in sustainable agriculture, requiring interventions to achieve significant impacts in areas where new challenges arise.

1. Initiating improvements in existing interventions begins with leveraging critical programs that already address the challenges confronting ASEAN agriculture and food systems. These interventions may vary across ASEAN Member States (AMS) due to factors such as evolving environmental conditions, infrastructural developments, social and institutional frameworks, and diverse farm types.
2. In certain AMS, interventions necessitate transitioning to alternative systems, involving changes in crop varieties, fishing practices, or livestock management techniques to enhance yields. While some of these interventions can build upon existing efforts, they demand novel scientific research and the application of cutting-edge technologies.

Moving forward, the priority programs identified aim to enhance socio-ecosystem connectivity, fostering collaboration among institutions, landscape planning initiatives, private sector engagement, and the promotion of technology and financing mechanisms for sustainable production models. Key areas for action include:

1. Developing technologies for high-value commodities tailored to evolving urban markets, implementing ecosystem-based or other adaptation strategies for climate-resilient planning, diversifying agricultural systems to manage climate risks, and implementing cost-effective measures aligned with circular economy principles.
2. Heightening focus on pest and disease management, particularly with an emphasis on reducing post-harvest losses and enhancing processing capabilities relevant to small-scale producers, thereby stimulating local entrepreneurship.
3. Identifying and addressing associated investment requirements through consultations between AMS and dialogue partners, aimed at solidifying commitments for their implementation.

Lastly, sustainable agriculture programs necessitate a tailored combination of policy instruments for effective implementation, as this approach has proven more impactful than relying solely on a singular policy approach.

Several crucial aspects within the realm of programming and policy encompass:

1. Offering technical support to farmers can enhance the adoption of sustainable farming practices. Often, policy interventions beyond agriculture are necessary, necessitating a stronger emphasis on localized enabling environments.
2. Re-evaluating market dynamics, mitigating risks, enhancing soil and water management, ensuring land tenure security, and targeting impoverished populations through productive social safety nets and alternative opportunities are critical considerations for market efficacy.
3. Enhancing collaborative efforts that are essential to achieve post-2025 policy and institutional milestones across ASEAN Member States (AMS). This entails capacity-building, coordination, and knowledge-sharing initiatives.
4. Developing implementation mechanisms including robust monitoring and reporting systems to oversee Action Plan execution and provide progress updates to relevant oversight agencies. Activities include identifying issues, monitoring Action Plan progress, recommending adjustments as necessary, overseeing policy and

institutional measures, securing technical and financial resources, and coordinating with private and public stakeholders and dialogue partners to facilitate implementation.

**Annex 1: List of National Projects and Activities (Note: Annex 1 is a living document and can be updated as needed.)**

Target Projects	Objectives	Outputs	Resources	Stakeholders	Timeline
<b>Brunei Darussalam</b>					
Soil remediation project focusing on improving soil health	<p>To increase productivity (yield/hectare)</p> <p>To optimise use of resources such as water and fertilizers</p> <p>To enhance technical knowledge for extension officers, institutions, and farmers</p>	<p>Analyse soil microbes, soil content and diversity</p> <p>Reduce the use of chemicals or substitute organic to inorganic matter</p> <p>Develop and use efficient water management system</p>	<p>Dispatch of technical experts/consultants</p> <p>Financial requirements for running knowledge-sharing and demo plots/farms</p> <p>Farmers and community support</p> <p>Research and development</p>	<p>DOAA of Brunei Darussalam</p> <p>Farmers</p> <p>ASEAN Secretariat and development partners</p> <p>Private sectors &amp; civil society partners</p> <p>Higher academic institutions</p>	<p>Short-term to Medium-term (2025 to 2029)</p> <p>#1 – 2026</p> <p>#2 – 2025</p> <p>#3 – 2025</p> <p>#4 – 2025</p>
<b>Cambodia</b>					
Development of agricultural production value chains programme through the application of sustainable agricultural approaches.	<p>To strengthen effective agricultural production and Agri-Food value chains in sustainable ways to ensure food security and improve the livelihoods of people by:</p> <ul style="list-style-type: none"> <li>Promoting modern agricultural cooperatives/communities.</li> <li>Developing crop, Livestock, and aquaculture production value chains.</li> </ul>	<p>Cambodian family farming systems have transformed to strong and integrated economic enterprises. This transformation creates economies of scale and can ensure food security and sustainable, efficient, inclusive and resilient food supply chains for local and international markets.</p>	<p>Government of Cambodia and Development partners (ADB World Bank IFAD, FAO, JICA, KOICA)</p>	<p>Government of Cambodia, Development partners, Private Sector, Agricultural Cooperatives, Farmers</p>	<p>Medium-term (2025 to 2030)</p>



<p>Assessment on the suitability, economic efficiency, and the impacts on agro-ecosystem of Climate Smart Agriculture, including Conservation Agriculture's Practices</p>	<ul style="list-style-type: none"> <li>Identify suitable best practices of Conservation Agriculture to enhance sustainable agricultural production systems and promote agro-ecology services diversification.</li> </ul>	<ul style="list-style-type: none"> <li>Appropriate practices of CA/CSA identified for application in agricultural production systems,</li> <li>Increased soil organic carbon in crop lands and soil health.</li> <li>New agricultural production options and value chains for agroecology with high economic efficiency identified and developed.</li> <li>Policy framework developed for implementation of CA and agroecology, and improved ecology services.</li> </ul>	<p>Government of Cambodia and Development partners (ADB, World Bank, FAO AFD, GIZ, ERIA,)</p>	<p>Government of Cambodia, Development partners, Private Sector, Academe, Cooperatives/ Farmers</p>	<p>Medium-term (2025 to 2030)</p>
<p>Indonesia</p>					
<p>Regional implementation and supervision of sustainable agricultural practices</p>	<p>To conserve soil quality</p> <p>To ensure food crop production will fulfill the food demand</p> <p>To ensure the quantity and quality of food is improved</p> <p>To increase farmer welfare</p>	<p>Improve soil productivity and food crop production</p> <p>Implement the Sustainable Agricultural Practices</p>	<p>MoA for financial commitments</p> <p>Institutional oversight assigned to the Directorate of Facilities and Infrastructure, Food Crop, Horticulture, and Plantation</p>	<p>Farmers group</p> <p>Provincial, district, and subdistrict governments</p> <p>Fertilizer companies</p> <p>Students and academics</p>	<p>Medium-term (2025 to 2029)</p>

			Technical support from Indonesia Agency for Agricultural Standardization, Agricultural Uman Resources Agency Social: Farmer Group	NGO	
Lao PDR					
Enhance farming profitability	To increase farm income by 30 per cent  To create sustainable supply chains	Demonstration farms can: <ul style="list-style-type: none"> <li>• Reduce the cost of agricultural inputs</li> <li>• Strengthen farmer groups</li> </ul> Capacity building on: <ul style="list-style-type: none"> <li>• Post-harvest loss reduction</li> <li>• Improving soil fertility (use of biofertilizer, compost)</li> <li>• Empower farmer organization</li> </ul> Market linkage (through PPP)	Financial (development partner-World Bank, EU, ADB, GIZ, IFAD, SDC, financial institute)  Technical (JICA, JIRCAS, research institute, university)	Farmer group (OA, GAP, Agroforestry farmer group)  Private sector DOA, NAFRI, DALAM, NOUL  Consumer association	Medium-term (2025-2029)
Application of Climate Smart Agriculture (CSA) technologies for climate resilience	To develop and implement a list of CSA technologies for climate resilience, mitigation, and adaptation  To select feasible CSA technology to introduce to the	Demonstration farms for: <ul style="list-style-type: none"> <li>• Good CSA with documented results of CSA technologies (greenhouse, water supply system)</li> </ul>	Financial support from development partners (World Bank, EU, ADB, GIZ, IFAD, SDC, GEF, financial institute)	Smallholder farmers  Private sector  Government (NAFRI, DALAM, NOUL)	Medium-term (2025-2029)

	farmers with aim to disseminate and scale up good CSA technology	<p>Implement research programs</p> <ul style="list-style-type: none"> <li>• Study on the impact/adaptation of CSA</li> </ul> <p>Training programs on</p> <ul style="list-style-type: none"> <li>• Pest and disease technology/training</li> <li>• Scaling up of good practices</li> <li>• Farmer field visit</li> </ul> <p>Knowledge products</p>	Technical support from research programs (JICA, JIRCAS, research institute, university)		
Institutional arrangements for supporting standard compliance certification and trade ability	<p>To strengthen institutional systems</p> <p>To develop laws, regulations, standards, and technical guidance</p>	<p>Increase institutional capacity by</p> <ul style="list-style-type: none"> <li>• Developing tools and equipment (regulation, standard (SPS, OA, GAP) practical manuals, etc.)</li> </ul> <p>Increase human resources competency</p> <p>Materials for dissemination to raise awareness</p>	<p>Financial (development partner-World Bank, EU, ADB, GIZ, IFAD, financial institute)</p> <p>Technical (USDA, EU, ASEAN expert working group)</p>	DOA DOPC	Medium-term (2025-2029)
Malaysia					
Water management in Rice Field: Application of	<p>To reduce in water usage by</p> <ul style="list-style-type: none"> <li>• Significantly reducing water usage in rice cultivation, conserving precious water</li> </ul>	<p>Transfer of technology:</p> <ul style="list-style-type: none"> <li>• Upscaling the AWD approach by establishing model</li> </ul>	Community Engagement: Involvement and support from local	Policymakers (NRECCC and KPKM)	Short-term (2025 - 2026)

<p>Alternate Wetting and Drying Approach (AWD)</p>	<p>resources and addressing concerns related to water scarcity.</p> <p>Potentially increase rice yield:</p> <ul style="list-style-type: none"> <li>• Through AWD, which does not negatively impact rice yields and can even improve them by promoting better root growth and nutrient uptake when properly implemented.</li> </ul> <p>To reduce GHG emissions by:</p> <ul style="list-style-type: none"> <li>• Reducing methane emissions from rice paddies</li> </ul>	<p>farms within farmers' rice areas as a showcase to others</p> <p>Develop knowledge sharing and extension services:</p> <ul style="list-style-type: none"> <li>• Facilitate knowledge-sharing platforms, workshops, or farmer field schools to exchange experiences and lessons learned among farmers practicing AWD.</li> </ul> <p>Collaboration with agricultural extension services to disseminate information about the benefits and best practices of AWD to farmers.</p>	<p>communities and farmers are crucial.</p> <p>Building awareness, educating farmers, and involving them in decision-making are essential for successful adoption.</p> <p>Capacity Building: Strengthening the capacity of agricultural extension services, research institutions, and local organizations to provide technical support, training, and guidance on the implementation.</p> <p>Coordination and Collaboration: Establishing coordination among various stakeholders, including government agencies, NGOs, research institutions, and farmer cooperatives, to ensure a unified approach to AWD promotion and implementation.</p>	<p>Extension officers (IADA)</p> <p>Rice Farmers</p>	
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			<p>Cost-Benefit Analysis: Conducting economic assessments to demonstrate the financial benefits of AWD adoption, including reduced water usage, increased yields, and cost savings in the long run.</p> <p>Research and Development: Investing in R&amp;D to improve AWD techniques, and mitigate environmental impacts.</p> <p>Training and Education: Offering technical training and extension services to farmers and stakeholders on properly implementing and managing AWD practices.</p>		
Upscaling for Community Rice Straw-Return Sustainable Demonstration Project	<p>To reduce GHG emissions and carbon footprint</p> <p>To create Green Jobs among farmer communities – improve livelihood by developing local green technologies.</p>	<p>Training and education programs on:</p> <ul style="list-style-type: none"> <li>• Processing rice straw into bio-organic fertilizer</li> <li>• Farmer cooperative good management practices</li> </ul>	<p>Social: Farmers' Group</p> <p>Department of Agriculture</p> <p>Raw materials, Water, Utility, Structure</p> <p>Technology provider</p>	<p>Private Partner (Technology developer)</p> <p>Extension Officer</p> <p>Farmer / Cooperatives</p>	Short-term (2025 - 2026)

	<p>To increase productivity and farmer income and develop healthy food for citizens.</p> <p>To achieve healthy farmers through training cooperatives and farmers and officers in monitoring sustainable activities in farming communities</p> <p>To achieve efficient resource utilization</p>	<ul style="list-style-type: none"> <li>• Green machinery and facility usage</li> <li>• Carbon Evaluation and ISO 14000 on Zero Management</li> </ul>	<p>Malaysia Cooperative Commission</p> <p>Application fee and establishment funding</p> <p>Training fee</p>	<p>Policy maker</p> <p>Extension Officer Farmer / Cooperatives</p> <p>State Government</p> <p>Malaysia Productivity Council: Machinery upscaling Farmers</p> <p>Carbon evaluation</p> <p>Management ISO service provider</p> <p>Ministry of Energy and Natural Resources</p> <p>Department of Agriculture</p>	
Myanmar					
<p>Rice Bio-Park (RBP)</p> <ul style="list-style-type: none"> <li>• Alternative food production using byproducts and waste materials</li> <li>• Feeds production</li> </ul>	<p>To utilise the whole rice plant by promoting biomass use to reduce the volume of agricultural wastes</p> <p>To create more products through circular economy</p>	<p>Capacity-building in technologies for:</p> <ul style="list-style-type: none"> <li>• GAP, OA, CA, postharvest, and value-added production for officer/staff and farmers</li> <li>• Digital market platforms</li> </ul>	<p>Social support from</p> <ul style="list-style-type: none"> <li>• Farmer organisations</li> <li>• Local organisations of women and youth</li> <li>• MSMEs</li> <li>• Institutional</li> <li>• Researches in DAR, DOA, Extension system</li> </ul>	<p>Lead institutions</p> <ul style="list-style-type: none"> <li>• Department of Agricultural Research</li> <li>• Department of Agriculture</li> </ul> <p>Beneficiaries</p> <ul style="list-style-type: none"> <li>• Local Farmer Organisations</li> </ul>	<p>Short-term to Long-term</p>

<ul style="list-style-type: none"> <li>Value-added products from agriculture waste</li> </ul>			<p>Financial support from:</p> <ul style="list-style-type: none"> <li>Government fund, International fund aid</li> </ul> <p>Technical support on:</p> <ul style="list-style-type: none"> <li>Production techniques of GAP, Organic rice, CA</li> <li>Postharvest technology</li> <li>Value-added products</li> <li>Art creation</li> </ul>	<ul style="list-style-type: none"> <li>Farmers</li> </ul> <p>Partners</p> <ul style="list-style-type: none"> <li>AMS</li> <li>MAFF</li> <li>NGO, INGO</li> <li>Agrobusiness Companies</li> </ul>	
Philippines					
National Soil Health R4D Program	<p>To conduct soil health assessment mapping</p> <p>To develop suitable and modern soil nutrient diagnostic tools and soil health indicators for STBF</p> <p>To implement technology scaling and deployment</p>	<p>Soil health map Soil health cards</p> <p>Updated soil health indices</p> <p>Optimized site-specific nutrient management toolkit</p> <p>Precision-based location-specific package of adaptive technologies (seeds, fertilizers, production practices, water management, ICM, IPM)</p>	<p>Funding for the procurement of necessary materials and salaries of personnel involved</p> <p>Experts on soil health management</p> <p>Funding for the procurement of necessary materials and salaries of personnel involved</p> <p>Expertise in soil health management</p>	<p>Lead institution: DARFOs and LGUs</p> <p>Coordinating role: BAR</p> <p>Beneficiaries: Farmers, farmworkers Technicians</p> <p>Government employees, LGU officials, AEWs</p>	Short-term (2025-2027)

<p>Climate Change R4D Program</p>	<p>To address the challenges and threats posed by the changing weather patterns affecting the country's food security and the livelihood of rural communities by building and</p> <p>To enhance the national and local capacities to minimize risks and reduce the vulnerability</p>	<p>Innovative and Sustainable Macroalgal Biorefinery System</p> <p>Deployment of LAMPParA for Sustainable Abaca Production</p> <p>Crop improvement for disease, drought and submergence resistance on Abaca</p> <p>Varietal registration of abaca varieties with tolerance or resistance to biotic and abiotic stresses</p> <p>Establishment of Tropical Seaweed Resilience Center</p> <p>Ulva Cultivation Research &amp; Development for Innovations and Sustainable Production Systems (Ulva CRISPS)</p> <p>Valorization of Sargassum: From</p>	<p>Funding for the procurement of necessary materials and salaries of personnel involved</p> <p>Experts on Climate Change</p>	<p>Lead institution: SUCs, NGAs, DA-RFOs</p> <p>Coordinating role: BAR</p> <p>Beneficiaries: Farmers, farmworkers</p>	<p>Short-term (2025-2027)</p>
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		<p>Hatchery to Ocean Farming</p> <p>Sustainable Production of Indigenous Gamét (SPRING) in Northern Philippines</p> <p>Upgrading of Climate Change Resiliency R4D Center</p> <p>Climate Change R4D Capacities Enhancement</p>			
<p>Upland R4D Program</p> <ul style="list-style-type: none"> <li>Component 1: Development and Scaling of Location Specific and Sustainable Practices for the Agroforestry Management, Agrobiodiversity and Soil and Water Resources Conservation</li> </ul>	<p>To complement modern agriculture and to sustain and protect the environment as well as expanded natural resources that promotes farming practices and methods that are profitable, environmentally sound and good for the communities</p>	<p>Viability studies of rainwater harvesting model facilities</p> <p>Studies regarding the efficiency of the water utilization and distribution of the rainwater harvesting ponds to the cropped fields</p> <p>Studies on the evapotranspiration rate and underground seepage of rainwater harvesting ponds to further improve water</p>	<p>Funding for the procurement of necessary materials and salaries of personnel involved</p> <p>Experts on Agroforestry, Soil and Water Resource Management</p>	<p>Lead institutions: BSWM, DA RFOs CLSU, WRMC</p> <p>In collaboration with: LGUs, CRAO, FAO, BAFE, and Farmers beneficiaries and Farmworkers</p>	<p>Short-term (2025-2027)</p>

<ul style="list-style-type: none"> <li>Component 2: Technology Transfer of Integrated Production Management Systems for Upland Vegetables, Fruit Trees</li> </ul>		<p>collection and storage effectiveness and efficiency</p> <p>Verification and Scaling of Crop Diversification and Integrated Farming System Models in the Uplands (includes Market Linkaging and Livelihood Development for the Upland Communities)</p> <p>Machinery development in the uplands</p>		<p>Lead institutions: BPI, BSWM, PhilMech, DA RFOs, selected SUCs</p> <p>In collaboration with: LGUs, Farmers beneficiaries and Farmworkers</p>	
<p>SMART Agriculture Program</p>	<p>To mainstream digital farming technologies in Philippine agriculture through development, utilization, and enhanced promotion of precision, digital and smart technology-based farming.</p> <p>To make the sector more efficient, productive, sustainable, profitable and globally competitive.</p>	<p>Digital Transformation of a Sustainable Socially Inclusive Rice Production System Towards National Food Security</p> <p>Crop Damage Assessment due to Climate Risk Using SARAI Protocols: Study on Selected Vulnerable Corn Farming Communities in the Philippines</p>	<p>Funding for the procurement of necessary materials and salaries of personnel involved</p> <p>Experts on Digital Agriculture</p>	<p>Lead institution: DA RFOs</p> <p>Beneficiaries: Farmers, Farmworkers</p>	<p>Short-term (2025-2027)</p>

		<p>HySeedPH: Strengthening Public Hybrid Rice Seed System for Widescale Adoption to Address Rice Sufficiency</p> <p>Managing Water for Rice: Laying the Foundation for Low-emission and highly productive rice Systems</p> <p>High throughout soil health assessment</p> <p>AI-powered image analysis for plant growth assessment and yield estimation</p> <p>Pest Detection and Management using Drones and AI</p> <p>RiceCrop Assist: AI-powered Personal Agricultural Advisor Making Rice Knowledge Accessible to Farmers</p>			
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		<p>Carbon-smart rice Advisory</p> <p>Development of multiple-harvest rice system for a green, resource-efficient technology</p> <p>Integration of Rice Crop Manager (RCM) and Rice Doctor: A Holistic Approach to Integrated Crop Pest Management for Sustainable Rice Cultivation</p> <p>Empowering Sustainable Rice Farming with AI-driven Nutrient Management Solutions</p>			
Singapore					
Industrial space for farming and Agri-food Innovation Park	To foster the co-location of activities across urban agriculture and aquaculture activities, to enable innovation	<p>Discover synergies across value chains and between activities with adjacencies</p> <p>Allow the testing for potential agglomeration benefits</p>	Technical (R&D opportunities)	Solution Providers Institute of Higher Learning Farmers	Medium-term to Long-term

<p>SG GAP and Clean and Green Urban Farms</p>	<p>To promote responsible farming in highly productive farms and address market demand for high-quality and traceable farm products in Singapore.</p> <p>This guides local farms on a holistic approach to farm management in the areas of food safety, produce quality environmental management, and workers' health, safety, and welfare while aiming to improve productivity through optimizing resource utilization and minimizing waste generation.</p>	<p>Establish agricultural standards which is aligned to regional and international standards.</p>	<p>Technical (Setting Standards)</p>	<p>Government Institute of Higher Learning Farmers</p>	<p>Medium-term to Long-term</p>
<p>Thailand</p>					
<p>GHG emission reduction in agriculture (targeted crop- Cassava and other economic crops)</p>	<p>To improve capacity of inspector and certification body</p> <p>To develop model farm and learning center</p> <p>To create awareness of the benefit (income, well-being, environmentally friendly)</p> <p>To gain knowledge and reduce labor through precision farming</p>	<p>Capacity building for government officials on the process of validation and verification of carbon credit in agriculture</p> <p>Demonstration farm (Cassava area, Rayong Field Crop Research Center, for other economic crops will be considered appropriate area later on)</p> <p>Programs for farmers on:</p>	<p>Thailand GHG Management Organization</p> <p>Public organization, TGO, Private Company</p> <p>The unit concerned under MOAC</p> <p>Thai Tapioca Products Factory Association</p> <p>Green Climate Fund</p>	<p>DoA- MOAC</p> <p>Farmers, government organizations, private sector</p> <p>Private company, international organization, AMS CIAT, IRRI</p>	<p>Short-term (2025-2027)</p>

		<ul style="list-style-type: none"> <li>• Awareness raising on GAP through seminars and training</li> <li>• Technology transfer and application of innovation</li> </ul>	JICA, JIRCAS, JAIF		
Viet Nam					
GHG Reduction in rice, livestock and aquaculture	<p>To develop active MRV system in place and pilot carbon credit exchange</p> <p>To achieve food security</p> <p>To engage private sector</p>	<p>Demonstration site to pilot MRV system</p> <p>Programs to enhance technical capacity building (GHG measuring, reporting, and verifying)</p> <p>Guideline for policy and institutional development</p>	<p>Green financing, climate funds (e.g. JICA)</p> <p>Technical advances Network (verifiers, carbon credit buyers)</p> <p>ASEAN Guidelines</p> <p>Private sector investment</p>	<p>MARD (DCP; DLP, DOF), MAFF</p> <p>Private companies, R&amp;D Institute (VAAS, NIAH)</p>	Short-term (2028)
Nature-based smart aquaculture adapting to climate change	To develop farming practices and foster livelihood resilience	<p>Learning and sharing events to disseminate initiatives and smart aquaculture practices</p> <p>Pilot technical smart aquaculture technologies</p> <p>Technical guidelines and training</p>		MARD (DOF, VIFEP, RIA), MAFF, AMS	Medium-term (2030)
Food value chain	<p>To improve food production</p> <p>To improve food processing and supplies</p>	<p>Strategies for managing:</p> <ul style="list-style-type: none"> <li>• Food loss and food waste</li> </ul>	ASEAN-JICA project fund	MARD and relevant Departments, PSAV,	Short-term (2027)

	To increase food consumption	<ul style="list-style-type: none"> <li>• Technology and innovation uptake</li> <li>• Nutrition improvement</li> </ul> <p>Sharing and learning events with other AMS</p>	<p>Private sector investment</p> <p>Venture capital</p>	<p>Japanese partners, AMS partners, private sector</p>	
Sustainable livelihood for fishermen through promoting Nature-based solutions in fisheries sector of Viet Nam	To improve livelihood for fishermen	<p>Evaluate and select Nature-based solutions for improving productivity, sustainability and efficiency in capture fisheries, aquaculture.</p> <p>Technical supports, facilities and guidelines to create alternative/additional livelihood for fishermen.</p> <p>Apply smart solutions in in capture fisheries, aquaculture (technology, advanced techniques)</p> <p>Capacity building for stakeholders.</p> <p>Develop potential plan/policies for Sustainable livelihood for fishermen</p>	<p>Call for financial support from ASEAN-JICA fund</p>	<p>DOF and provinces</p>	<p>2025 -2030</p>

Agriculture Product Traceability	<p>To improve transparency in food production value chain</p> <p>To enable food safety</p> <p>To comply regulations and standards</p> <p>To expand quality control and sustainability</p>	<p>Establish a product traceability system/platform for major agriculture products</p> <p>Establish a GIS mapping system that enables transparency and better product management</p> <p>Create a data sharing mechanism between different traceability systems, linking local databases to national databases</p>	<p>ASEAN JICA project fund</p> <p>Private sector investment</p>	<p>MARD-Center for Agriculture Digital Transformation and Statistics (DTS), ICD, DPP, and relevant partners</p> <p>Private sector</p>	Short term (2026-2028)
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**Annex 2: List of Regional Projects and Activities (Note: Annex 2 is a living document and can be updated as needed.)**

Priority Areas	Proposed Projects	Objectives	Outputs	Implementation Timeframe
Decarbonisation/ Nature-based Solutions	Improving Regional Capacities on Nature-based Solutions/Ecosystem-based Approach to Support Social Forestry Development in ASEAN	<ul style="list-style-type: none"> <li>Enhance knowledge and skill of stakeholders in ASEAN.</li> <li>Contribute to the development of policies and strategies that promote nature based solution</li> <li>Foster partnership and collaboration among stakeholders</li> </ul>	<ul style="list-style-type: none"> <li>Training/ workshop/seminar to educate stakeholders on the principles and practices of nature based solutions on social forestry</li> <li>Develop guidelines and best practices documents that provide practical information on implementation nature-based solutions</li> </ul>	2025-2030



			<ul style="list-style-type: none"> <li>• Conduct and disseminate research studies and case studies that showcase successful nature-based solution.</li> </ul>	
	ASEAN Guideline on Agroecology Transition	<ul style="list-style-type: none"> <li>• Encourage the adoption of agroecological principles and practices that promote sustainable agriculture in the ASEAN region</li> <li>• Increase the resilience of farming systems to climate change, pests and other environmental pressures through agroecology</li> <li>• Promote biodiversity conservation and ecosystem services</li> </ul>	<ul style="list-style-type: none"> <li>• Developing a set of guidelines and principles that outline best practices and approaches for transitioning to agroecology in the region</li> <li>• Establish demonstration farms or model sites where farmers can observe and learn about successful agroecological practices</li> </ul>	2025-2030
	Exchange of information between ASEAN and India on ICT and soil science domains	<ul style="list-style-type: none"> <li>• Improve soil health to capture carbon emissions and maintaining a Circular Agricultural economy through Smart Farming</li> </ul>	<ul style="list-style-type: none"> <li>• Develop soil health card portal systems for participating AMS, with recommended parameters for fertilizer requirements and major crop species set by each AMS based on systematic input and optimization</li> </ul>	2025-2030
	Mangrove Ecosystem Management in the ASEAN region	<ul style="list-style-type: none"> <li>• Improve the network and develop communication tools among ASEAN Mangrove Network (AMNET) member countries to promote sustainable mangrove ecosystem management</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a regional strategy for sustainable mangrove ecosystem management</li> </ul>	2025-2030

	<p>Development of Greenhouse Gas mitigation technologies economically beneficial for small-scale farmers in Southeast Asia</p>	<ul style="list-style-type: none"> <li>• Develop and promote cost-effective technologies and practices that help small-scale farmers in ASEAN reduce their GHG emission from agricultural activities</li> <li>• Encourage the adoption of sustainable agricultural practices that not only mitigate GHG emissions, but also enhance productivity, resilience and environmental sustainability</li> </ul>	<ul style="list-style-type: none"> <li>• Implement demonstration projects to showcase the effectiveness and economic benefits of GHG technologies to small scale farmers and local communities</li> <li>• Design and conduct training programme, workshops and educational campaign to raise awareness and build the capacity of farmers implementing GHG mitigation technologies.</li> </ul>	<p>2025-2028</p>
	<p>Accelerating the application of agricultural technologies which enhance production potentials and ensure sustainable food systems in the Asia Monsoon region</p>	<ul style="list-style-type: none"> <li>• Leverage advanced agricultural technologies to boost yields and productivity in the Asia Monsoon region, thereby enhancing food production to meet the growing demand.</li> <li>• Integrate sustainable agricultural practices into the adoption of new technologies, ensuring long-term environmental stability, soil health, and resilience against climate change impacts</li> </ul>	<ul style="list-style-type: none"> <li>• Facilitate the transfer of advanced agricultural technologies to farmers in the Asia Monsoon region through training programs, demonstrations, and extension services.</li> <li>• Support research initiatives to develop and adapt technologies that are suitable for the diverse agro-ecological conditions of the Asia Monsoon region.</li> </ul>	<p>2022-2026</p>
	<p>Project on the Feasibility study on the use of Biomass Resources that contribute to Carbon Neutrality</p>	<ul style="list-style-type: none"> <li>• Conduct a comprehensive assessment of biomass resources available in Japan to determine their feasibility and contribution</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct feasibility studies on the technical, economic, and environmental aspects of utilizing different biomass resources for energy</li> </ul>	<p>2023-2024</p>

		<p>to achieving carbon neutrality targets.</p> <ul style="list-style-type: none"> <li>• Encourage the utilization of biomass resources for renewable energy production to reduce greenhouse gas emissions and transition towards a low-carbon economy.</li> </ul>	<p>production and other applications.</p> <ul style="list-style-type: none"> <li>• Provide policy recommendations to support the development and deployment of biomass-based technologies, including incentives, regulations, and market mechanisms to promote their uptake.</li> </ul>	
	<p>Launch of a project on Joint Crediting Mechanism (JCM) to promote climate change mitigation in agriculture</p>	<ul style="list-style-type: none"> <li>• Reduce greenhouse gas emissions associated with agricultural activities.</li> <li>• Enhance local capacity and knowledge in adopting innovative climate-smart agricultural practices for long-term sustainability.</li> </ul>	<ul style="list-style-type: none"> <li>• Quantifiable reductions in greenhouse gas emissions achieved through the implementation of climate-friendly agricultural practices</li> <li>• Recommendations and best practices for integrating climate-friendly agriculture into national and local policies to create an enabling environment for sustainable practices.</li> </ul>	<p>2025-2030</p>
	<p>Establishing the basic MRV environment to scale up GHG reduction, as well as stakeholder coordination to scale up actions on the ground</p>	<ul style="list-style-type: none"> <li>• Establish a robust MRV system to accurately monitor, report, and verify greenhouse gas emissions and reductions from various projects and activities on the ground.</li> <li>• Strengthen the technical capacity of local institutions, stakeholders, and relevant personnel in MRV methodologies and</li> </ul>	<ul style="list-style-type: none"> <li>• Development of a functional MRV system with clear procedures, methodologies, and tools for monitoring, reporting, and verifying GHG emissions and reductions</li> <li>• Enhanced technical capacity and knowledge among stakeholders to effectively implement MRV practices and ensure data accuracy and reliability.</li> </ul>	<p>2025-2030</p>

		practices to ensure effective implementation.		
	Reducing GHG originating from livestock sector through optimized feeding by introducing livestock information management system	<ul style="list-style-type: none"> <li>• Decrease greenhouse gas emissions associated with livestock production through optimized feeding practices.</li> <li>• Introduce and promote efficient feeding practices that reduce methane emissions from enteric fermentation in livestock digestive systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of optimized feeding practices that reduce methane emissions per unit of livestock product, resulting in measurable reductions in GHG emissions from the livestock sector.</li> <li>• Development and implementation of a system to collect, store, analyze, and manage data related to livestock feeding, health, and performance to improve efficiency and reduce environmental impact.</li> </ul>	2025-2030
	Providing crop and other information using satellite data and agricultural machines that contribute to establishing effective MRV systems	<ul style="list-style-type: none"> <li>• Utilize satellite data and agricultural machines to gather accurate and real-time information on crop conditions, yields, land use, and other relevant agricultural parameters for improved monitoring and reporting.</li> <li>• Provide timely and precise crop information to farmers, policymakers, and stakeholders to support informed decision-making processes in agriculture.</li> </ul>	<ul style="list-style-type: none"> <li>• Integration of satellite data for crop monitoring, yield estimation, pest and disease detection, and land use analysis to provide valuable insights for decision-making and reporting.</li> <li>• Collection and utilization of data generated by agricultural machines (e.g., precision farming equipment) for optimizing field operations, resource use efficiency, and crop management practices.</li> </ul>	2025-2030

	<p>Case study for development of the strategies for reducing crop burning in ASEAN Member States (ERIA)</p>	<ul style="list-style-type: none"> <li>• Conduct a comprehensive analysis of existing crop burning practices in ASEAN Member States to understand the reasons, methods, and impact of such practices on the environment and public health.</li> <li>• Develop evidence-based strategies and action plans for reducing crop burning through alternative practices, policy interventions, capacity building, awareness campaigns, and technology adoption.</li> </ul>	<ul style="list-style-type: none"> <li>• Produce a comprehensive case study report detailing the findings, analysis, and recommendations for reducing crop burning in ASEAN Member States, based on the assessment of current practices and stakeholder consultations.</li> <li>• Compile a set of best practices and successful interventions from case study examples and other relevant sources that have effectively reduced crop burning and promoted sustainable agriculture in similar contexts.</li> </ul>	<p>2024-2025</p>
	<p>Promotion of high quality and low carbon emission rice</p>	<ul style="list-style-type: none"> <li>• Increase rice yields and improve grain quality through the adoption of climate-smart agricultural practices</li> <li>• Reduce greenhouse gas emissions associated with rice production</li> <li>• Foster knowledge exchange and capacity building among farmers, researchers, and extension workers.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a regional certification system for low-carbon emission rice</li> <li>• Establish pilot farms in different ASEAN countries showcasing climate-smart rice production practices</li> <li>• Establish a regional knowledge sharing platform for farmers, researchers, and stakeholders to share best practices and research findings on low-carbon rice production</li> </ul>	<p>2024-2030</p>

Reduction of harmful agrochemicals	Demonstration project on the application of biological control agents (BCA) as a countermeasure against antimicrobial resistance (AMR) in aquaculture and livestock in ASEAN	<ul style="list-style-type: none"> <li>• Identification of the most effective BCAs for controlling diseases in aquaculture and animal husbandry</li> <li>• Determination of the modes of action, and the assessment of the BCA's impact on the growth, health, and disease resistance of species</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a booklet to demonstrate the efficacy of the tested BCA</li> <li>• Raise awareness of AMR and prudent use of antimicrobials in BCA-based strategies in controlling various diseases in aquaculture and animal husbandry.</li> </ul>	2024-2025
	Promoting biocontrol-based integrated pest management strategies for safer vegetables in the ASEAN countries	<ul style="list-style-type: none"> <li>• Conduct a baseline assessment to understand the current pest management practices in vegetable production in ASEAN countries, highlighting existing challenges, pesticide use patterns, and potential risks to human health and the environment.</li> <li>• Establish demonstration farms or pilot projects to showcase the effectiveness of biocontrol-based IPM strategies in vegetable production, demonstrating improved crop yields, reduced pesticide residues, and enhanced safety of agricultural produce.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop a comprehensive technical guidelines manual on biocontrol-based IPM strategies for safer vegetable production in ASEAN countries, encompassing pest management practices, biocontrol agent selection, monitoring protocols, and sustainable farming techniques.</li> <li>• Establish a knowledge sharing platform, such as a web portal, mobile application, or community network, to facilitate exchange of information, experiences, success stories, and challenges related to biocontrol-based IPM among stakeholders in the ASEAN region.</li> </ul>	2025-2030

Digitalisation in agriculture	Capacity building on “Advances in AI, IoT and Machine Learning for Precision Agriculture”	<ul style="list-style-type: none"> <li>• Provide basics and enhanced understanding of the participants on applications of AI, IoT and advanced techniques in agriculture's various activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Improvement of knowledge and skills in the area of AI and IoT in agriculture.</li> </ul>	2025-2030
	Smart Agriculture Pilot Project in Southeast Asia	<ul style="list-style-type: none"> <li>• Evaluate and select appropriate smart agriculture technologies such as IoT (Internet of Things), drones, sensors, AI (Artificial Intelligence), and data analytics for improving productivity, sustainability, and resource efficiency in agriculture in Southeast Asia.</li> <li>• Provide training and capacity building programs for farmers, agricultural extension officers, and stakeholders on the use of smart technologies, data interpretation, decision-making tools, and digital literacy to enhance their skillset and adoption of smart agriculture practices.</li> </ul>	<ul style="list-style-type: none"> <li>• Produce a comprehensive report summarizing the findings, outcomes, lessons learned, and recommendations from the smart agriculture pilot project in Southeast Asia, highlighting successful practices, challenges, and best approaches for scaling up.</li> <li>• Develop a best practices guide or toolkit showcasing successful implementations of smart agriculture technologies, case studies, and practical recommendations for farmers, policymakers, and other stakeholders interested in adopting smart farming practices.</li> </ul>	2025-2030
	Demonstration of data integration of agricultural machinery and related equipment for sustainable agriculture	<ul style="list-style-type: none"> <li>• Integrate data-driven technologies with agricultural machinery and equipment to enhance operational efficiency,</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct field demonstrations showcasing the integration of data technologies with agricultural machinery in practical farming scenarios,</li> </ul>	2025-2030

		<p>precision farming practices, and resource management in agriculture</p> <ul style="list-style-type: none"> <li>• Demonstrate the application of integrated data systems in agricultural machinery to promote sustainable agriculture practices, reduce input waste, optimize resource use, and improve environmental stewardship in the farming sector.</li> </ul>	<p>illustrating improved monitoring, decision-making, and management capabilities for sustainable agriculture practices</p> <ul style="list-style-type: none"> <li>• Develop technical guidelines and manuals outlining the process of integrating data systems with agricultural equipment, providing step-by-step instructions, best practices, and recommendations for farmers and stakeholders interested in adopting similar technologies.</li> </ul>	
	<p>Contributing to the reduction of fertilizers through automatic plotting technology and soil diagnosis of farmland using satellite data</p>	<ul style="list-style-type: none"> <li>• Utilize automatic plotting technology coupled with soil diagnosis based on satellite data to implement precision agriculture techniques aimed at optimizing fertilizer use, reducing over-application, and improving nutrient management practices on farmlands.</li> <li>• Promote sustainable agriculture by leveraging technology-driven solutions to accurately assess soil health, fertility levels, and crop nutrient requirements, thereby enhancing crop productivity while minimizing environmental</li> </ul>	<ul style="list-style-type: none"> <li>• Generate soil health assessment reports using satellite data analysis and automatic plotting technology, providing farmers with detailed insights into soil conditions, nutrient levels, and fertilizer recommendations to support informed decision-making and precision nutrient application.</li> <li>• Conduct an impact analysis to evaluate the effectiveness of the technology in reducing fertilizer usage, optimizing nutrient application, increasing crop yields, improving soil health, and mitigating environmental risks</li> </ul>	<p>2025-2030</p>



		impacts associated with excessive fertilizer use.	linked to excessive fertilization practices on farmland.	
	Study on benefits and challenges of digitalization in agriculture and food system for enhanced resilience and improved sustainability (ERIA)	<ul style="list-style-type: none"> <li>Evaluate the benefits and challenges associated with the digitalization of agriculture and food systems to understand how technology adoption can enhance resilience, sustainability, and efficiency across the entire agricultural value chain.</li> <li>Identify key strategies, best practices, and potential solutions for effectively integrating digital tools and data-driven technologies in agriculture and food systems to improve resilience against climate change, market fluctuations, and other challenges while enhancing sustainability practices.</li> </ul>	<ul style="list-style-type: none"> <li>Produce a comprehensive research report detailing the findings on the benefits and challenges of digitalization in agriculture and food systems, including case studies, data analysis, and recommendations for stakeholders, policymakers, and industry players.</li> <li>Develop policy briefs, guidelines, and practical recommendations based on the study outcomes to inform decision-makers, industry leaders, and farmers on how to leverage digital technologies for enhanced resilience, improved sustainability, and increased efficiency in agricultural and food production systems.</li> </ul>	2024-2025
Climate change adaptation	Improving Community Livelihood Through Promoting Nature-based Tourism (NbT) for Climate Action in ASEAN	<ul style="list-style-type: none"> <li>Promote nature-based tourism initiatives within ASEAN member countries to create opportunities for local communities, including indigenous groups, to derive income from environmentally friendly tourism activities</li> </ul>	<ul style="list-style-type: none"> <li>Conduct training programs and workshops to build the capacity of local communities, tour operators, and guides in adopting sustainable tourism practices, conservation principles, and climate-resilient approaches to enhance community</li> </ul>	2025-2030

		<p>while conserving natural resources and ecosystems.</p> <ul style="list-style-type: none"> <li>• Support climate action efforts by harnessing the potential of nature-based tourism to raise awareness about environmental conservation, biodiversity protection, and sustainable practices within the ASEAN region, contributing to ecosystem preservation and mitigating the impacts of climate change.</li> </ul>	<p>livelihoods and promote responsible tourism.</p> <ul style="list-style-type: none"> <li>• Develop nature-based tourism development plans and strategies tailored to each ASEAN country, incorporating climate action measures, community engagement frameworks, marketing strategies, and sustainability criteria to guide the implementation of nature-based tourism initiatives in the region.</li> </ul>	
	<p>Building stable food systems and developing climate change adaptation and mitigation measures on irrigation and drainage facilities</p>	<ul style="list-style-type: none"> <li>• Strengthen food systems by improving the efficiency, reliability, and resilience of irrigation and drainage facilities to ensure consistent water availability for agricultural production, thereby contributing to stable food production and food security.</li> <li>• Develop adaptation and mitigation measures to address the impacts of climate change on irrigation infrastructure, minimize water-related risks, enhance water use efficiency, and promote sustainable agricultural practices in the context of</li> </ul>	<ul style="list-style-type: none"> <li>• Implement upgrades, repairs, and modernizations on irrigation and drainage facilities to enhance their effectiveness, improve water management practices, reduce water wastage, and ensure reliable water supply for agriculture, leading to increased crop yields and food production stability.</li> <li>• Introduce climate-resilient agriculture techniques, water-saving technologies, and sustainable irrigation practices to farmers through training programs, capacity-building initiatives, and knowledge sharing to improve</li> </ul>	<p>2025-2030</p>

		changing climatic conditions.	adaptation to climate change, mitigate environmental impacts, and promote sustainable food production systems.	
	Promotion of climate change adaptation and mitigation measures through agricultural and rural development in the Asian Monsoon region	<ul style="list-style-type: none"> <li>Promote the adoption of climate change adaptation strategies within the agricultural sector in the Asian Monsoon region to enhance resilience to extreme weather events, variability in precipitation patterns, and other climate-related challenges.</li> <li>Implement practices and technologies that contribute to the mitigation of greenhouse gas emissions from agricultural activities, such as reducing carbon footprints, enhancing soil carbon sequestration, and promoting sustainable land use practices to support climate change mitigation efforts.</li> </ul>	<ul style="list-style-type: none"> <li>Conduct capacity-building programs, workshops, and training sessions for farmers, agricultural extension workers, and rural communities to enhance their understanding of climate change impacts, adaptation strategies, sustainable farming practices, and mitigation measures.</li> <li>Establish demonstration farms showcasing climate-resilient agricultural practices, innovative technologies, and successful adaptation strategies that can be replicated by farmers in the region to improve agricultural productivity, ensure food security, and mitigate the negative effects of climate change.</li> </ul>	2025-2030
Public and private partnerships	Cooperation Mechanism for the Competitive Development of Aquaculture and Small-Scale Fishery in ASEAN (COOPMEC)	<ul style="list-style-type: none"> <li>Improve the competitiveness of aquaculture and small-scale fisheries sectors within ASEAN countries through collaboration, knowledge sharing,</li> </ul>	<ul style="list-style-type: none"> <li>Provide technical assistance, capacity-building initiatives, and training programs for aquaculture farmers, fisherfolk, industry stakeholders, and government officials to</li> </ul>	

		<p>capacity building, and the implementation of best practices to promote sustainable development and economic growth.</p> <ul style="list-style-type: none"> <li>• Foster regional cooperation and coordination among ASEAN member states to address common challenges, promote information exchange, facilitate technology transfer, enhance market access, and support sustainable management of aquaculture and small-scale fisheries resources.</li> </ul>	<p>enhance their skills, knowledge, and adoption of sustainable practices in aquaculture and small-scale fisheries.</p> <ul style="list-style-type: none"> <li>• Develop a harmonized policy framework, guidelines, and best practices recommendations for the sustainable management of aquaculture and small-scale fisheries, incorporating principles of resource conservation, environmental sustainability, quality standards, and social responsibility to promote competitiveness and compliance with international norms.</li> </ul>	
	Capacity Building of Farmers through Farmers' Exchange	<ul style="list-style-type: none"> <li>• Impart to ASEAN farmers the knowledge on advanced practices of agriculture in India, and vice versa</li> </ul>	<ul style="list-style-type: none"> <li>• The ASEAN farmers will get exposure to modern agricultural technologies and successful case studies by visiting research institutes and farmers' fields.</li> </ul>	2025-2030
	Finance Solutions for Accelerating Carbon Neutrality and Regenerative Agriculture in ASEAN	<ul style="list-style-type: none"> <li>• Create a technical assistance and loan facility that provides tailor-made training on agroeconomic and climate-smart practices as well as financial literacy.</li> </ul>	<ul style="list-style-type: none"> <li>• Innovative model will securitize this financing assistance with a mix of risk/return profiles to catalyse participation from a range of commercial and concessional capital providers</li> </ul>	

	<p>Human Resource Development Project in Food-Related Areas through Partnership Program with Universities in ASEAN Region</p>	<ul style="list-style-type: none"> <li>• Enhance the human resource capacity in food-related areas within the ASEAN region by providing specialized training, skills development, and knowledge transfer to students, researchers, and professionals in collaboration with universities and academic institutions.</li> <li>• Strengthen regional cooperation and networking among universities and educational institutions across ASEAN countries to foster academic partnerships, facilitate research collaboration, and promote innovation in food-related disciplines for sustainable development.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop specialized curricula, training modules, and workshops tailored to food-related disciplines, incorporating cutting-edge research, industry trends, and practical skills to equip students and professionals with the necessary competencies and expertise to address contemporary challenges in the food sector.</li> </ul>	<p>20225-2030</p>
	<p>Promotion of Crop Insurance in ASEAN through the Public and Private Partnership</p>	<ul style="list-style-type: none"> <li>• Improve the resilience of farmers and agricultural communities in the ASEAN region by promoting the uptake of crop insurance, which provides financial protection against crop losses due to natural disasters, pests, diseases, or other unforeseen events.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct public awareness campaigns, training sessions, workshops, and educational programs to inform farmers and agricultural stakeholders about the benefits of crop insurance, how it works, and how to access and utilize insurance products effectively to mitigate risks and improve financial security.</li> </ul>	<p>2023-2025</p>

		<ul style="list-style-type: none"> <li>• Foster collaboration between public agencies, private insurers, financial institutions, agricultural stakeholders, and relevant organizations to develop innovative crop insurance products, boost insurance penetration rates, enhance risk management practices, and ensure sustainable agricultural production</li> </ul>	<ul style="list-style-type: none"> <li>• Collaborate with insurance companies, government agencies, and agricultural experts to design and implement tailored crop insurance products, risk assessment tools, and insurance schemes that are affordable, accessible, and customized to the needs of farmers in different regions, crops, and production systems.</li> </ul>	
	<p>Activities to establish circular agriculture through public-private partnerships to train trainers to teach cultivation techniques and to utilize food residues as fertilizer</p>	<ul style="list-style-type: none"> <li>• Advance the adoption of circular agriculture principles within the farming sector to minimize waste, enhance resource efficiency, and create sustainable food production systems that promote ecological balance and environmental stewardship.</li> <li>• Build the capacity of trainers, agricultural extension workers, farmers, and stakeholders in innovative cultivation techniques and the utilization of food residues as organic fertilizers to improve productivity, reduce environmental impact, and foster</li> </ul>	<ul style="list-style-type: none"> <li>• Implement training-of-trainers programs to equip educators, extension workers, and agricultural experts with the knowledge, skills, and tools necessary to effectively train farmers and communities in modern cultivation techniques, sustainable farming practices, and the use of food residues as organic fertilizers.</li> <li>• Establish demonstration farms, pilot projects, and model circular agriculture initiatives in collaboration with public and private partners to showcase best practices, innovative techniques, and successful approaches in cultivating crops, managing resources, recycling food</li> </ul>	2025-2030

		<p>circularity in agricultural practices.</p>	<p>residues, and promoting circularity in agriculture.</p>	
	<p>ASEAN food value chain development project</p>	<ul style="list-style-type: none"> <li>• Strengthening food security in the ASEAN region by improving the efficiency, resilience, and inclusivity of food value chains. This involves ensuring food availability, access, and utilization for all, particularly vulnerable population.</li> <li>• Encouraging the adoption of sustainable and climate-resilient agricultural practices along the food value chain to minimize environmental impact, conserve natural resources, and support the long-term viability of food production systems.</li> </ul>	<ul style="list-style-type: none"> <li>• Conduct comprehensive mapping and analysis of food value chains within the ASEAN region to identify key stakeholders, bottlenecks, opportunities for improvement, and areas where interventions can enhance efficiency, quality, and sustainability.</li> <li>• Provide targeted capacity building, training, and technical assistance to farmers, producers, processors, distributors, and other actors along the food value chain to enhance their skills, knowledge, and practices in areas such as post-harvest handling, technology adoption, quality control, food safety standards, and market linkages.</li> </ul>	<p>2025-2028</p>
	<p>Network for Agriculture and Rural Development Think-Tanks for ASEAN countries (based on the success of the project Network for Agriculture and Rural Development Think-Tanks for Countries in Mekong sub-region, implemented 2019-2024</p>	<ul style="list-style-type: none"> <li>• Improve the cooperation through the establishment of researcher networks-including members who are able and willing to cooperate from multi-stakeholder cooperation networks of ASEAN</li> </ul>	<ul style="list-style-type: none"> <li>• Policy research capacity building for members of government and non-government agencies is improved.</li> </ul>	<p>2025-2030</p>

	with the participation of Cambodia, Laos, Myanmar and Viet Nam.	<p>countries – to share policy experience and information toward a mutual sustainable agriculture and rural development</p> <ul style="list-style-type: none"> <li>Identify regional opportunities, challenges, and key issues for agriculture and rural development, and implement joint actions including joint policy research, formulation, implementation and advocacy; knowledge sharing, and capacity building</li> </ul>	<ul style="list-style-type: none"> <li>Cooperation and partnership among policy research institutions and researchers, and between them and policy makers is strengthened.</li> <li>Relevant actions are taken through regional cooperation and partnership to address a number of common development issues in the region</li> </ul>	
	Promotion of Sustainable Agricultural Value Chain in ASEAN II (ASEAN AgriTrade II), GIZ	<ul style="list-style-type: none"> <li>Public and private stakeholders in some ASEAN Member States (AMS) benefit from regional exchange on the application of sustainability and quality standards in agricultural value chains.</li> </ul>	<ul style="list-style-type: none"> <li>The technical and technological foundations for diverse range of resilience-enhancing, gender-relevant climate risk financing for farmers in the ASEAN region have improved.</li> <li>Regional dialogue formats between AMS and/or public or private actors on compliance with sustainability and quality standards have been conducted on topics proposed or prioritised by actors from some AMS for regional experience exchange</li> </ul>	2024-2026



			<ul style="list-style-type: none"> <li>Experts and managers from public and private sector and/or civil society institutions from some AMS, including women have participated in regional knowledge transfer activities.</li> </ul>	
		<ul style="list-style-type: none"> <li>To implement activities from roadmaps of public institutions to improve sustainability and quality standards related to regional harmonisation within ASEAN by the responsible public and/or private actors in some AMS</li> </ul>	<ul style="list-style-type: none"> <li>The expertise of actors at institutional and target group level on gender-responsive climate risk financing for farmers has increased.</li> </ul>	
		<ul style="list-style-type: none"> <li>To strengthen capacities of public and private actors in some AMS to implement climate-sensitive approaches to sustainable agricultural trade at national level.</li> </ul>	<ul style="list-style-type: none"> <li>Public stakeholders have conducted the consultations with the private sector at national level to improve the implementation of trade-related sustainability and quality requirements (e.g. GAP, digital traceability systems, etc.).</li> </ul>	
			<ul style="list-style-type: none"> <li>Integrated Development Partnership with Public and Private sector (iDPPPs) for the implementation of trade-relevant climate-sensitive approaches with companies in some AMS have been developed.</li> </ul>	



### Annexe 3: List of Potential Funding Institutions/Facility

Modality	Status and Implementation Period	Priority Focus Areas
<b>ASEAN Development Fund (ADF)</b>		
Trust Fund managed by ASEAN Secretariat	<p>The implementation of the 3<sup>rd</sup> Work Programme (2017 – 2018) has been considered completed by 31 December 2021.</p> <p>Currently, the ADF is funding the 4<sup>th</sup> Work Programme 2019-2020 and the 5<sup>th</sup> Work Programme 2021-2022 wherein the 4/2022 has agreed on the extension of the implementation timeframe of the 4<sup>th</sup> Working Programme until December 2023 in light of the COVID-19 pandemic.</p>	<p>The ADF shall be used for any of the following purposes:</p> <ul style="list-style-type: none"> <li>• To leverage funding of regional cooperation programmes and projects from Dialogue Partners and other external parties. When used for counterpart funding, the amount shall not exceed 20% of the total funding raised regardless of whether the co-funding source is an ASEAN Member State or an external party;</li> <li>• To provide seed funding for initial activities of large-scale projects, requiring major financial support from a Dialogue Partner or other external party; and</li> <li>• To provide full funding support to small and short-term projects of a confidential or strategic nature.</li> </ul>
<b>Japan-ASEAN Integration Fund (JAIF)</b>		
Trust Fund managed by ASEAN Secretariat. There is a project facility for JAIF Management Team – JMT	Ongoing	<p>Project proposals seeking funding from JAIF should describe how the projects contribute to the principles and objectives of the ASEAN Outlook on the Indo-Pacific (AOIP) and how they are linked to its area(s) of cooperation:</p> <ul style="list-style-type: none"> <li>• Maritime cooperation, especially maritime security, marine plastic debris</li> <li>• Connectivity</li> <li>• Sustainable Development Goals 2030</li> <li>• Economic and other areas of cooperation</li> </ul>
<b>ASEAN-ROK Cooperation Fund (AKCF)</b>		
Trust Fund managed by ASEAN Secretariat. There is a Project Facility of ASEAN- ROK Programme Management Team	<p>Ongoing</p> <p>The ASEAN-ROK Cooperation Fund Framework (2021/2025)</p>	<ul style="list-style-type: none"> <li>• Public Health</li> <li>• Education and Training</li> <li>• Culture and Tourism</li> <li>• Economic Resilience</li> <li>• Environment, Safety, and Peace</li> </ul>
<b>ASEAN-China Cooperation Fund (ACCF)</b>		

<p>Trust Fund managed by ASEAN Secretariat</p> <p>There is a Project Facility for the ASEAN China Cooperation Fund Management Team - AMT</p>	<p>Ongoing</p> <p>ASEAN-China POA 2021-2025</p>	<ul style="list-style-type: none"> <li>• Political and security dialogue and cooperation</li> <li>• Treaty of Amity and Cooperation in South East Asia</li> <li>• Consultation on the Protocol to the Treaty on Southeast Asia Nuclear-Weapon-Free Zone</li> <li>• Implement the Declaration on the Conduct of Parties in the South China Sea (DOC) in its entirety and conclude a Code of Conduct in South China Sea (COC)</li> <li>• Human Rights</li> <li>• Combat transnational crimes and address other non-traditional security issues</li> <li>• Cooperation in anti-corruption</li> <li>• Defense</li> <li>• Trade and investment</li> <li>• Finance</li> <li>• Food and agriculture</li> <li>• Sanitary and Phyto-Sanitary (SPS) and Technical Barrier to Trade (TBT) Maritime</li> </ul>
<b>ASEAN Plus Three Cooperation Fund (APTCF)</b>		
<p>Trust Fund managed by ASEAN Secretariat</p>	<p>Ongoing</p> <p>ASEAN Plus Three Cooperation Work Plan 2023 – 2027</p>	<ul style="list-style-type: none"> <li>• Political and security dialogue and cooperation;</li> <li>• Transnational crimes and non-traditional security issues;</li> <li>• Counterterrorism and violent extremism;</li> <li>• Maritime cooperation;</li> <li>• Promotion of moderation as a common value;</li> <li>• Trade and investment;</li> <li>• Financial market stability in the region;</li> <li>• Sustainable tourism and people-to-people connectivity;</li> <li>• Cooperation in food, agriculture and forestry;</li> <li>• Energy security and cooperation;</li> <li>• Cooperation in minerals;</li> <li>• Sustainable development of micro, small and medium enterprises (MSMEs);</li> <li>• Cooperation in science, technology, and innovation (STI);</li> <li>• Digital Economy</li> <li>• Environment conservation and sustainable use of natural resources;</li> <li>• Impact of climate change;</li> </ul>

		<ul style="list-style-type: none"> <li>• Cooperation in poverty alleviation for sustainable development;</li> <li>• Social welfare and development</li> </ul>
<b>ASEAN- India Fund (AIF)</b>		
Trust Fund managed by ASEAN Secretariat	Ongoing  ASEAN-India Plan of Action 2021-2025	<ul style="list-style-type: none"> <li>• Transnational Crime and Counter Terrorism</li> <li>• Trade and Investment</li> <li>• Finance</li> <li>• Energy</li> <li>• Transport</li> <li>• Food, Agriculture and Forestry</li> <li>• Information and Communication Technology (ICT)</li> <li>• Tourism</li> <li>• Science, Technology and Innovation</li> <li>• Disaster Management and Emergency Response</li> <li>• Environment, Climate Change and Biodiversity</li> <li>• Public Health</li> <li>• Education, Youth, Culture and People-to-People Exchange</li> <li>• Initiative for ASEAN Integration and Narrowing the Development Gap</li> <li>• Connectivity</li> <li>• Smart Cities</li> <li>• ASEAN Institutional Strengthening</li> <li>• Sustainable Development</li> <li>• Creating a Research and Knowledge Network of Government and nongovernment institutions, experts, scientists, and business entities to advance the knowledge and climate change-related actions to support the attainment of the objectives of the ASEAN Community;</li> <li>• Promoting synergy between energy efficiency necessary for climate action and economic growth;</li> <li>• Promotion of development, transfer and wider dissemination of new technologies including clean technologies and renewable;</li> <li>• Promotion of regional adaption response to adverse impacts of climate change;</li> </ul>

		<ul style="list-style-type: none"> <li>Organizing fairs, workshops and seminars as considered necessary, aimed at climate-friendly technologies; and</li> <li>Any other aspect of the environment and related to climate change such as Biodiversity Conversation, Environment Education, etc.</li> </ul>
<b>ASEAN-Russian Federation Dialogue Partnership Financial Fund (ARDPFF)</b>		
Trust Fund managed by ASEAN Secretariat	<p>Ongoing</p> <p>Comprehensive Plan of Action (CPA) to Implement the Association of Southeast Asian Nations and The Russian Federation Strategic Partnership (2021-2025)</p>	<ul style="list-style-type: none"> <li>Political and Security</li> <li>Counter-Terrorism and Transnational Crime</li> <li>Trade and Investment</li> <li>Finance</li> <li>Energy</li> <li>Industry and Minerals</li> <li>Transport</li> <li>Food, Agriculture and Forestry</li> <li>Information and Communication</li> <li>Technology (ICT)</li> <li>Tourism</li> <li>Science, Technology and Innovation</li> <li>Culture</li> <li>Disaster Management and Emergency Response</li> <li>Environment, Climate Change and Biodiversity</li> <li>Health and Pandemic Preparedness and Response</li> <li>Education, Youth and People-to-People Exchange</li> <li>Physical Training and Sports</li> <li>Narrowing the Development Gap</li> <li>Connectivity</li> </ul>
<b>ASEAN-Canada Plan of Action Trust Fund</b>		
Trust Fund managed by ASEAN Secretariat	<p>On-going</p> <p>March 2023 – June 2024</p>	<p>ASEAN-Canada Plan of Action</p> <p><i>Prioritisation for projects to be funded under the Trust Fund is ongoing as part of the establishment of Project Management Team</i></p>
<b>ASEAN-Australia Development Cooperation Program Phase II (AADCP II)</b>		
<p>Multi-year Programme</p> <p>Fund managed by ASEAN Secretariat</p>	<p>Ongoing</p> <p>23 July 2009 - 31 December 2025</p>	<p>Component 1: Institutional strengthening of the ASEAN Secretariat;</p> <ul style="list-style-type: none"> <li>Corporate development; and</li> <li>Monitoring and Evaluation</li> </ul> <p>Component 2: Supporting the AEC</p> <ul style="list-style-type: none"> <li>Services;</li> <li>Investment;</li> </ul>

		<ul style="list-style-type: none"> <li>• Consumer protection;</li> <li>• Agriculture;</li> <li>• ASEAN Connectivity;</li> <li>• Cross-cutting issues;</li> <li>• Financial integration;</li> <li>• Energy/Minerals;</li> <li>• MSMEs;</li> <li>• IAI/NDG;</li> <li>• ICT; and</li> <li>• Tourism</li> </ul> <p>Additional financial contribution to the ASEAN Centre for Public Health Emergencies and Emerging Diseases (ACHPEED) in the amount of AUD 21 million and Contribution to the ASEAN Comprehensive Recovery Framework (ACRF) in the amount of AUD 1 million</p>
<b>Australia for ASEAN Futures Initiative for Economic and Connectivity (Aus4ASEAN(ECON))</b>		
Multi-year Programme Fund managed by ASEAN Secretariat	Ongoing 22 December 2022 – 10 June 2032	<p>A flexible programme designed to respond to ASEAN priorities including:</p> <ul style="list-style-type: none"> <li>• Economic recovery, integration and connectivity.</li> <li>• Digitalisation, 4IR, and, smart cities and other sectors of mutual interest.</li> <li>• Gender, Disability and Social Inclusion (GEDSI), and other priorities.</li> </ul> <p>In Q4 2023 the programme will be expanded to:</p> <ul style="list-style-type: none"> <li>• include a technical assistance facility to provide short-term advisory support; and</li> <li>• cover all three communities of ASEAN, including additional funding to AUD 204 million.</li> </ul>
<b>Enhanced Regional EU-ASEAN Dialogue Instrument (E-READI)</b>		
Multi-year Project Facility Fund managed by the EU through a contracted TA provider	Ongoing 2017-2023  (E-READI no-additional cost extension until end of December 2025 is currently being reviewed for CPR approval)	<p>Focal Area 3 of the MIP. The E READI will focus on:</p> <ul style="list-style-type: none"> <li>• Human Rights;</li> <li>• Maritime Cooperation;</li> <li>• Science and Technology;</li> <li>• ICT;</li> <li>• Energy;</li> <li>• Forestry &amp; Agriculture;</li> <li>• Trade;</li> <li>• Transport;</li> </ul>

		<ul style="list-style-type: none"> <li>• Tourism;</li> <li>• Health;</li> <li>• Culture and Media;</li> <li>• Women / Gender;</li> <li>• Migrant / Labour;</li> <li>• Climate Change;</li> <li>• Disaster Management;</li> <li>• Environment,</li> <li>• Education;</li> <li>• Sustainable Development Gaps,</li> <li>• Capacity Building; and</li> <li>• Connectivity, Initiative for ASEAN Integration</li> <li>• Other areas may emerge during the implementation period of the facility.</li> </ul>
<b>Regional Development Cooperation Agreement between ASEAN and the U.S. (RDCA)</b>		
Multi-year Programme Facility managed by the USAID and implemented through grants, contracts, cooperative agreements, and other implementing mechanisms	Ongoing  2020-2025 as of May 2023 is USD 18 million	<p>The RDCA aims to contribute to strengthening ties and continuing links of friendship between ASEAN and the United States as well as to sustainable and inclusive growth and development, while encouraging rules-based systems in support of a peaceful, secure and prosperous ASEAN, bearing in mind the aims of the ASEAN Community Vision 2025, the ASEAN-U.S. Plan of Action (2021-2025) and the Joint Statement of the ASEAN-U.S. Special Summit.</p> <p>It has the following Development Objectives (DOs):</p> <ol style="list-style-type: none"> <li>1. DO 1. Enhancing capacity to effectively address regional and global challenges by ASEAN;</li> <li>2. DO 2. Enhancing ASEAN capacity to further regional economic integration and sustainable economic growth;</li> <li>3. DO 3. Advancing rules-based architecture to uphold human dignity and the rule of law by ASEAN; and</li> <li>4. DO 4. Expanding and enhancing people-to-people and institutional ties between ASEAN and the U.S. (CPR+U.S.+ASEC Directors), taking into account the recommendations of the ASEAN sectoral bodies</li> </ol>
<b>ASEAN-USAID Inclusive Growth in ASEAN through Innovation, Trade, and E-Commerce (IGNITE)</b>		



Multi-year Project Facility managed by the U.S. through a contracted TA provider	Ongoing 2018-31 March 2024	Support to ASEAN Economic Integration through three focus areas: 1. Trade Facilitation; 2. Digital Economy; and 3. Science, Technology and Innovation.
<b>ASEAN-USAID Partnership for Regional Optimization with the Political-Security and Socio-Cultural Communities (ASEAN-USAID PROSPECT)</b>		
Multi-year Project Facility managed by the U.S. through a contracted TA provider	Ongoing 2018-19 February 2024	PROSPECT envisions the following results: 1. Capacity and Coordination on Anti-Human Trafficking and Irregular Migration Increased. 2. ASEAN Capacity to prevent violent extremism advanced. 3. Ability to Manage Disaster Risk Improved. 4. ASEAN Strengthens Civil Illustrative indicator 5. ASEAN Promotes the Rights and Opportunities for Women, Children, Youth, and Other Vulnerable People. 6. ASEAN and AMS Integration Advances through Addressing Governance Gaps.
<b>ASEAN Policy Implementation (API)</b>		
Multi-year Project Facility managed by the US through a contracted TA provider	Ongoing 2021-October 2023	API aims to provide technical assistance at the national level of ASEAN Member States (AMS) to accelerate the implementation of key ASEAN initiatives that support the U.S. Government's (USG) and ASEAN's goals. Moreover, API Phase I will also aim to provide lessons learned to feed into the next phase of the API.  API Phase I activity will focus on the implementation of the ASEAN Economic Community's (AEC) selected instruments through comprehensive research, multiyear activities as well as technical assistance at the national level of AMS. API Phase I is expected to work closely with activities of the ASEAN-USAID Inclusive Growth in ASEAN through Innovation, Trade, and E-Commerce (ASEAN-USAID IGNITE) and ASEANUSAID Partnership for Regional Optimization with the Political-Security and Socio-Cultural Communities (ASEANUSAID PROSPECT) to build upon current USAID support to ASEAN.  The main outputs are:

		<ul style="list-style-type: none"> <li>• To identify concrete needs and opportunities for supporting the implementation of targeted ASEAN policies at the Member State level;</li> <li>• To provide concrete technical assistance to Member States and the ASEAN Secretariat to strengthen their implementation of targeted ASEAN policies; and</li> <li>• To explore mission-driven windows of opportunity.</li> </ul>
<b>ASEAN-UK Flagship Development Programmes</b>		
<p>Multi-year Programmes</p> <p>Each programme will have allocated funds for each year.</p> <p>The UK Mission to ASEAN will manage the budget</p>	<p>On-going Programmes codesigned by ASEAN and UK</p>	<p>Girls' education; <i>"Promoting Women and Girls"</i></p> <ul style="list-style-type: none"> <li>• <i>Education in ASEAN" worth up to £30 million which will run for five years, was launched in May 2023.</i></li> </ul> <p>Economic integration;</p> <ul style="list-style-type: none"> <li>• <i>"ASEAN-UK Economic Integration Programme" has indicated budget of £25 million and implementation period of five years and currently under formulation.</i></li> </ul> <p>Women, peace and security;</p> <ul style="list-style-type: none"> <li>• <i>"ASEAN-UK Women, Peace and Security Programme" has indicated budget of £3.2 million and implementation period of three years and currently under formulation.</i></li> </ul> <p>Health systems; and</p> <p>Climate transition</p>
<b>ASEAN-Pakistan Cooperation Fund (APCF)</b>		

<p>ASEAN Pakistan Cooperation Fund (APCF)</p>	<p>Ongoing</p> <p>ASEAN-Pakistan Sectoral Dialogue Partnership: Practical Cooperation Areas 2019-2021 (The PCA has been extended for period of two years to 2023)</p>	<ul style="list-style-type: none"> <li>• Countering Terrorism, Violent Extremism, and Transnational Crimes</li> <li>• Economic Cooperation</li> <li>• Food and Agriculture</li> <li>• Science, Technology and Innovation</li> <li>• Information and Communication Technology</li> <li>• Tourism</li> <li>• Disaster Management</li> <li>• Culture</li> <li>• Human Resource Development</li> <li>• Connectivity</li> <li>• Narrowing Development Gap and Initiative for ASEAN Integration</li> </ul>
<p><b>ASEAN-Türkiye Fund (ATF)</b></p>		
<p>ASEAN-Türkiye Fund (ATF)</p>	<p>Ongoing</p> <p>ASEAN-Türkiye Sectoral Dialogue Partnership: Practical Cooperation Areas 2019-2023</p>	<ul style="list-style-type: none"> <li>• Counter-Terrorism, Violent Extremism, Radicalisation and Transnational Crimes</li> <li>• Peace and Reconciliation</li> <li>• Trade and Investment</li> <li>• Public-Private Partnership</li> <li>• Micro, Small and Medium Enterprises</li> <li>• Tourism</li> <li>• Mining</li> <li>• Energy and Renewable Energy</li> <li>• Science and Technology, Innovation, Research and Development</li> <li>• Food and Agriculture</li> <li>• Disaster Management</li> <li>• Sustainable Development</li> <li>• Culture</li> <li>• Education, Skills Training and Youth Development</li> <li>• ASEAN Smart Cities Network Connectivity</li> <li>• Narrowing Development Gap</li> </ul>