



**STRATEGIC PLAN OF ACTION (SPA)  
FOR THE ASEAN COOPERATION  
IN AGRICULTURAL RESEARCH AND DEVELOPMENT  
(2016-2020)**

**2017**

**STRATEGIC PLAN OF ACTION (SPA) FOR**

**THE ASEAN COOPERATION IN AGRICULTURAL RESEARCH AND DEVELOPMENT (2016-2020)**

SECTOR : AGRICULTURE  
 SUB-SECTOR: AGRICULTURAL RESEARCH & DEVELOPMENT  
 WORKING GROUP: ASEAN TECHNICAL WORKING GROUP ON AGRICULTURAL RESEARCH & DEVELOPMENT (ATWGARD)

**STRATEGIC THRUST 1:**

*Enhance quantity and quality of production with sustainable, 'green' technologies, resource management systems, and minimise pre- and post-harvest losses and waste*

Action Programme	Activities	Sub Activities	Responsible ASEAN Bodies/Lead Country	Timeline	Key Performance Indicators /Deliverables/Means of Verification
1.1 Identify infrastructure investment requirements to increase production and reduce post-production losses, and address investment needs. (SPFAF 1.1)	1.1.1 Study and survey on existing gaps causing post-production losses.  1.1.2 Identify infrastructure investment for reducing postharvest/post production losses	<ul style="list-style-type: none"> <li>Reduction of Postharvest Losses for Agricultural Produces</li> </ul>	<ul style="list-style-type: none"> <li>ATWGARD / INDONESIA (JAIF project on postharvest led by IND)</li> </ul>	2016-2020	<ul style="list-style-type: none"> <li>GAPS identified</li> <li>Database developed</li> <li>Infrastructure requirements identified</li> </ul>
1.2 Increase private sector participation in policy discussions, programme and project formulation, research and development (R&D) and provide incentives and foster an enabling environment for public-private partnerships (PPPs) towards enhancing productivity and quality, recognising that the 'private sector' in the context of FAF must refer not only	1.2.1 Provide knowledge exchange platform between the NARS and private/business through PPP forums  1.2.2 Develop joint public and private	<ul style="list-style-type: none"> <li>Country reports on how R&amp;D investment from private sector is made</li> <li>Workshops /Fora/Exposition on PPP in R&amp;D projects</li> </ul>	ATWGARD	2016-2020	<ul style="list-style-type: none"> <li>Mechanisms/SOP for PPP in R&amp;D developed.</li> </ul>

<p>to larger commercial enterprises but must also include the small scale farmers, fishermen and SMEs. (SPFAF 1.3)</p>	<p>sector R&amp;D activities</p>				<p>- Number of PPP Projects obtained .</p>
<p>1.3 Develop yield and productivity enhancing technologies and best practices that involve land use intensification in a sustainable manner, bearing in mind that expansion of cultivable land rapidly reaches its limits even in the land-abundant AMS. (SP-FAF1.4)</p>	<p>1.3.1 Study/ analyse priority research areas for improving agricultural productivity</p> <p>1.3.2 Develop R&amp;D activities on enhancing productivity of crops commodities in a sustainable manner without causing any adverse effect on environment and the ecosystem</p>	<ul style="list-style-type: none"> <li>Country reports at to share existing technologies and practices on land use intensification</li> <li>Develop ASEAN R&amp;D roadmap for 2016-2020</li> <li>R&amp;D on aerobic rice</li> <li>Impact studies of land use intensification on environment and ecosystem</li> </ul>	<p>ATWGARD</p>	<p>2016-2020</p>	<p>- Number of technologies, best and safe practices on land use intensification</p>
<p>1.4 Develop new and appropriate technologies, best practices and management systems to ensure food safety and address health/disease and environmental issues, particularly in the fast growing aquaculture, livestock and horticulture sub-sectors (SPFAF 1.6)</p>	<p>1.4.1 Establish linkage with the crops, livestock and fisheries SWGs to establish priority research areas for food safety, health/disease and environmental issues, so as to develop joint RD&amp;I activities</p> <p>1.4.2 Promotion of Biosensor technology as a tool to ensure food safety in agriculture</p>	<ul style="list-style-type: none"> <li>Presentation by crops, livestock and fisheries at 12<sup>th</sup> or 13<sup>th</sup> ATWGARD on priority research areas for food safety</li> <li>Develop ASEAN R&amp;D roadmap for 2016-2020</li> <li>Workshop on the development and application of Biosensor technology</li> </ul>	<p>ATWGARD</p> <p>MALAYSIA</p>	<p>2016-2020</p>	<ul style="list-style-type: none"> <li>- Number of technologies developed, adopted and commercialized</li> <li>- Workshop on Biosensor application implemented.</li> <li>- Reduction in incidences of food borne diseases</li> </ul>

	<p>produce</p> <p>1.4.3 Promote use of appropriate technologies with hygienic and good management practices to ensure food safety</p>	<ul style="list-style-type: none"> <li>• Workshop on good and hygienic management practices</li> <li>• Periodic evaluation of aquaculture, livestock and horticulture farms for usage of appropriate technologies with hygienic and good management practices</li> <li>• Survey on incidences of food borne diseases originating from aquaculture, livestock and horticulture produce</li> </ul>			
<p>1.5 Carefully balance production increases with conservation objectives and needs of local communities to develop better management systems to minimise eco-system damage and promote sustainable management of forest and aquatic resources management. SPFAF 1.8)</p>	<p>1.5.1 Continue with the ASEAN CRN to scale up CSA practices</p> <p>1.5.2 Linkage with the Laos initiative on conservation agriculture</p>		ATWGARD	2016-2020	Number of management practices
<p>1.6 Increase investments in collaborative R&amp;D activities, and strengthen existing regional collaboration among AMS and with key international institutes, such as the International Rice Research Institute (IRRI), to</p>	<p>1.6.1 Develop and implement collaborative R&amp;D projects in specific areas identified by Member States</p>		ATWGARD	2016-2020	Percentage increase in the collaborative R&D activities

<p>generate sustainable technologies and management and harvesting systems, and effective extension/communication systems for technology diffusion. (SP-FAF 1.9)</p>	<p>1.6.2 Establish partnership with the private/business sectors/international organizations/dialogue partners in establishing RD&amp;I joint collaborations through existing collaborations</p>				
<p>1.7 Regularly review the nature of R&amp;D partnerships and strategic partnerships with concerned organizations to ensure that the research and training agendas are aligned with ASEAN goals. (SP-FAF 1.11)</p>	<p>1.7.1 Conduct monitoring and assessment of the RD&amp;I initiatives to ensure alignments with the ASEAN goals and to identify regional priority of RD&amp;I activities</p>	<ul style="list-style-type: none"> <li>• Align ATWGARD's agenda with the R&amp;D SPA and to monitor the relevant R&amp;D partnerships during yearly meeting</li> </ul>	<p>ATWGARD (for R&amp;D)</p>	<p>2016-2020</p>	<p>Number of monitoring and assessment activities,</p>
<p>1.8 Identify and document technology success stories and explore new methods of extension including enhanced use of information and communications technology (ICT) and other communication facilities for dissemination of successful technologies and management systems throughout AMS. (SPFAF 1.12)</p>	<p>1.8.1 Develop an effective communication tools and facilities to promote the dissemination and transfer of RD&amp;I results 1.8.2 Promote the commercialization of RD&amp;I technologies through campaigns, advertisements and other media channels</p>	<ul style="list-style-type: none"> <li>• Strengthen the ASEAN Agricultural R&amp;D Information System (ARDIS) as a platform to exchange information and disseminate appropriate technologies generated from national R&amp;D centers</li> </ul>	<p>Indonesia</p>	<p>2016-2020</p>	<p>Number of publication  Number of viewers in the ATWGARD websites  Number of technologies commercialized</p>
<p>1.9 Standardise and harmonise concepts, methods and presentation</p>	<p>1.9.1 Build the RD&amp;I capacity of young</p>	<ul style="list-style-type: none"> <li>• Workshop on building RD&amp;I</li> </ul>	<p>ATWGARD</p>	<p>2016-2020</p>	<p>Number of trained scientists</p>

<p>of national statistics and strengthen technical capacity of AMS to conduct multi country studies and undertake accurate situational analysis and planning. (SPFAF 1.13)</p>	<p>generation research scientists through training on the concepts, methods and presentations of research methodologies  1.9.2 Stocktaking of human and institutional resources in NARS to identify the RD&amp;I capacity of the ATWGARD  1.9.3 Exchange study visits/mobilization of ASEAN talents/expert dispatch as consultants/resource persons to regional projects.  1.9.4 Explore partnership with SEARCA</p>	<p>capacity of young generation research scientists</p>			
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**STRATEGIC THRUST 3:**

*Ensure food security, food safety, better nutrition and equitable distribution*

Action Programme	Activities	Sub Activities	Responsible ASEAN	Timeline	Key Performance Indicators /Deliverables/Means of
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			Bodies/Lead Country		Verification
3.1 Promote nutrition education and consumer awareness of healthy diets, conduct social marketing campaigns and lifestyle change communication programmes to promote physical activity and dietary diversification, including increased consumption of micronutrient-rich foods. (SPFAF 3.7)	<p>3.2.1 Conduct research studies on consumer and market analysis</p> <p>3.2.2 Organize Exposition to showcase health and nutrition products developed by the ATWGARD NARS</p> <p>3.2.3 Nutrition education to specific target groups</p> <p>3.2.4 Develop effective and creative communication tools through activities eg school children; housewives;</p> <p>3.2.5 Develop income generating projects linked to social media for communities to promote nutrition education eg integration of indigenous vegetable production with aquaculture; nutritious school garden.</p> <p>3.2.6 Consumer awareness programs for</p>		ATWGARD	2016-2020	<ul style="list-style-type: none"> <li>• Database on consumer awareness for healthy diets before and after conducting nutritional education and awareness programme</li> <li>• No of creative communication programmes and tools created to promote nutrition education and consumer awareness for healthy diets</li> </ul>

	healthy diets				
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**STRATEGIC THRUST 4:**

*Increase Resilience to Climate Change, Natural Disasters and Other Shocks*

Action Programme	Activities	Sub Activities	Responsible ASEAN Bodies/Lead Country	Timeline	Key Performance Indicators /Deliverables/Means of Verification
4.1 Increase investment in R&D for technologies and management systems with a focus on resilience to facilitate climate smart/friendly agriculture, land use, and fishery in cooperation with research programmes and networks on the basis of best practices. (SP-FAF 4.1)	4.1.1 Build the capacity of ATWGARD in proposal writing to explore funding support from the climate funds. 4.1.2 Active participation of the ASEAN CRN in regional/international fora related to promoting climate smart/friendly agriculture, land use, and fishery.		ATWGARD	2016-2020	Number of activities  Volume of funding obtained
4.2 Promote good agriculture practices to minimize the negative effects on natural resources such as soil, forest and water and reduce the greenhouse gas emission. (SP-FAF4.2)	4.2.1 Packaging of CSA technologies as landscape approach in different agro-ecological vulnerabilities 4.2.2 Scaling-up/scaling out of identified CSA best practices at community level. 4.2.3 Impact studies of good agriculture practices on environment and ecosystem		ATWGARD	2016-2020	Number of CSA technology package  Reduction in negative effects of agricultural practices on environment and ecosystem



4.3 Build competencies, share information, technologies and assistance packages with a focus on small scale producers. (SPFAF 4.3)	4.3.1 Establish a knowledge exchange/sharing platforms to promote climate resilience of the community and small scale producers.	Workshops and field visits to share information and technologies	ATWGARD	2016-2020	Number of knowledge exchange/sharing activities  Number of knowledge and or technologies taken up by small producers
4.4 Integrate gender issues into climate friendly agriculture, fishery and forestry practices to reduce the higher vulnerability of women to the social and economic impact of natural disasters and climate change. (SPFAF 4.7)	4.4.1 Promote and encourage the engagement of women into climate friendly agriculture, fishery and forestry practices to reduce the higher vulnerability to women to the social and economic impact of natural disasters and climate change.	Workshops to educate women with necessary skills to participate in the agriculture, fishery and forestry work sectors	ATWGARD	2016-2020	Percentage increase in women participation
4.5 Provide access to climate-related financial resources to support climate friendly agriculture. (SPFAF 4.8)	4.5.1 Build the capacity of the ATWARD in proposal writing to explore funding support to accessing climate-related financial resources to support climate friendly agriculture		ATWGARD	2016-2020	Number climate-related financial resources accessed and volume of funding obtained

*STRATEGIC THRUST 6:*

*Strengthen ASEAN joint approaches on international and regional issues*

Action Programme	Activities	Sub Activities	Responsible ASEAN Bodies/Lead Country	Timeline	Key Performance Indicators /Deliverables/Means of Verification
6.1 Enhance coordination and develop joint approaches through consultations among AMS and related ASEAN bodies in regional and international for a in order to gain a better hearing for its views and proposals, and to obtain more favourable outcomes in negotiations and agreements affecting FAF sector. (SP-FAF 6.1)	6.1.1 A regional platform for coordination and developing joint approaches	ATWGARD / ASEAN CRN Meeting	ATWGARD	2016-2020	Number of participation in the climate change relevant for a.
6.2 Present ASEAN common position on the issues affecting FAF sector in for a such as Conference of Parties on the United Nations Framework Convention on Climate Change (UNFCCC), World Trade Organization (WTO), United Nations Forum on Forests (UNFF), World Organization for Animal Health (OIE), International Plant Protection Convention (IPPC), Codex Alimentarius Commission(CODEX), Convention on Biological Diversity (CBD) and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and International Tropical Timber Organisation (ITTO).(SP FAF 6.2)	6.2.1 Engagement of ATWGARD to present ASEAN common position on the issues affecting FAF sector in related fora e.g. Conference of Parties on the United Nations Framework Convention on Climate Change (UNFCCC) and the Subsidiary Body on Scientific and Technical Advise (SBSTA)		ATWGARD	2016-2020	ASEAN Common Position on relevant issue in agriculture developed