



SUBMISSION BY

Viet Nam on behalf of

Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, and Thailand as members of the Association of South East Asian Nations (ASEAN)

TO

UNFCCC Subsidiary Body for Scientific and Technological Advice 44 on issues related to agriculture in response to SBSTA decision FCC/SBSTA/2014/L.14. These are views on Identification of adaptation measures, taking into account the diversity of the agricultural systems, indigenous knowledge systems and the differences in scale as well as possible co-benefits and sharing experiences in research and development and on the ground activities, including socioeconomic, environmental and gender aspects. FCC/SBSTA/2014/L.14 paragraph 3 (c).

1. Adaptation measures in the ASEAN region

Southeast Asia (SEA) is one of the world's most vulnerable regions to climate change, due to its long coastlines, high concentration of population and economic activity in coastal areas, and heavy reliance on agriculture, fisheries, forestry and other natural resources. Climate hazards such as temperature increase, erratic rainfall patterns, extreme climatic events (such as strong typhoons and severe droughts) cause adverse effects and impacts on ecosystems, livelihoods and on many other aspects of human societies. In particular, climate change threatens agricultural production and indirectly food security, ecological stability, and sustainable development. INDCs from all ASEAN Member States identify food security and increasing the resilience of the agricultural sector to be an adaptation priority. Taking cognizance of the diverse challenges posed by climate change, ASEAN Member States have identified a range of adaptation measures, both national and regional, to increase the resilience of the region's agricultural sector. Building resiliency of the region is one of the priorities of ASEAN as reflected in its new 10 year guiding frameworks such as the ASEAN Economic Blueprint, where the Vision and Strategic Plan for ASEAN Cooperation in Food, Agriculture and Forestry 2016 – 2025 (FAF) is aligned with. These policy measures, however, need to be considered together with a range of practices and technologies which aim to increase resilience, enhance food security, and productivity in a sustainable manner (see submission in response to FCC/SBSTA/2014/L.14 paragraph 3 (d)).

2. Addressing diversity of agricultural systems through regional cooperation

Adaptation measures have varying impacts and environmental and economic costs, which change depending on place and time. Therefore, decision makers need frameworks and tools to assist in channeling adaptation investment in efficient, effective and equitable ways to address existing and future challenges. To address this need, the ASEAN Climate Resilience Network, through the ASEAN Technical Working Group on Agriculture Research and Development (ATWGARD), developed the “ASEAN Guidelines on Promoting Climate Smart Agriculture Practices”, which was subsequently endorsed by the Ministers of Agriculture and Forestry of the 10 ASEAN Member States in its 37th Meeting, as the guiding framework to promote resiliency of agriculture in the region. This came after a process that included a vulnerability index assessment of food crops critical to the region’s food security, and an assessment that allowed for the identification of practices and technologies with potential for scaling-up in the region.

This important guiding document is divided into two parts: Guidelines on Knowledge Exchange and South-South cooperation, including accessing climate finance in support of scaling up initiatives; and Technical Guidelines on the promotion of particular climate-resilient practices such as Crops Insurance, Cropping Calendar, Promotion of Stress Tolerant Varieties for Maize and Rice.

3. Practices and technologies to underpin adaptation measures in agriculture

The ASEAN Member States view adaptation measures to include interventions relating to policy and planning, finance, achieving scale through innovative approaches, improving gender equity and social inclusion, and research and knowledge systems. However, these measures need to be underpinned by agricultural practices and technologies. The ASEAN Member States views in relation to agricultural practices and technologies are expressed in our submission in response to FCC/SBSTA/2014/L.14 paragraph 3 (d). However, it is important to recognize the link between adaptation measures and practices and technologies in agricultural systems. In South East Asia, adaptation measures are underpinned by the following practices and technologies:

1. **Stress Tolerant Maize Varieties:** Maize varieties tolerant to drought, floods, salinity, pests and diseases, and maturing in short/medium durations.
2. **Stress Tolerant Rice Varieties:** Rice varieties tolerant to drought, heat, floods, salinity, pests and diseases.
3. **Climate informed Agricultural Insurance (including use of Weather Indices):** Insurance mechanisms which protect farmers from weather related risks.
4. **Alternate Wetting and Drying:** Practice of rice cultivation which reduced water use, increases resilience and reduces methane emissions.
5. **Cropping Calendar for Rice and Maize:** Matching planting calendars with the occurrence of precipitation.

4. Key priorities and needs for adaptation measures in agricultural systems

The ASEAN Member States are of the view that the following are key priorities for South East Asia, to be scaled up through UNFCCC processes.

- a. **Creating the evidence base:** Invest in pilot Implementation of climate-resilient agricultural practices and generation of an evidence base regarding benefits
- b. **Models for impact at scale:** Develop and share experiences on successful models to scale-up climate-resilient practices in particular to reach smallholder farmers
- c. **Funding and Capacity Building:** Provide opportunity and funding for capacity building and technical exchange and assistance among participating countries in the ASEAN-CRN and working with existing alliances
- d. **Climate Information Services for Smallholders:** Develop effective and efficient approaches to provide integrated, climate information based services to marginalized farmers which include interpretation and application of the information (e.g. through ICT, SMS, Radio and extension)
- e. **Market Orientation:** Integrate marketability and other value chain aspects into research on stress tolerant varieties – consult with downstream players/ private sector to ensure competitiveness of new varieties

5. Mechanisms to support implementation

ASEAN Member States have respective country level mechanisms to implement adaptation measures. A range of regional initiatives support these efforts, and the ASEAN Member States are of the view that the UNFCCC needs to take into account the role of these regional actors in supporting implementation in South East Asia.

a. ASEAN Climate Resilience Network

The ASEAN Climate Resilience Network (ASEAN-CRN) has been established to promote the implementation of the guidelines and to thereby contribute to the aim that ASEAN Member States are in a better position to adapt their agricultural sector to climate change and. It therefore aims to promote a common understanding on climate change and the agriculture sector amongst ASEAN Member States. It also facilitates mutual learning and promotes resilience of agriculture within the region, through the scaling-up of identified good practices and policies. It also identifies common concerns and capacity needs, and propose regional support strategies and instruments to address these in a coherent manner; and to support ASEAN decision-making and implementation processes by providing inputs based on policy-oriented research results on climate change and agriculture..

b. Other key initiatives

Other key initiatives which play an important role in the region include the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS), which brings together the research expertise across the 15 CGIAR centres to support policy and implementation processes. The CCAFS regional program for Southeast Asia, together with key CGIAR centres in the region such as CIAT, CIMMYT, ICRAF,

IRRI etc., play a key role in supporting implementation in the region. UN agencies in the region, notably the FAO are also key to providing technical assistance to countries and the ASEAN CRN. In addition to these initiatives, the Asia Pacific Advanced Network (APAN) on climate change, Asia Pacific Association of Agricultural Research Institutions (APAARI) and SEARCA networks are key initiatives in the region.

c. **Recommendations for UNFCCC based on experiences in the ASEAN region**

The ASEAN Member States are of the view that UNFCCC should consider the following recommendations based on experiences in the ASEAN region.

- **Promote regional cooperation and collaboration.** Regional cooperation and collaboration, notably through the ASEAN Climate Resilience Network plays an important role in South East Asia. Continued support to regional initiatives and leveraging on these initiatives for implementation is key.
- **Support inclusive planning mechanisms.** In the ASEAN, an inclusive planning process bringing together various stakeholders emerged successful, and helped identify priorities and actions for the region. Similar science-based inclusive planning mechanisms should be considered in different planning contexts.
- **Increase investment in research and development for technologies and management systems to support climate-resilient agriculture, land use and fishery.** As climates change, consistent long-term investment in research at national level – and collaboratively across countries – will pay off for adaptation at farm, agriculture sector and national food security levels.
- **Increase financial support to adaptation measures in agriculture.** Lack of sufficient financial resources limits the capacity to develop climate-resilient agricultural systems.

6. **Gender and social inclusion**

Research by the CGIAR research program on Climate Change, Agriculture and Food Security show that women and men farmers in developing countries have different vulnerabilities and capacities to adapt to climate change. Women experience greater financial and resource constraints as well as less access to information and extension services in agriculture. The ASEAN Member States are of the view that gender and social inclusion needs to be incorporated within adaptation measures in agriculture. Mechanisms to guarantee women's involvement in developing and implementing adaptation strategies and financing and the development of principles and procedures to protect and encourage women's access to national adaptation programs and projects are important.