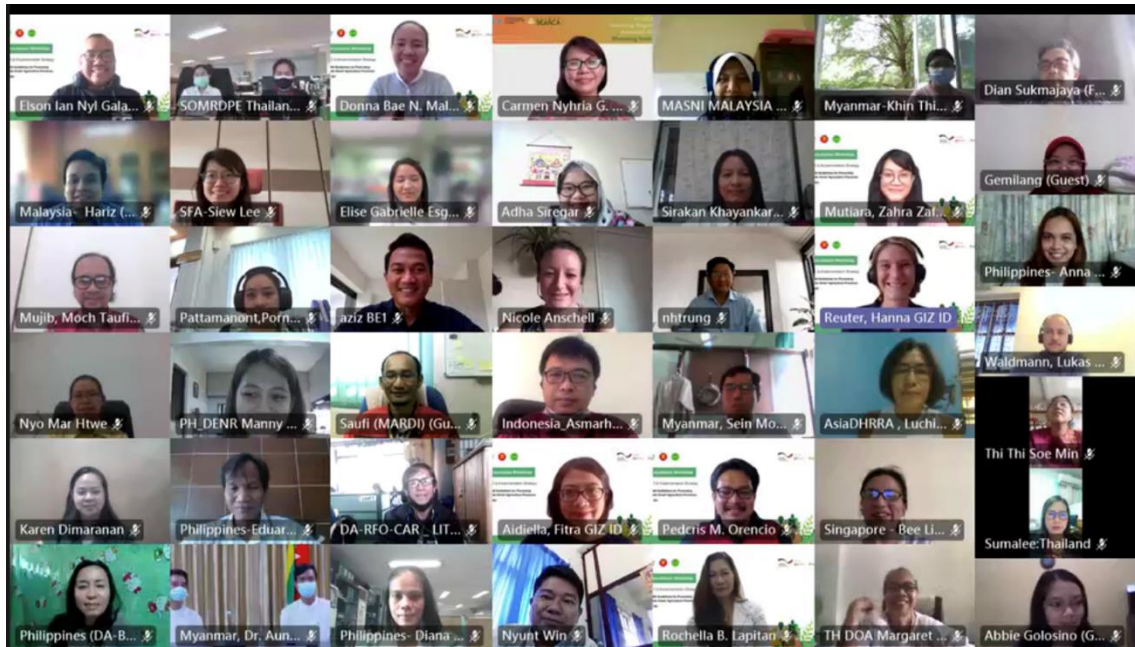





CONSULTATION WORKSHOP EVENT SUMMARY

ASEAN Guidelines for Promoting Climate Smart Agricultural (CSA) Practices Volume III and Implementation Framework




July 7, 2021

ASEAN Guidelines for Promoting Climate Smart Agricultural (CSA) Practices

Volume 3 and Implementation Strategy

Date : 7 July 2021
Location : MS Teams
Event: 1st Consultation Workshop

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Group photo of the meeting participants. (Photo: SEARCA/Renz B. Tabadero)

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List of Abbreviations

ACRF	ASEAN Comprehensive Recovery Framework
AMAF	ASEAN Ministers on Agriculture and Forestry
AMS	ASEAN Member States
ARD	Agriculture and rural development
ASEAN	Association of Southeast Asian Nations
ASEAN CRN	ASEAN Climate Resilience Network
ATWGARD	ASEAN Technical Working Group on Agriculture Research and Development
CSA	Climate Smart Agriculture
CSLU	Climate Smart Land Use
GDP	Gross Domestic Product
GHG	Greenhouse Gas
MARDI	Malaysian Agriculture Research and Development Institute
MRD	Mekong River Delta
PhilRice	Philippine Rice Research Institute
RCP	Representative Concentration Pathway
SEARCA	Southeast Asian Regional Center for Graduate Study and Research in Agriculture
SOMAMAF	Senior Officials Meeting on ASEAN Ministers on Agriculture and Forestry
SOMRDPE	Senior Officials Meeting on Rural Development and Poverty Eradication

I. Background

ASEAN Member States (AMS) have been increasingly responsive to how climate change is impacting agriculture throughout the region. The ASEAN Climate Resilience Network (ASEAN-CRN) was established to “ensure that the ASEAN Member States are in a better position to adapt their agricultural sectors to climate change and optimize its mitigation potential.”¹ The initiative by Thailand to create an inventory of adaptive practices in the agriculture sector led to the framing of the ASEAN Regional Guidelines for Promoting Climate-Smart Agriculture (CSA).

CSA Guidelines Volume I was developed alongside the establishment of ASEAN-CRN and the creation of its terms of reference. Both underwent the necessary official endorsement from policy-making bodies under AMAF in 2015. In 2017, CSA Guidelines Volume II was released to complement Volume I with additional information on CSA practices.

Together, Volumes I and II cover the following CSA practices:

Volume I:

- Stress tolerant maize varieties
- Stress tolerant rice varieties
- Agro insurance using weather indices
- Alternate wetting & drying
- Cropping calendar for rice and maize

Volume II:

- Integrated insurance
- Integrated farming system
- Climate information services
- Rice shrimp farming

In 2020, in response to the ongoing COVID-19 pandemic, ASEAN leaders endorsed the ASEAN Comprehensive Recovery Framework (ACRF) and its associated Implementation Plan. The ACRF recognized the importance of climate-smart agriculture, food security, and climate change mitigation and adaptation as important aspects for promoting a sustainable response to the challenges posed by the COVID-19 pandemic.

As a means to further promote the application of CSA practices in the region, ASEAN-CRN aims to complement the existing two volumes with:

- i. a third volume covering more CSA practices while reflecting on latest trends in CSA and considering the impacts of the COVID-19 pandemic, and
- ii. an “implementation strategy” providing general principles/recommendations for how to further advance CSA in ASEAN

The process is being supported by the Climate-Smart Land Use in ASEAN (CSLU) Project, financed by the German Federal Ministry for Economic Cooperation and Development (BMZ) and implemented by GIZ, with contributions from the Southeast Asian Regional Center for Graduate Study and Research in Agriculture (SEARCA).

¹ <https://asean-crn.org/>

Consultation workshop

On behalf of ASEAN-CRN, the Malaysian Agricultural Research and Development Institute (MARDI), also acting as this year`s Chair of the ASEAN Working Group on Agriculture Research and Development (ATWGARD) hosted the first consultation workshop that kick-started the development process of the ASEAN CSA Guidelines Vol 3 + Implementation Strategy.

Workshop objectives

- Generate insights about CSA technologies and practices at the national and regional level
- Explore perceptions about existing ASEAN CSA Guidelines
- Reflect on considerations and ideas for Volume 3 and the Implementation Framework
- Create a joint understanding of the way forward

II. Participants

The meeting was attended by ASEAN-CRN members, national focal points from ATWGARD and other selected ASEAN sectoral bodies, representatives of development agencies, and research institutions. In total, the workshop was attended by approximately 75 participants from seven different ASEAN sectoral bodies², further government agencies and development organisations.

The list of participants is attached in **Annex I**.

III. Workshop Agenda Summary

The final meeting program is attached as **Annex II**.

A. Opening Remarks

Dr. Mohd Shukri Mat Ali, Director of the Agrobiodiversity and Environment Research Center, Malaysian Agricultural Research and Development Institute (MARDI) opened the workshop by emphasizing the importance of climate-smart agriculture for the region. He expressed the view that the ASEAN policy framework and tool resulting from the consultation process will bring forward the ASEAN agenda and contribute to the global, regional, and national policy and implementation processes related to CSA. The Volume 3 of CSA Guidelines, as well as a complementing implementation strategy will serve as the reference for updating technologies, approaches, and policies for promoting climate-friendly and resilient agricultural practices in the region.

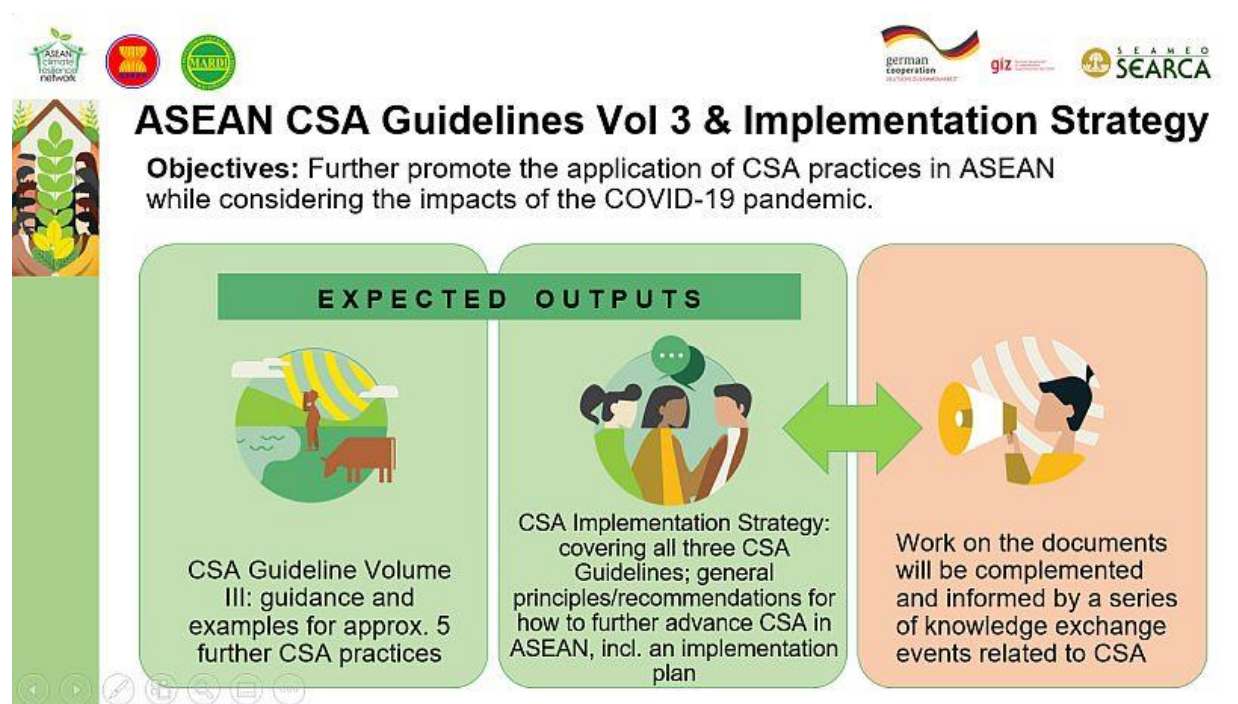
Dr. Pham Quang Minh, Assistant Director, ASEAN Secretariat, Food Agriculture, and Forestry Division echoed the outlook given by Dr Shukro and emphasized the relevance of this process for advancing action under the ACRF. He expects that the documents will consider the impact of

² ATWGARD, ASWGFI, ASWGC, AWGCC, ASWGL, AWGSF, SOMRDPE

the COVID-19 pandemic and reflect on approaches for promoting a green recovery in the agriculture sector.

B. Introduction of Agenda

Ms. Hanna Reuter of GIZ as the moderator of this event, provided an overview over the agenda and gave a brief recap of how the ASEAN CSA Guideline Volume 3 + Implementation strategy will build upon the existing Volumes I and II and what outputs are to be expected from the development process.



Picture 1: Expected outputs

C. Review of ASEAN Guidelines on Climate-Smart Agriculture

Dr. Romeo Labios of SEARCA presented a review of the existing ASEAN CSA Guidelines. As part of the objectives and outcomes from the creation of the ASEAN-CRN, the development of the CSA Guidelines Volume I was initiated and was eventually published in 2015. The ASEAN-CRN coordinated national studies that assessed impacts of climate change on agriculture and identified existing CSA practices across rice and maize/ cassava in Cambodia, Indonesia, Lao PDR, Myanmar, Philippines, Thailand, Vietnam, Brunei Darussalam, and Malaysia.

Through these national studies, the CSA Guidelines Volume I identified five practices that AMS representatives wanted to prioritize in knowledge exchange activities: (1) stress-tolerant rice varieties, (2) stress-tolerant maize varieties, (3) agro-insurance using weather indices, (4) alternate wetting and drying, and (5) cropping calendar for rice and maize. Each practice was

discussed in terms of technical descriptions, synthesis of technical issues, institutional and technical challenges, regional cooperation, and mechanisms.

Dr. Labios identified different institutional challenges encountered in scaling up CSA practices. These include the lack of effective approaches for the transfer of CSA technology and knowledge through agricultural extension programs, limited field demonstrations and piloting of the CSA practices in selected areas, difficulty in sharing and dissemination among AMS, difficulty in the implementation of effective regional networking and collaboration for research and development, activities, and projects, and a sustainable finance mechanism for scaling up CSA practices.

In 2017, the CSA Guidelines Volume II was published to update and complement the first Volume. It added four new CSA practices based on studies on the promotion of climate resilience for food security in ASEAN and learnings from major ASEAN CRN regional events from 2015-2017. These new CSA practices are (1) agricultural insurance, (2) integrated farming systems, (3) climate services, and (4) rice-shrimp farming.

In 2020, the Climate Smart Land Use (CSLU) [reviewed the CSA Guidelines Volumes I and II and other ASEAN Guidelines in terms of content and style, drafting and development, dissemination and awareness-raising, and implementation and monitoring](#). From this review, the CSLU came up with eight recommendations to improve the process of CSA Guidelines development, the outputs from such development process, and the adoption/rollout of these outputs. The experiences of ASEAN-CRN in crafting the CSA guidelines was also presented.



Picture 2: Example of development process for ASEAN CSA Guidelines by ASEAN-CRN

The review and recommendations mentioned above provide important considerations in the development for CSA Volume III and its corresponding implementation strategy. Given all these CSA technologies and practices from Volume I and II, and others that might be included further, there is a need to have a tangible approach on which ones to select and prioritize for implementation in respective community (ies). A guideline in assessing and prioritizing the technologies and practices using an indicator based prioritization was presented. This include: (1) assessment of CSA interventions, (2) assessment of implementation feasibility, (3) assessment of adoption barriers, (4) assessment of incentive mechanisms, and (5) assessment of key implementation players.

After the prioritization and selection of the most relevant, useful, and feasible CSA technologies and practices, the next question is on how to operationalize and implement CSA (ies). The strategies of the Philippines towards transforming agriculture and rural development (ARD) under climate change condition was presented as an example.

D. Discussion on the process and output of developing CSA Guidelines and on the adoption/rollout of CSA Guidelines

Guiding questions for the participants:

On Process and Output of Developing CSA Guidelines:

Reflecting on the existing CSA Guidelines Vol. I and II, how they have been developed and applied, what should be maintained, what could be improved that would lead to the development and implementation of national policies and programs?

On the Adoption/Rollout of CSA Guidelines:

Given technologies and practices outlined in Vol. I and II, what implementation strategies should be included in CSA III?

Dr. Mak Soeun from the Ministry of Agriculture, Forestry, and Fisheries of Cambodia responded that Cambodia is focused on soil integrated management, integrated nutrient and water management. The CSA Guidelines provide useful tools for agriculture. He suggests for the Vol 3 & Implementation Strategy (1) to encompass different areas of agriculture, such as crops, livestock, and fisheries, (2) and to provide clear guidelines for implementation which are consistent with other ASEAN guidelines. Mr. Soeun emphasizes that CSA is not just a technology but a comprehensive approach. This should be reflected by the new policy documents.

Dr. Margaret Yoovatana from the Department of Agriculture in Thailand added that CSA Guidelines Volume III should refer to the three components of CSA to cover enhanced productivity, increased resilience, and reduction of GHG emissions. CSA Guidelines Volume III may also focus on resilient food systems and response to pandemics and environmental shocks.

Ms. Imelda Bacudo of ASEAN CRN agreed with Mr. Soeun that CSA is an approach. She cautioned to talk about a plan for “rolling out” CSA, as this would indicate there is a starting point.

But CSA has been happening even before Volume I was produced, hence a “roll out” plan would be unnecessary. Additionally, Ms. Bacudo pointed out that Volumes I and II have been produced based on a compilation of experiences from different stakeholders with implementing CSA practices. She advised to also consider the outcomes of the three events organized by ASEAN-CRN under the UN Food System Dialogues for the Vol 3 + Implementation Strategy.

Dr. Labios responded that “upscaling strategy” may be used instead of “roll out”. As an “upscaling strategy” the Implementation Strategy could provide guidance on how to prioritize and develop a locally adapted strategy.

Ms. Alfi Syakila from the ASEAN Working Group on Social Forestry seconded the comment from Mr. Soeun on the alignment with other suggested guidelines. She suggested the incorporation of the landscape approach and the learnings from the COVID-19 pandemic in the guideline documents.

Mr. Mohammad Hariz bin Abd Rahman from MARDI, said that Malaysia has worked in the 5-year timeframe starting in 2021 to 2025. He suggested including a timeframe in the CSA Guidelines to align with the implementation of programs and activities in Malaysia.

Mr. Soeun suggested to use the three principles of CSA as the overarching structure for the guidelines. He strongly believes that this will aid in the implementation of CSA practices in local communities. Mr. Soeun also mentioned that we need to consider how CSA serves as a tool in the context of food systems and food supply chains.

Dr. Labios talked about agroforestry and the landscape approach in the CSA Guidelines. As suggested by some participants, a landscape or systems approach may be more beneficial instead of focusing on one specific CSA practice. He cited climate-smart villages as an example.

Dr. Nguyen Hieu Trung from Can Tho University in Vietnam highlighted that CSA is complex and affected by new developments continuously, for example the COVID-19 pandemic. He suggests to develop a web-based platform for sharing real-time information and knowledge on CSA. Dr. Trung shared Vietnam’s experience in creating a dynamic website that is currently utilized by one of their local community. Dr. Trung suggested that the CSA Guidelines should be constantly updated and should be responsive to changes for it to be relevant to its stakeholders.

Dr. Aung Moe Myo Tint from the Ministry of Natural Resources in Myanmar suggested creating an integrated CSA Guidelines digital platform for target communities, villages, and regions. This digital platform may highlight the most effective CSA practices from Volumes I and II. Dr. Tint adds that the Agriculture Development Strategy (ADS) in promoting IT for technological dissemination should be prioritized.

E. Evolution and emergence of shocks and stresses related to climate change in Southeast Asia

Dr. Pedcris Orencio of SEARCA noted that the majority of Southeast Asian countries are affected by climate change. Most being part of the developing countries, their vulnerability to climate impacts may be different given the underlying factors such as the effects of changing climate on their natural resources, livelihood, and food security. Climate change impacts include decreased water availability, extinction of species, intense storms, and droughts. The IPCC has developed several climate projections and scenarios to show these various impacts. On the impact of climate change to crop production, Dr. Orencio said that the changes in temperature and precipitation can make lands less arable. He adds that not all changes are negative because, in some areas, crop yield increases. The underlying risks are not limited to sustaining the crop production activities but affect the entire food system. The observed risks are affected by other disruptions such as the pandemic that result to supply and demand shocks.

Dr. Orencio took the Mekong River Delta (MRD) in Vietnam as an example to illustrate how climate change threatens economic and food security. With the IPCC's RCP 4.5 climate change scenario, MRD is expected to experience a yield reduction of 1.93% and this could go up to 6.38% with the RCP 8.5 scenario. In the RCP 4.5 scenario, the estimated reduction of the value of yield per hectare averages at US 42.89/ton/ha while in the RCP 8.5 scenario it could quadruple to USD 146.55/ton/ha. Dr. Orencio noted that for rice production, climate change impact would be seen in the percentage of rice fields experiencing salinity intrusion and the grain quality of the rice. These effects of climate change on crop production losses equates to food losses and an increase in the prices of food products.

With this, Dr. Orencio emphasized that farmers in the MRD need to understand the negative effects of salinization on their lands and must develop and employ farm-level responses to salinization. This can be done through (1) experimentation and learning the application of local and traditional farming systems, and (2) improving the crop yield by applying fertilizers and switching local rice varieties that have higher yield and shorter growth duration. There is also the need to adopt new CSA technologies such as the 41 new salinity and flood tolerant varieties which can be coupled with adjustments in the cropping calendar to avoid the drought-salinity intrusion cycles.

At the macro and meso levels, adaptation strategies can be through the development of an innovative system of integrated policy, services, technology, human capital development, and social community engagement. At the micro-level, adopting Good Agricultural Practices (GAP) in coastal rice farms can be an adaptive CSA approach. Based on the GAP for growing rice in coastal saline areas, farmers could follow 7 steps to increase rice yield including:

1. Selection of rice varieties appropriate to each cropping season and rice agro-ecosystem
2. Use of high-quality seeds
3. Seedbed management
4. Field preparation
5. Water management to reduce effects of salinity
6. Fertilizer management to increase yield and maintain healthy soil

7. Timely rice harvest to reduce grain losses and ensure grain quality

F. Proposed Strategies for CSA Promotion and Implementation

Dr. Romeo Labios presented the proposed strategies for CSA prioritization, promotion, and implementation. The approach in assessing and prioritizing the technologies and practices using an indicator-based prioritization of the CSA technologies and practices includes the assessment of the CSA intervention, implementation feasibility, adoption barriers, incentive mechanisms, and the key implementation players.

On the assessment of CSA interventions, the assessment tool determines the productivity rate in the absence of biotic/abiotic stress, resilience rate in the presence of biotic/abiotic stress, and GHG emission rate of identified technologies and approaches. Scoring through likert scaling method (with -ve value meaning reduction and +ve value meaning increase) was used. The assessment used a technology ranking based on composite indicators wherein the methodology has a multi-criteria analysis. Dr. Labios used the Philippines as an example, noting that controlled irrigation (alternate wetting and drying technique) received the highest score in the assessment of CSA technologies and approaches for irrigated lowland ecosystems. Controlled irrigation is followed by site-specific nutrient management and *Palay* check system.

On the assessment of implementation feasibility, the indicators used are technical feasibility, cost of technology, inclusivity (gender friendliness), and synergy with government plans.

On the assessment of adoption barriers, the barriers include the availability of finance, availability of machinery, awareness of the farmers about the CSA intervention, availability of labor, availability of reliable water, availability of government support, access to extension service, and access to market (by the potential users).

On the assessment of incentive mechanisms, indicators used are subsidy, credit, capacity building, and market linkages, while the assessment of key implementation players identify the respective roles and responsibilities of the different stakeholders in the dissemination of CSA interventions.

Dr. Labios also discussed the seven Philippine Strategies for Transforming Agriculture and Rural Development (ARD) under Climate Change. These strategies are interconnected and aim to help farmers and farmer organizations to collaborate, improve farm productivity, reduce GHG emissions, and enhance their resilience. Each of these strategies was also presented with suggested example activities.

The seven Philippine strategies are:

- (1) Sustainable CSA Technology and Approaches through Integrated Clusters and Landscapes Approaches
- (2) Empower Farmers and Farmer Organizations
- (3) Go Digital

- (4) Mainstreaming Low Emission Development
- (5) Improved Access to Finance
- (6) Enhanced Social Inclusion
- (7) Educate the Consumers and Producers

Dr. Labios also discussed the suggested methods for a results-based monitoring and evaluation of the promotion and implementation of CSA. Monitoring and evaluation should involve gathering specific data related to project indicators while focusing on the outcomes and impacts of the CSA interventions. Activities can include setting the project baselines, defining the indicators, measuring progress, and evaluating successes and the problems encountered by CSA interventions at the end of the project. Dr. Labios also emphasized that monitoring and evaluation activities should start even during the project preparation stage because it is closely connected with the overall CSA planning.

G. Open Forum

Participants sought clarification about some aspects of the presentations such as indicators for monitoring resilience and GHG emissions, and additional details on the *Palay* check system which is practiced in the Philippines.

Dir. Eduardo Jimmy Quilang of the Philippine Rice Research Institute (PhilRice) suggested to consider the aspects of pest management and direct-seeded rice (DSR) technologies in the context of the CSA Guidelines.

Ms. Suttapak Panpapai of the Ministry of Interior in Thailand referred to the ASEAN 2021-2025 Rural Development and Poverty Eradication Work Plan and pointed out potential synergies with the work of the agriculture sector on CSA. She further shared the observation that due to the COVID-19 pandemic in Thailand many people lost their jobs and went back to their rural communities and started working as farmers. Some of these in-country migrants bring new,

Picture 3. Philippine strategies for ARD under climate change.

“smart” approaches to farming and the CSA Guidelines could provide an important source of information for them. For the CSA Guidelines Volume III, Ms Suttapak suggests to include livestock and fisheries, and address food systems, food value chains, and farmlands.

H. Breakout Session and Plenary Session

The participants were divided into four breakout groups to answer the following key questions:

- Which of the following strategies (see Annex IV for infographic) are the most relevant for your country given emerging shocks and stresses (e.g., climate change, pandemic)? Are there any strategies not identified or included in this framework?
- What factors hinder the implementation of such strategies in your country?

- *What factors facilitate or support the implementation of such strategies in your country?*

Ms. Zahra Mutiara, Dr. Pedcris Orencio, Dr. Romeo Labios, and Ms. Hanna Reuter facilitated the discussions in the breakout room and reported back in the plenary on the highlights of their discussions. See **Annex III** for the documentation of the breakout room discussion.

Ms. Zahra Mutiara of GIZ, for the Indonesia, Malaysia, Vietnam, and Singapore group, reported that there was a common understanding of what CSA is. The group was able to cover both the mitigation and adaptation aspects.

In Malaysia, when talking about CSA, the priority is to ensure low emissions agriculture system. When implementing the CSA approaches, one aspect with the most concern is to ensure crop suitability with specific varieties based on different agroclimatic zonation: (1) clean & regular; (2) short & fairly regular and (3) without regular dry season.

Dr. Trung added that work in introducing CSA to the relevant stakeholders should follow the landscape approach. Because the change in approach and impact will affect the resilience of a community greatly. The approaches of CSA should also be integrated by local business sectors as the main pillars of supply inputs by adopting certain techniques or technologies.

In Singapore, they implement smart climate technologies and practices onto existing practices. Community practices and technologies help farmers select approaches that are suitable to what they should be focusing on. Nonetheless, the challenge is on the availability of such information (of readily-used technologies) for the farmers. While farmer-to-farmer learning is essential, farmers also need an access to the existing knowledge and technologies. There should also be a pool of indigenous and community knowledge at the same time. In Indonesia and Malaysia, they use farmer-to-farmer learning platforms and organizations to disseminate good practices that the government is trying to replicate in other parts of the country.

The implementation of CSA in Indonesia is synergized under the government vision in Agriculture 4.0. There are some tool developments such as mobile-app to provide soil sensory to help farmers in finding the balance of soil fertilization. The role of extension agencies is crucial in dissemination of CSA techniques and technologies. The dissemination of a certain technology would also benefit from the cross-institutional collaboration to ensure the technology can be accessed virtually and financially by the farmers on the ground.

The hindering factors to these strategies are primarily the cost of technology and a stable internet connection that would allow more farmers or communities to access tools. These factors prevent opportunities for the wider public to implement CSA technologies.

Mr. Elson Galang reported for the Thailand-Cambodia-Lao PDR group. He said that the participants are generally amenable to the current contents of the Philippine strategies for transformation under climate change. They also already implement different activities for these strategies such as remote sensing to monitor land use in Cambodia. Participants also identified

additional activities to accelerate these strategies such as creating enabling frameworks for private-public partnerships, maximizing certification, exploring carbon credits and payment for ecosystem services, and increasing awareness of younger consumers to respond to climate change shocks in Thailand. There was also a strong call on ways to mainstream CSA in regional, national, and/or local programs.

Hindering factors identified across countries are the availability of data, land tenure issues, and downscaling of investments to farmers.

Ms. Rochella Lapitan of SEARCA in the Philippines reported that the additional activity other than the seven umbrella strategies is provision of subsidies for farmers during the transition period from pandemic period to normalcy. The facilitating factors identified include land consolidation at national and regional level, provision of government program for farm mechanization that can be adopted by farmers, linkages/cooperation with private suppliers of farm mechanization and banks, establishment of village seed banks (diversification of crops and livelihoods) and design of appropriate CSA technology in diverse agroecosystem.

Under the strategy of empowering farmers, farmer families, and organizations, the group suggested the establishment of knowledge centers. The facilitating factors to this are the establishment of knowledge centers and provision of investment, while the hindering factor is the reluctance of farmers to join. For the mainstream low emission development strategy, strengthening the implementation of policy on low emission technologies and practices and agroforestry roadmap may prove useful. Awareness programs headed by financial institutions can improve access to finance according to the group, especially because investing in agriculture is often perceived as a “risk.” In educating consumers and producers, baseline information as basis for planning and program development should be developed. Traditional and ethnic healthy foods should also be promoted as well as improving market and information systems.

Ms. Reuter facilitated the Philippine group. The group discussed about digitalization becoming more and more important in the agricultural sector. A lack of understanding of the available technologies and their application, particularly for farmers and small-scale enterprises, is a large hindering factor. There is a need to provide basic knowledge and access to digital tools/infrastructure. Further, the farm clustering approach was mentioned, which is currently being piloted in the Philippines. It is promising in terms of improving farmers’ productivity and access to markets.

Participants highlighted that there is a need for more good test cases, and general strategies need to be operationalized so that farmers and other stakeholders in the agriculture sector can apply them. Also farmers need to better understand the benefits of CSA. Access to funds by farmers is perceived as a major barrier as there is a disconnect between farmers and banks. This is due to the high risk of farmers not being able to repay loans, especially when natural disasters hit leading to crop failure. To improve access to finance, insurance schemes are recommended. Farmers also need to increase their capacity in managing funds.

On consumer perspectives on the CSA approaches, the group said the consumption choices are linked to demography; poor people choose products mainly because of their price. Strategies for promoting “CSA products” could be to promote labelling and explore if more sustainable production could also lead to superior quality.

On the data and information front, there are attempts to localize data, so farmers receive information in a format suitable to them. Again, digitalization could greatly benefit the farmers as it can be used as a decision-making tool.

Generally the group agreed that cooperation between different institutions and stakeholders is necessary for successfully promoting cross-cutting approaches such as CSA and digitalization in agriculture.

In the following discussion, **Mr. Soeun** of Cambodia noted that the additionally to the aspects mentioned by the groups the enabling policy framework for mainstreaming CSA at regional, national, or local levels will be needed.

Ms. Bee Ling Poh of Singapore said that there is a need for more unique cases and feedback from the grassroots on the successes of CSA implementation. She suggested to provide more information on specific approaches mentioned by the groups, for example on the farm clustering approach, could be shared through other exchange formats.

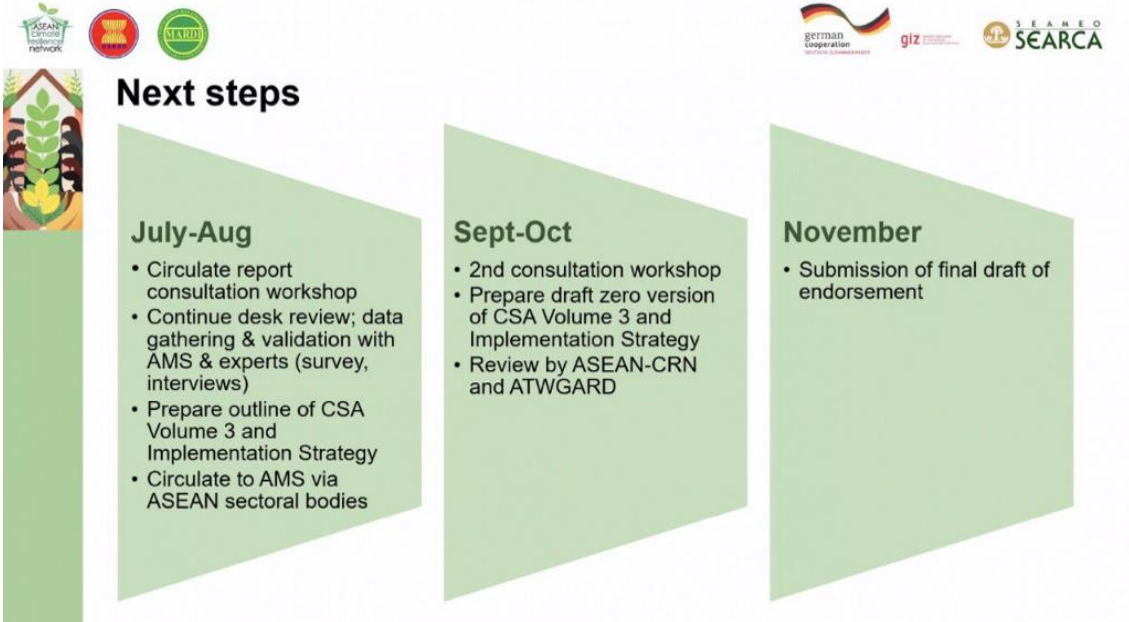
I. Summary and Next Steps

Ms. Reuter of GIZ commended the participants for a very rich discussion and noted that there are a lot of approaches, strategies, stakeholders, and recommendations to take into consideration. She noted that several participants shared similar views on the design of CSA Guideline Vol 3 and the Implementation Strategy as presented by the research team, specifically related to addressing CSA more from a systems perspective. Ms. Reuter noted that CSA as an approach has been existing for a long time, even before it was recognized internationally. The development process for the new CSA documents will build on this rich source of information and will consider the experiences and perspectives of relevant stakeholders in the region.

J. Closing Remarks

Mr. Dian Sukmaiaya from the ASEAN Secretariat thanked GIZ, SEARCA, and the facilitators for organizing the event. He also thanked the participants for expressing their support for the CSA Guidelines, especially during the breakout sessions. Based on the discussions, SEARCA can identify the gaps in the implementation of CSA interventions as well as the needs of AMS countries for mainstreaming CSA. Mr. Sukmaiaya highlighted the importance of successful stories in strengthening CSA and in further identifying areas to be prioritized. In closing, Mr. Sukmaiaya guaranteed that the ASEAN Secretariat will facilitate the development and the approval process through ATWGARD and SOM AMAF.

Ms. Reuter of GIZ thanked everyone for their contributions to the development of CSA Guidelines Volume III and the Implementation Strategy. Based on the day’s consultation workshop, SEARCA will continue to conduct research and work on the zero drafts of the documents. The outline for the CSA Guidelines Volume III and its Implementation Strategy will be shared with the relevant ASEAN sectoral bodies and members of ASEAN-CRN for comments. A second consultation will be held in September to discuss the suggested outline for the document and its concrete content. The final round of review will be conducted by ASEAN-CRN and ATWGARD.



Picture 3. Summary of next steps.

Annex I. Participants' list

Government Representative

Cambodia - Department of Climate Change, Ministry of Environment

1. Mr. Sum Cheat

Indonesia - Indonesian Agency for Agricultural Research and Development (IAARD)

2. Dr. Asmarhansyah

Indonesia - Indonesian Center for Agricultural Land Resources Research Development (ICALARRD)

3. Dr. Adha Fatmah Siregar

Malaysia - Ministry of Energy and Natural Resources

4. Ms. Barathi Muniyandi

Malaysia - Department of Agriculture

5. Ms. Masni Binti Mohd Marzuki

Malaysia - Malaysian Agricultural Research and Development Institute (MARDI)

6. Dr. Mohd Saufi Bastami
7. Mr. Mohammad Hariz bin Abd Rahman
8. Mr. Mohd Aziz Rashid

Myanmar – Ministry of Agriculture, Livestock, and Irrigation (MOALI)

9. Dr. Pau Sian Kam (Department of Agricultural Research)
10. Dr. Aung Moe Myo Tint (Department of Agricultural Research)
11. Dr. Khin Thida Sann (Livestock Breeding and Veterinary Department)
12. Dr. Hnin Thidar Myint (Livestock Breeding and Veterinary Department)
13. Ms. Win Than (Department of Agriculture, Plant Protection Division)
14. Mr. Thura Soe (Department of Agriculture)
15. Mr. Thet Zin Maung (Department of Agriculture)
16. Mr. Myint Zin Htoo (Department of Fisheries)
17. Mr. Nyunt Win (Department of Fisheries)

Myanmar – Forest Department

18. Dr. Ei Ei Shwe
19. Mr. Sein Moe

Myanmar - Climate Change Division Environmental Conservation Department Ministry of Natural Resources and Environmental Conservation

19. Dr. San Win, Deputy Director
20. Ms. Thi Thi Soe Min, Assistant Director

Philippines - Department of Agriculture

21. Mr. Gerald E. Cammagay (Fisheries)
22. Dr. Carmelita C. Fantilanan (Western Visayas)
23. Mr. Lito D. Mocati (Cordillera Administrative Region)
24. Ms. Kay S. Olivas (Cordillera Administrative Region)
25. Ms. Imelda Gemino (Cordillera Administrative Region)
26. Mr. Abel F. Wagas (CARAGA Region)
27. Mr. Nicandro M. Navia, Jr. (CARAGA Region)
28. Ms. Melani A. Provido (Region XI - Davao City)
29. Mr. Simeon Fernandez (Region XI - Davao City)
30. Ms. Mary Ann B. Guerrero (Bureau of Plant Industry)
31. Mr. Arlan M. Mangelen
32. Mr. Lowell D. Rebillaco
33. Dr. Fabio G. Enriquez
34. Ms. Karen C. Dimaranan (Bureau of Animal Industry-National Swine and Poultry Research Development Center (BAI-NSPRDC))
35. Ms. Jenina Cusay (Bureau of Agriculture and Fisheries Standards)
36. Ms. Anna Dominique Cadsawan (Bureau of Agriculture and Fisheries Standards)

Philippines - Department of Natural and Environmental Resources - Forest Management Bureau

37. Ms. Manny Lie C. Racelis
38. Ms. Elise Gabrielle Esguerra
39. Ms. Dianne A. Lanugan
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42. Dr. Jasper G. Tallada
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- 54. Sumalee Pothong (Suphan Buri Field Crops Research Center)
- 55. Mr. Chaiya Boonlert
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- 77. Dr. Julian Gonsalves

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- 78. Ms. Nicole Anshell

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Annex II. Agenda

Time	Activity	Speaker/ Facilitator
9:00	Opening Remarks	Dr. Mohd Shukri Mat Ali <i>Director of Agrobiodiversity and Environment Research Center MARDI</i> Dr. Pham Quang Minh <i>Assistant Director, ASEAN Secretariat</i>
9:10	Introduction to agenda	Ms. Hanna Reuter <i>GIZ</i>
9:15	Review of ASEAN Guidelines on Climate-Smart Agriculture	Dr. Romeo V. Labios <i>SEARCA</i>
9:45	On the Process and Output of Developing CSA Guidelines and the Adoption/Rollout of CSA Guidelines	Ms. Hanna Reuter <i>GIZ</i> Dr. Pedcris M. Orencio <i>SEARCA</i>
10:10	Evolution and Emergence of Shocks and Stresses Related to Climate Change in Southeast Asia	Dr. Pedcris M. Orencio <i>SEARCA</i>
10:20	<i>Short Break and Group Photo</i>	
10:25	Proposed Strategies for CSA Promotion and Implementation	Dr. Romeo V. Labios <i>SEARCA</i>
10:45	Open Forum	Ms. Hanna Reuter <i>GIZ</i>
10:55	Orientation on Breakout Room Discussions	Dr. Pedcris M. Orencio <i>SEARCA</i>
11:00	Breakout Room Session: Input considerations and ideas for CSA Guidelines Volume III and Implementation Strategies	Facilitators: <ul style="list-style-type: none"> ○ Ms. Zahra Mutiara ○ Dr. Pedcris Orencio ○ Dr. Romeo Labios ○ Ms. Hanna Reuter
11:50	<i>Break</i>	
12:10	Group Output Presentation: Sharing and commenting on outputs of breakout groups in plenary.	Dr. Romeo V. Labios <i>SEARCA</i>
12:50	Summary, next steps, and closing	Mr. Dian Sukmaiaya <i>ASEAN Secretariat</i> Ms. Hanna Reuter <i>GIZ</i>

Annex III. Documentation of breakout room discussion

Breakout Room 1				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
Implementing suitable CSA technologies and practices through integrated clusters and landscape approaches	CSA Evaluation	Localizing/letting the farmers access climate info from PAGASA; sharing of this info into local material is needed Raising awareness on technologies and approaches, including their benefits Minimizing financial risk for farmers when adopting CSA	Many farmers are climate-conscious Close links with LGUs, academe, other organizations on the ground; convergence of different institutions to minimize conflicts on the ground	Limited awareness and knowledge of farmers/ communities/ SMEs about specific approaches and technologies and how to apply them Insurgency, peace, and order on the ground Farmers are risk-averse so want to be sure of the strategy, can recoup what they may lose in the process Pricing Access to (climate) data and information
	Mapping Risks and CSA Suitability			
	Customize Climate Information Services			
	Mechanization			
Empowering Farmers, Farming Families, and Farmer Organizations	Diversification of Crops and Livelihoods			
	Farmer-to-Farmer Learning	Farm clustering approach (currently piloted in the Philippines) Creating use cases to showcase the CSA approaches and their effects Make strategies more operational, break these down into smaller/doable/more easily understood steps		Cooperatives have failed before for a variety of reasons; need to show that coops can be of great benefit; give more voice to farmers as a group rather than individually
	Agricultural Entrepreneurship			
Farm Business School				
Go Digital	Big Data			

Breakout Room 1				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
	Internet of Things Blockchain Technology Agriculture 4.0	Increasing farmers' digital literacy Use digital technologies to improve access to localized data/information		Lack of knowledge, general understanding of technologies and how to apply these to agriculture
Mainstream Low Emission Development	Low Emission Technologies and Practices (e.g., Agroforestry) Incentives and other Benefits	Localizing/letting the farmers access climate info from PAGASA; sharing of this info into local material is needed		Access to (climate) data and information
Improve Access to Finance	National and International Funding Innovative Finance for Credit and Insurance Public-Private Partnerships Financial Literacy Programs	Crafting policies linking farmers to financing agencies Financial risk mitigation strategies (for financial institutions and customers from the agriculture sector) Promote agricultural insurance Capacity building / awareness-raising for farmers on accessing and managing funds	In the Philippines, there is a law that mandates that a percentage of a bank's resources be allocated for agriculture. Example social forestry in the Philippines: in rural banks, insurance is included when a loan is taken out by farmers; there are credit facilities available eg SIKAPSAKA, through the rural banks	The disconnect between farmers and banks: Farmers don't approach banks due to stringent requirements; risk for banks that loans are not being paid back (i.e. risk of crop failure due to natural disasters) Lack of knowledge on the local level for accessing and managing funds
Enhance Social Inclusion	Participatory Approaches Dialogues Youth Agri-preneurship			Impacts of COVID-19 pandemic on mobility
Educate the Consumers and Producers	Information, Education, and Communication Social Marketing Strategy Promotion of Alternative Food	Labeling Explore the potential of CSA to increase the quality of products	High-quality agricultural products	Lack of awareness for most consumers about CSA products The final deciding factor for most people choice is usually price

Breakout Room 2				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
Implementing suitable CSA technologies and practices through integrated clusters and landscapes approaches	CSA Evaluation	Provision of subsidies for farmers during the transition period (Pandemic period to normalcy)	Land consolidation (national level approach) Provision of govt program for farm mechanization that can be adopted by farmers	Negotiation with farmers to agree with land consolidation (farmers acceptance) Farm Mechanization: (1) Lack of investment support (2) Determination of market-led products and quality improvement
	Mapping Risks and CSA Suitability		Linkages/cooperation with private suppliers of farm mechanization and banks	
	Customize Climate Information Services		Establishment of village seed banks (diversification of crops and livelihoods)	
	Mechanization		Design appropriate CSA technology in diverse agroecosystem	Technology and knowledge transfer to selected agro-ecosystem
	Diversification of Crops and Livelihoods			
Empowering Farmers, Farming Families, and Farmer Organizations	Farmer-farmer Learning		Establishment of knowledge centers (eg YAU Climate Smart Agriculture Center) and provision of investments	The reluctance of farmers to join farmer organizations
	Agricultural Entrepreneurship			
	Farm Business School			
Go Digital	Big Data		Human Resource Development	Absence of unified service provider/platform
	Internet of Things		High-speed internet connection	Limited internet speed in several marginal areas
	Blockchain Technology			
	Agriculture 4.0		Mobile application for weather and crop production services	
Mainstream Low Emission Development	Low Emission Technologies and Practices (e.g., Agroforestry)		Policy development (for activities under MLE development);	Insufficient budget for policy development (re policy on importation of

Breakout Room 2				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
	Incentives and other Benefits		Strengthen the implementation of policy on low emission technologies and practices Development of agroforestry roadmap	farm machinery that could contribute to low emission)
Improve Access to Finance	National and International Funding		Creation of awareness program by finance institutions about private banking systems and lending facilities for farmers and farming families Contract farming	Agriculture as a business is risky (in terms of investment) Less financing in more fragile and risk areas The market linkage between producers, traders, and consumers
	Innovative Finance for Credit and Insurance			
	Public-private Partnerships			
	Financial Literacy Programs			
Enhance Social Inclusion	Participatory Approaches		Enhancing the program on farmer associations/organizations to promote social inclusion	Provision of incentives in organizing farmer associations
	Dialogues			
	Youth Agri-preneurship			
Educate the Consumers and Producers	Information, Education, and Communication		Development of baseline information as a basis for planning and program development Promotion of traditional or ethnic healthy food Improving market and info systems	
	Social Marketing Strategy			
	Promotion of Alternative Food			

Breakout room 3				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
Implementing suitable CSA technologies and practices through integrated clusters and landscapes approaches	CSA Evaluation			
	Mapping Risks and CSA Suitability			
	Customize Climate Information Services			
	Mechanization			
	Diversification of Crops and Livelihood			
Empowering Farmers, Farming Families, and Farmer Organizations	Farmer-farmer Learning			
	Agricultural Entrepreneurship			
	Farm Business School			
Go Digital	Big Data	Remote sensing (Cambodia)		
	Internet of Things			
	Blockchain Technology	Data Management and Analytics (to have relevant actions in these policies)		
	Agriculture 4.0			
Mainstream Low Emission Development	Low Emission Technologies and Practices (e.g., Agroforestry)	Payment for Ecosystem Services (CSA as an ecosystem service provider)		
	Incentives and other Benefits	Carbon Credit for CSA farming		
Improve Access to Finance	National and International Funding	Enabling framework for finance		
	Innovative Finance for Credit and Insurance	Climate Finance		
	Public-private Partnerships	Enabling environment for public-private partnerships		
	Financial Literacy Programs			

Breakout room 3				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
Enhance Social Inclusion	Participatory Approaches	Enhance collaboration among young people dairy and other livestock industry (Thailand)		
	Dialogues			
	Youth Agri-preneurship			
Educate the Consumers and Producers	Information, Education, and Communication	Increase awareness to prepare their options to respond (Cambodia)		
	Social Marketing Strategy			
	Promotion of Alternative Food	Certification (i.e., Sustainable Rice Platform)		
Additional Proposed Strategies: <ol style="list-style-type: none"> 1. Monitoring and Evaluation 2. Integration of policy and governance in the Framework so we can identify actions for Climate-Smart Agriculture 3. Mainstreaming CSA in regional, national, and/or community implementation programs 				
Cross-cutting Facilitating Factors: <ol style="list-style-type: none"> 1. Related practices are already being implemented (Cambodia) 			Cross-cutting Hindering Factors: <ol style="list-style-type: none"> 1. Availability of data (Thailand) 2. Land tenure* 3. Downscaling investments of farmers (Cambodia, Laos PDR) 	

Breakout Room 4				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
Implementing suitable CSA technologies and practices through integrated clusters and landscapes approaches	CSA Evaluation	Initial Comments/Clarification (Bee Ling Poh – SG): Make the technologies available for the farmers Resiliency: Climate change and shocks; low-emission		
	Mapping Risks and CSA Suitability	Hariz (Malaysia) Crop suitability on diff climatic zones (3) – low, medium, and high rain intensity NHTrung (Vietnam) Step by step – according to the dynamics of changes – socio-economic Consider the changes and their impacts on the resilience of the community Long and short term measures – engage the local business sectors (supply inputs and technologies; postharvest losses)		
	Customize Climate Information Services			
	Mechanization			
	Diversification of Crops and Livelihood			
Empowering Farmers, Farming Families, and Farmer Organizations	Farmer-farmer Learning	Bee Ling Poh (Singapore): Rain detection – automate How ready are the technologies?		

Breakout Room 4				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
		<p>Improve access to knowledge and technologies – people are not aware that certain technologies are there. Access to a central pool of knowledge – practices, and technologies Indigenous knowledge – making this available</p> <p>MASNI (Malaysia) FFS – training for a group of farmers – GAP (land prep to harvesting), nutrient and water management; farmers are expected to share what they've learned to other farmers in their community</p>		
	Agricultural Entrepreneurship			
	Farm Business School			
Go Digital	Big Data	MASNI (Malaysia): Collect soil sample – send to laboratories;	Allow the farmers to have a good/stable internet connection	The cost of getting access to soil sensor tool
	Internet of Things	MASNI (Malaysia): Use the available tools such as soil moisture	Extension agency of the Ministry of Agriculture	Some technologies are not 'ready'/there yet.
	Blockchain Technology			Improve access to technology and finance
	Agriculture 4.0	Adha Siregar (Indonesia): develop tools – soil sensor, Agriculture/Technology 4.0 – get the information on soil chemistry properties; recommendation;	Cross-institutional collaboration Many other institutions are interested	Budget; limited access to the internet Having to adapt to climate change and shocks

Breakout Room 4				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
		<p>application; launched already; conduct balanced fertilization; can help farmers in balanced soil fertilization; has advanced scales – use mobile and precisely get the recommendations</p> <p>NHTrung (Vietnam): Farming system to adapt to climate change Develop a tool to support participatory land use/farming systems that could help implement digitalization in farming; engaging farmers, government and private sectors – transforming agriculture sector; case studies from Mekong Delta</p>		
Mainstream Low Emission Development	Low Emission Technologies and Practices (e.g., Agroforestry)	Hariz (Malaysia): Mitigation on rice cultivation- methane reduction; AWD from Malaysian perspective- saturated water condition		
	Incentives and other Benefits			
Improve Access to Finance	National and International Funding			
	Innovative Finance for Credit and Insurance			
	Public-private Partnerships			

Breakout Room 4				
Umbrella Strategy	Example Activities	Proposed Additional Activities	Facilitating Factors	Hindering Factors
	Financial Literacy Programs			
Enhance Social Inclusion	Participatory Approaches			
	Dialogues			
	Youth Agri-preneurship			
Educate the Consumers and Producers	Information, Education, and Communication			
	Social Marketing Strategy			
	Promotion of Alternative Food			