ASEAN-Japan MIDORI Cooperation Plan
for Strengthening Cooperation towards
Enhancing Resilient and Sustainable Agriculture and Food Systems
for Ensuring Regional Food Security

1. Background

In 2021, the United Nations (UN) Food Systems Summit and its Pre-Summit were held in September in New York and in July in Rome, respectively. The summit took place in the context of increasing recognition of the importance of stable food supply and resilient and sustainable agricultural development. The concept of enhancing resilient and sustainable agriculture and food systems while reducing greenhouse gas (GHG) emissions has been positioned as a core concept in agricultural policy and government initiatives and was stated by many countries including some ASEAN Member States (AMS) at the summit and the pre-summit. On the Pre-summit in July 2021, the Joint Statement on Sustainable Agricultural Production and Food Systems (the Joint Statement) was agreed and announced by ministers in charge of agriculture from several AMS and Japan.

In the statement, it was confirmed that countries geographically located in the Asia-Monsoon region shared several regional particularities in terms of agricultural production; high humidity and high temperature, abundance of paddy fields, and high density of small- and medium-sized farmers. Taking into account these regional particularities, to achieve the goals of resilient and sustainable agriculture and food systems as well as the SDGs, it was recognized that there was no “one-size-fits-all” solution leading to these goals. This important concept agreed by many AMS and Japan was clearly reflected in ‘The Secretary-General’s Chair Summary and Statement of Action on the UN Food Systems Summit’ released on 23 September 2021.

Further, the Joint Statement pointed out that international collaboration is important to introduce innovative and sustainable agricultural practices and technologies. It was agreed that collaboration through joint research projects and existing frameworks should be promoted and strengthened to achieve a balance between productivity and environmental protection.

At the 22nd Meeting of ASEAN Ministers on Agriculture and Forestry (AMAF) Plus Three, Japan proposed its new initiative called MIDORI Cooperation Plan to strengthen cooperation between AMS and Japan and suggested that MIDORI Cooperation Plan be elevated to a joint initiative of AMS and Japan in 2023 which marks 50th anniversary of ASEAN-Japan friendship and cooperation. The proposal was welcomed by AMAF at the AMAF Plus Three meeting and noted in the Joint Press Statement of the ASEAN-Japan Leaders Meeting in November 2022.

Following these global movements and basic understandings, AMS and Japan establish this ASEAN-Japan MIDORI Cooperation Plan for Strengthening Cooperation towards Enhancing

Resilient and Sustainable Agriculture and Food Systems for Ensuring Regional Food Security as a joint document of AMS and Japan.

2. Direction of the cooperation

ASEAN has the ASEAN Integrated Food Security (AIFS) Framework and Strategic Plan of Action on Food Security in the ASEAN Region (SPA-FS) 2021–2025, ASEAN Strategy on Sustainable Biomass Energy for Agriculture Community and Rural Development in 2021 – 2030 as a regional umbrella for initiatives to ensure regional food security and low-emission agriculture production. The AIFS Framework and SPA-FS 2021–2025 which was adopted by AMAF in October 2020 emphasized that enhancing resilience to climate change and increasing sustainable agricultural production and productivity as the emerging challenges in food security. AMAF has also agreed to adopt the ASEAN Regional Guidelines for Sustainable Agriculture in ASEAN on 26 October 2022. The guidelines aim to guide AMS on the transition to the ASEAN agriculture that is highly productive, economically viable, and environmentally sound. Furthermore, the 43rd ASEAN Summit adopted 'ASEAN leaders' Declaration on Strengthening Food Security and Nutrition in Response to Crises' on 5th September 2023 that highlights ASEAN leader's commitment to ensure rapid action on food security and nutrition in response to crises as well as strengthen preparedness for long-term resilience and sustainability of agri-food system.

In Japan, a medium- to long-term strategy for sustainable food systems, MIDORI was formulated in May 2021 to realize increases in both productivity and sustainability in the food, agriculture, forestry and fisheries industries through innovation. Currently the Japanese government and stakeholders are strongly implementing the related activities in the strategy that is expected to pave the way towards the development of resilient and sustainable agriculture and food systems, more specifically, increasing productivity of food and agricultural production while reducing environmental loads by promoting innovation.

These policy and strategy directions of ASEAN and Japan indicate that both parties clearly recognize the importance of resilient and sustainable agriculture and food systems– specifically on improving agricultural production and productivity while reducing environmental loads.

In order to promote cooperation between AMS and Japan, which have similarities in weather and agricultural production conditions, the new ASEAN guidelines and the strategy of Japan should be recognized as a principal guidance and method for strengthening food security. Under this common recognition, AMS and Japan will intensify efforts to achieve resilient and sustainable agriculture and food systems in ASEAN region through their close collaboration in contributing and ensuring the regional food security. AMS and Japan will also fully apply public-private partnership mechanisms to utilize the technical and financial capabilities of the private sector.

3. The scope of cooperation

AMS and Japan will promote their cooperation and collaboration with each other toward "building resilient and sustainable agriculture and food systems through innovation". AMS and Japan will focus on the suitability and necessity of technologies in pursuing resilient and sustainable farming in implementing the cooperation between AMS and Japan which commonly share the regional particularities such as high humidity and temperature, abundance of paddy fields, and small- and medium-sized farmers. The specific scope of cooperation that AMS and Japan consider as important and should be addressed in each AMS are as follows:

i) Development, demonstration and dissemination of technologies for building resilient and sustainable agriculture and food systems through innovation, such as technologies enhancing smart/digital agriculture, circular economy, biomass energy, reducing Green House Gas (GHG) emission and Integrated Pest Management (IPM)

ii) Human resource development for building resilient and sustainable agriculture, forestry and food systems, and

iii) Other supports for the implementation of the ASEAN Regional Guidelines for Sustainable Agriculture in ASEAN.

Currently on-going ASEAN-Japan cooperation projects are shown in Annex 1. The projects, which are not included in Annex1, but could be initiated in coming years, are shown in Annex 2. To ensure the effective project management as well as the transparency of progress, clear and specific deliverable and timeframe will be set for each project. In promoting these cooperations, AMS and Japan will make full use of the public-private partnership mechanisms. Annex 1 and Annex 2 could be updated as necessary by mutual consent from AMS and Japan, for example through focal points of the Coordination Mechanism.

Through the implementation of cooperation projects, AMS and Japan intend to further strengthen and deepen the cooperative relationship with each other, aiming for the prosperity of the agriculture and food sector in the region by increasing agricultural productivities while reducing environmental loads, thus enhancing accessibility of safe, affordable, diverse, and nutritious food for people in the region.

4. Implementation

In order to implement the ASEAN-Japan MIDORI Cooperation Plan, AMS and Japan may consider holding ministerial and/or senior officials' level meetings on agriculture and forestry as and when necessary.

Annex 1 : Ongoing Projects

As of , 2023
Subject to change in the future

	PROJECTS	Period	Target AMS
Category i) **Development, demonstration and dissemination of technologies for building resilient and sustainable agriculture and food systems through innovation, such as technologies enhancing smart and/or digital agriculture, circular economy, biomass energy reducing Green House Gas (GHG) emission and Integrated Pest Management (IPM)**			
1	Japan-ASEAN Integration Fund Capacity Development Program for ASEAN Rice Net	2021– 2023	*Cambodia, Lao PDR, Myanmar, Vietnam*
2	Development of Greenhouse Gas mitigation technologies economically beneficial for the small-scale farmers in Southeast Asia	2023-2028	*Philippines, Vietnam*
3	Accelerating the application of agricultural technologies which enhance production potentials and ensure sustainable food systems in the Asia Monsoon region	2022-2026	*Indonesia, Thailand, Vietnam*
4	Smart Agriculture pilot Project in Southeast Asia	2021-	*Thailand, Philippines, Vietnam*
5	Project for Promotion of Sustainable Fisheries in Southeast Asian Region	2020-2024	*all AMS*
6	JICA's Knowledge Co-Creation Program: Practice Plant Quarantine Techniques for Export of Agricultural Products (Thermal Treatment for Disinfestation of Fruit Flies)	1988-	*several AMS*
7	Capacity Development of protection against introduction and spread of transboundary plant pests in the Asia and the Pacific Region	2020-	*several AMS*
8	Demonstration of data integration of agricultural machinery and related equipment for sustainable agriculture in Thailand (PRISM/BRIDGE)	2021-2024	*Thailand and other AMS*
9	International Joint Research Project	2022-2028	*Thailand, Vietnam*
10	[Completed] Improved Coordination and Strengthened Capacity to Deal with the Invasive Insect Pest Tuta absoluta in Mainland Southeast Asia	2021-2023	*all AMS*

11	[Completed] Japan-MAFF funded Project to enhance capacities on soil carbon sequestration and methane emission reductions	2019-2022	*all AMS*
Category ii） **Human resource development for building resilient and sustainable agriculture , forestry and food systems**			
12	Japan-MAFF (Forestry Agency) funded ITTO Project on Sustainable Wood Use Promotion in Timber producing countries	(i) and (ii) 2023-2024 (iii) 2021-2023	*(i)Indonesia,* *(ii)Thailand,* *(iii) Vietnam*
13	Japan-MAFF (Forestry Agency) and MOFA funded ITTO Project on Capacity Building for Sustainable Forest Management in Timber producing countries	(i) 2021-2024 (ii) 2023-2025 (iii) 2021-2024	*(i)Cambodia,* *(ii)Malaysia,* *(iii) Myanmar*
14	JICA technical cooperation projects on sustainable forest management	(i) 2020-2024 (ii) 2023-2027 (iii) 2022-2027 (iv)2018-2024 (v) 2021-2025	*(i)Cambodia,* *(ii)Indonesia,* *(iii)Lao PDR,* *(iv)Myanmar,* *(v) Vietnam*
15	East Asia Plant Variety Protection Forum	2007-2027	*all AMS*
16	Project for Enhancing the Understanding of GAP by Japan-ASEAN Partnership (ASEAN MAFF GAP Project)	2022-2025	*all AMS*
17	Capacity Building Project for Farmer's Organizations to Support the Development of Food Value Chain in ASEAN Countries (CBF Project)	2021-2024	*all AMS*
18	Human Resource Development Project in Food-Related Areas through Partnership Program with Universities in ASEAN Region (Japan) - Phase 3	2021-2023	*all AMS*
19	Promotion of Crop Insurance in ASEAN through the Public and Private Partnership	2023-2025	*all AMS*
20	Implementation and assessment of the ASEAN regional plan of action for the management of fishing capacity	2023-2025	*AMS except Lao PDR*
Category iii) **Other supports for the implementation of the ASEAN Regional Guidelines for Resilient Sustainable Agriculture and Food Systems in ASEAN**			
21	Project on the Feasibility study on the use of Biomass Resources that contribute to Carbon Neutrality	2023-2024	*several AMS*
22	Building stable food systems and developing climate change adaptation and mitigation measures on irrigation and drainage facilities	2021-	*several AMS*

23	Mangrove Ecosystem Management in ASEAN Region	2022-2024	*AMS except Lao PDR*
24	Regional Collaborative Research and Capacity Building for Monitoring and Reduction of Marine Debris from Fisheries in Southeast Asia	2022-2024	*all AMS*
25	Japan-MAFF funded ERIA Research Project on Building and Enhancing Resilient Sustainable agriculture and Food Systems in ASEAN Countries	-2025	*all AMS*
26	Project for Strengthening ASEAN Food Security Information System (AFSIS) Function for Emergency	2022-2025	*all AMS*
27	Collaborative Research and Capacity Building for Conserving and Using Plant Genetic Resources for Sustainable Agriculture (PGRAsia Project)	2021-2026	*Cambodia, Lao PDR, Vietnam*
28	[Completed] Creation and Testing of Learning and Accreditation Programme to Implement ASEAN RAI Guidelines	2021-2023	*Cambodia, Vietnam*
29	[Completed] Sharing Best-practices on the Development and Promotion of On-Farm Irrigation Management among the Water-User Groups in CLMV Countries	2021-2022	*all AMS*
30	[Completed] Data Collection Survey on Food Value Chain Development in with/PostCOVID-19 Society in the South-east Asia Region	2021-2022	*all AMS*

Annex 2 : Future Projects

These cooperation projects listed in Annex 2 are those that have not yet been initiated as of the date of the Special Meeting of ASEAN-Japan Ministers on Agriculture and Forestry, but AMS and Japan are continuing discussions on their details, including financial basis. Additional projects or AMS can be added.
Generally, these projects are expected to start from seminars, followed by local demonstrations in some AMS and dissemination to other AMS. As of the dissemination, coordination with the relevant organizations and conducting the necessary surveys will be needed.

	PROJECTS	Status and Future action	Concerned AMS
Category i) **Development, demonstration and dissemination of technologies for building resilient and sustainable agriculture and food systems through innovation, such as technologies enhancing smart/digital agriculture, circular economy, biomass energy reducing Green House Gas (GHG) emission and Integrated Pest Management (IPM).**			
1	Contributing to the reduction of fertilizers through automatic plotting technology and soil diagnosis of farmland using satellite data	*The first demonstration will be conducted this year in Thailand. Other demonstration sites will be searched for with concerned AMS*	*Thailand and other AMS*
2	Contributing to increase of productivity and reduction of labor hours through automatic steering technology	*Demonstration in rice production was conducted and its results will be briefed. Demonstration sites for sugarcane are being searched for with concerned AMS.*	*Several AMS*
3	Launch of a project on Joint Crediting Mechanism (JCM) to promote climate change mitigation in agriculture（JAPAN-MAFF funded ADB project）	*Preparation in progress to launch expert committees consisting of countries and relevant international research institutes aiming at creating transparent and reliable carbon credits in line with Article 6.2 of the Paris Agreement. Demonstration projects for methane reduction from rice paddy fields will be implemented in 2024.*	*Vietnam*
4	Promotion on climate change adaptation and mitigation measures through agricultural and rural development in the Asian Monsoon region	*Demonstration plans of contributing to GHG emission control and disaster reduction in paddy fields are being considered this year. Demonstration will be conducted next year.*	*Cambodia, Lao PDR*
5	Promotion on smart irrigation system technology for fruits	*Demonstration sites are being searched for on Thai side.*	*Thailand*
6	ASEAN-JICA capacity building project on IUU fishing countermeasures in Southeast Asia	*First technical training for AMS will be conducted this year in Thailand.*	*all AMS*
7	Establishing the basic MRV environment to scale up GHG reduction, as well as stakeholder coordination to scale up actions on	*First technical training will be conducted this year in AMS.*	*all AMS*

	the ground		
8	Reducing GHG originating from livestock sector through optimized feeding by introducing livestock information management system	*The demonstration project by Japanese institution is ongoing in Vietnam.*	*Vietnam*
9	Providing crop and other information using satellite data and agricultural machine that contribute to establishing effective MRV systems	*The demonstration project by Japanese institution is ongoing in Cambodia.*	*Cambodia*
10	Introducing agroforestry practices in coffee production that contribute to increasing profitability of local farmers while preventing deforestation	*Japanese institution is providing technical assistance.*	*Lao PDR and other AMS*
11	Projects on GHG emission reduction	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Cambodia, Malaysia, Thailand, Vietnam*
	➢ *"Prolonged midseason drainage" in paddy fields for maintaining agricultural production and decreasing greenhouse gas emissions*		
	➢ *Greenhouse gas emission reduction technology with the combination of biogas effluent application and multiple drainage in a rice paddy*		
	➢ *A method to estimate the reduction in life cycle greenhouse gas emissions from rice cultivation caused by the use of alternate wetting and drying*		
	➢ *Energy-saving low-carbon technology in greenhouse horticulture utilizing thermal energy in irrigation canals*		
	➢ *Technologies for reducing greenhouse gas emissions from livestock waste*		
	➢ *Mitigation of methane emissions from local cattle using cashew nut shell liquid feeding*		
12	Projects on GHG emission reduction and Biomass utilization	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Indonesia, Malaysia, Thailand*
	➢ *Low-cost, high-efficiency production of CH4 and H2 from agricultural residues through microbial saccharification and bio-methanation*		
	➢ *Utilization by "Multi-Biomass*		

	Treatment Process" of unused biomass discharged from the palm oil industry		
13	Projects on GHG emission reduction and fertilizer reduction	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Malaysia*
	➢ *Biological nitrification inhibition maintains wheat yield with reduced nitrogen fertilizer application*		
14	Projects on climate disaster mitigation	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Cambodia, Malaysia, Thailand*
	➢ *"Paddy Field Dam" that reduces flood damage downstream while maintaining agricultural production*		
	➢ *Monitoring saline intrusion in rivers near paddy fields using satellite data*		
	➢ *Underdrain-drilling machine "Cut Drain": Easy construction of subsurface drainage without additional materials*		
15	Project on chemical pesticide reduction	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Malaysia, Thailand*
	➢ *International differential system to protect the rice production against rice blast diseases*		
16	Project on labor productivity enhancement	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Cambodia, Malaysia, Thailand*
	➢ *Smart production systems contributing to productivity improvement in paddy rice cultivation*		
	➢ *Smart agricultural machinery in compliance with the Common Communications Standard (ISOBUS)*		
17	Project on resource management/labor and productivity	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Cambodia, Malaysia, Thailand*

	➢ *Information and communication technology-based water management system for reducing agricultural water usage, agricultural labor, and electricity*		
18	Project on food loss reduction	*Detail information of the technology will be provided to AMS, and seminar will be held by Japanese side toward field demonstration.*	*Malaysia*
	➢ *Maintaining an acidic condition can prevent liquefaction of fermented rice noodles*		
Category ii） **Human resource development for building resilient and sustainable agriculture , forestry and food systems**			
19	Japan-MAFF (Forestry Agency) funded ITTO project on sustainable wood use promotion in timber producing countries	*Coordination in progress*	*Malaysia*
20	Activities to establish circular agriculture through public-private partnerships to train trainers to teach cultivation techniques and to utilize food residues as fertilizer	*Investigation and drafting of concept note are in progress.*	*Thailand and other AMS*
21	Capacity building activities of durian farmers in collaboration with local cooperatives	*The project by Japanese institution is ongoing in Malaysia.*	*Malaysia and other AMS*
Category iii) **Other supports for the implementation of the ASEAN Regional Guidelines for Resilient Sustainable Agriculture and Food Systems in ASEAN**			
22	ASEAN-JICA food value chain development project	*Its cooperation period is three years starting in 2023.* *A launching seminar is prepared to be held in November 2023.*	*all AMS*