

Pathways to Net Zero for Agrifood and Land Use Systems in Asia

Long-term Strategies, Carbon Neutrality, Transparency, and the Carbon Market

14-16 December 2022

Bangkok, Thailand

Background

The United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, provide a framework for countries to reduce global warming and avoid dangerous climate change by prioritizing and monitoring action to reduce emissions and adapt. Under this framework, countries that ratified the Paris Agreement have committed, amongst other things, to¹:

- Identify national contributions to the Paris Agreement goal of maintaining global temperatures below 2 degrees Celsius (°C) while pursuing efforts to limit it to 1.5 °C.(Article 4);
- Strive to formulate and communicate long-term low greenhouse gas emission development strategies (Article 4);
- Monitor and report on progress being made to meet their national contributions to the Paris Agreement goal under an Enhanced Transparency Framework (Article 13); and
- Investigate market and non-market-based mechanisms and pathways to cooperate to achieve national contributions and strive for higher mitigation and adaptation ambition (Article 6).

Each of these elements creates important opportunities and challenges for fostering a transformation to resilient and low-emission agrifood systems in the region.

¹ Please note that these points are paraphrased and that they should be interpreted with reference to the full detail of each article outlined in the Paris Agreement text.

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Nationally Determined Contributions

The sectors comprising the agrifood system —crops, livestock, fisheries, aquaculture and forestry—feature prominently in the Nationally Determined Contributions of most countries in Asia. A growing population in Asia has increased the demand for food, resulting in higher greenhouse gas emissions from food production and conversion of land to agriculture. This has adversely affected the environment and contributed to climate change. Agriculture, forestry, and other land use contribute about 13-21% of global anthropogenic greenhouse gas emissions (GHGs), about half of these from deforestation. Agriculture emissions of methane and nitrous oxide are increasing and are mainly attributed to enteric fermentation (digestive processes in animals like cattle), manure handling and storage, fertilizer use, as well as rice cultivation, where methane-emitting bacteria grow in flooded rice paddies.

Despite the challenges, this sector has a substantial opportunity to reduce emissions and sequester carbon through national and collective pathways to net zero.² For example, sustainable rice management has been highlighted as a key mitigation strategy to reduce methane emissions, in particular water management practices such as direct seeding, mid-season drainage, and alternate wetting and drying. Other priority measures include improved soil management, climate-smart livestock management, agroforestry, forest management, and reduced emissions from deforestation and forest degradation (REDD+).

Long-term strategies for low emission development

In line with commitments under the Paris Agreement, countries from across the region have also developed and communicated long-term low emission development strategies. These include commitments for decarbonization, carbon neutrality, and net zero greenhouse gas emissions. Many of these low emission strategies incorporate important roles for agriculture, forestry and land use to both reduce and sequester emissions. For example, a scoping study by the Enhanced EU ASEAN Dialogue Instrument (E-READI) on Long Term Strategies entitled, “Strengthening Science and Policy Interface in Climate Change Related Decision-Making Process - Laying the groundwork for the development of Long-term Strategies (LTS) in ASEAN,” reported that all ASEAN Member States have included agriculture, forestry and land use as a priority sector. The ASEAN Ministers of Agriculture and Forestry (AMAF) meeting in 2021 also recognized the need to understand the Nature-based Climate Solutions in the agriculture and forestry sectors to realize the Sustainable Development Goals.

Enhanced Transparency Framework

Recent assessments of climate commitments have highlighted that many countries face challenges in developing tools, methods, and systems to credibly monitor and report on priority actions at the national level. To address these challenges, many countries in the region have developed programs of work to strengthen systems for transparency in preparation for the Enhanced Transparency Framework (ETF) of the Paris Agreement. The Capacity Building Initiative for Transparency (CBIT) project has supported several countries in the region and there is an opportunity for knowledge exchange regarding transparency improvements, including work on GHG inventories and monitoring and reporting systems under CBIT and other initiatives.

Compliance and voluntary GHG markets

Finally, carbon markets are being highlighted as an important mechanism to support agriculture and land-use stakeholders to scale-up action to meet NDC and LTS targets. With increasing clarity regarding the workings of Article 6 of the Paris Agreement, there is growing interest from farmers and ranchers, private

² Net zero means that greenhouse gas emissions within a given sector or entity are reduced to zero. Because some sectors cannot reduce emissions entirely, such as agriculture, practices like afforestation that remove carbon dioxide from the atmosphere can also balance these residual emissions to reach net zero.

sector, non-governmental organizations, and governments to learn from experience with compliance and voluntary carbon market projects in agriculture and land use. Working through carbon or GHG offset markets to finance projects to reduce and sequester emissions is a significant opportunity. But there are many challenges. For example, rice methane reduction methodologies have been available since 2011, but only one verified rice project has been credited to date (although some projects are under development). Barriers to developing agricultural mitigation projects for carbon markets include availability of workable methodologies, scale, high data requirements, and high transaction costs. Digital monitoring, reporting, and verification (MRV) tools can help lower these costs, but new methodologies would need to be written.

Purpose

The ASEAN Climate Resilience Network, chaired by the Thailand Department of Agriculture, the EU-ASEAN Enhanced Dialogue Instrument (E-READI), the FAO Regional Office for Asia and the Pacific, the United Nations Environment Programme (UNEP), and the GIZ Agritrade Project are organizing a regional event on “Pathways to Net Zero for Agrifood and Land Use Systems in Asia: Long-term Strategies, Carbon Neutrality, Transparency, and the Carbon Market.” The *event is organized in conjunction with a Technical Training for Reporting Soil Carbon Stock Change in National Greenhouse Gas Inventories*.

The overarching purpose of the event will be to facilitate exchanges on work across the region to develop and implement NDC and LTS priorities for the agriculture and land-use sectors, to strengthen transparency systems to monitor and report on these priorities, and to enhance readiness to access finance through compliance and voluntary carbon markets to scale-up action.

This workshop moreover aims to contribute towards the drafting of the ASEAN Decarbonisation/Carbon Neutrality Strategies.

Outcomes

The workshop is expected to have the following outcomes:

- Improved understanding of agriculture and land-use priorities from Long Term Strategies for Low Emission Development (LTS) and related net zero pledges from the region.
- Improved understanding of the relationships between LTS, NDC, and initiatives to strengthen capacities to meet the requirements of the Enhanced Transparency Framework.
- Improved understanding carbon market opportunities for agriculture and land-use, with a special focus on rice and forestry.

Outputs

The workshop is expected to generate the following outputs:

- Recommendations for the ASEAN Decarbonisation/Carbon Neutrality Strategies for Agriculture and Land Use
- Strategies to enhance LTS, transparency, and carbon market initiatives at the national level; and
- A report and brief summary of the key findings of the event.

Target Participants

The scope of the event is for countries in Asia participating in:

- The ASEAN Decarbonisation/Carbon Neutrality Strategies for Agriculture and Land Use from the ASEAN Technical Working Group for Agriculture and Research Development (ATWGARD), the ASEAN Climate Resilience Network (ASEAN-CRN) and the ASEAN Negotiating Group for Agriculture (ANGA), with support from the EU-ASEAN Enhanced Dialogue Instrument (E-READI) and the GIZ Agritrade project
- FAO Capacity Building Initiative for Transparency national project countries
- UNEP Climate smart rice project countries; and
- Participants at the Technical Training for Reporting Soil Carbon Stock Change in National Greenhouse Gas Inventories.

Overview Program

Time	Session	Responsible/ Focal Point
Day 1: Wednesday 14 December 2022		
	WELCOME AND INTRODUCTION	
8:30-9:00	Registration	FAO RAP and E-READI
9:00-09:20	Opening Session <ul style="list-style-type: none"> ● Mr. Rapibhat Chandarasrivongs Director General Department of Agriculture, Thailand, and ASEAN-CRN Chair ● Aldo Dell’Ariccia Team Leader, E-READI ● Hang Thi Thanh Pham Senior Resilience Officer, FAO RAP ● Dian Sukmajaya Senior Officer, ASEAN Secretariat ● Pouchamarn Wongsangsa Team Leader, GIZ Agritrade 	Emcee: Dr Margaret Yoovatana
09:20-09:30	Introduction to the Workshop and its Objectives	Dada Bacudo, E-READI SNKE
09:30-09:45	Introduction of participants	
	SESSION 1: Understanding Global Climate Policies and National Level Commitments	

Time	Session	Responsible/ Focal Point
09:45-10:15	<p>Session 1.A Climate Policy and Reporting Instruments 101</p> <p>Format: Presentation covering an overview of UNFCCC, Paris Agreement, and the roles of NDCs, LTS, ETF, including NAPs and NAMAs</p>	Elisa Distefano and Alessandro Ferrara, FAO
10:15-10:35	Photo Session and Coffee Break	
10:35-11:00	<p>Session 1.B Highlights from COP 27 relevant to the Agriculture and Land Use Sectors</p> <p>Format: Panel discussion on the following topics:</p> <ul style="list-style-type: none"> - Koronivia - Loss and Damage - Article 6 - FAST 	<p>Moderator: Dada Bacudo, E-READI SNKE</p> <p>Panel of Experts: Margaret Yoovatana (TH), Albert Magalang (PH), Anil Pokhrel (Nepal), Alvin Chandra (UNEP), Chattep Chanyam, (UNFCCC)</p>
11:15-12:00	<p>Session 1.C Group Exercise - Drawing out Coherence</p> <p>Format: Participants will be guided through an exercise to map out the relationships between the different articles of the Paris Agreement and related conventions and tools.</p>	Moderator: Srijita Dasgupta, FAO
12:00-13:00	Lunch	
	<p>SESSION 2: Net Zero commitments: Connecting NDCs to long-term goals for agriculture and land use</p>	

Time	Session	Responsible/ Focal Point
13:00-14:00	<p>Session 2.A Connecting NDCs, LTS, Net-Zero and ambitions</p> <p>Format: Presentations and discussion on key issues and topics for NDCs, LTS, Net-Zero and ambition:</p> <p>Beau Damen, FAO</p> <ul style="list-style-type: none"> - Defining Net Zero, Decarbonisation and Carbon Neutrality, Climate Neutrality (Beau Damen) - Current level of climate ambitions not on track to meet the Paris agreement! Are we off track? <p>Dr Phaisarn Jeefoo, RUSID, GIZ Consultant</p> <ul style="list-style-type: none"> - Building towards the ASEAN Carbon Neutrality Strategies for Agriculture 	Moderator: Srijita Dasgupta, FAO
14:00-14:15	<p>Pulse Survey: Is Net Zero possible?</p> <p>Format: Participants will be guided through an online survey designed to consider the feasibility of working toward net-zero in the agriculture and land-use sectors.</p>	Mentimeter Quiz: Srijita Dasgupta, FAO and Mayang, E-READI
14:15-14:45	<p>Session 2.B Group exercise - Deepening the understanding; critical linkages, inter-dependencies, and differentials across the climate ambitions</p> <p>Format Participants will be guided through an exercise to prepare a a summary vision and set of climate targets encompassing the NDC and LTS for one country. Discussion will be on national climate priorities and how it can also drive regional ambition to address climate change based on common concerns, crosscutting issues and regional trends.</p>	Rathana Peou Norbert- Munns and Imelda Bacudo, E-READI SNKEs
14:45-15:15	Coffee Break	
15:15-16:45	<p>Session 2.C Group exercise - Multi-Stakeholder mapping</p> <p>Format: Participants will be organized into sub-regional groups and asked to produce a collective stakeholder map identifying different beneficiaries from low emission, resilient and sustainable agrifood systems. The maps will be organized into three timeframes now, 2030 and 2050.</p>	Rathana Peou E-READI SNKE
16:45-17:15	Quiz and closing of Day 1	

Time	Session	Responsible/ Focal Point
18:00 onwards	Cocktail Reception and Social Event	
Day 2, December 15, 2022 SESSION 3: The role of enhanced transparency framework in climate action and access to finance		
9:00-09:15	Merging Activity – Bump as many fists as possible!	
09:15-09:30	Summary from parallel training event - <i>Technical Training on Soil Carbon Stock Change in National Greenhouse Gas Inventories</i> Summary from Day 1	Iordanis Tzamtzis ASEAN CRN
09:30-09:45	Session 3.A The Enhanced Transparency Framework (ETF)	Alessandro Ferrara FAO
09:45-10:00	Role of GHG inventory under the ETF	Iordanis Tzamtzis, FAO
10:00-10:15	Coffee Break	
10:15 - 11:15	Session 3.B Enhancing country capacity for the ETF Format: Short presentations from selected countries on their work to strengthen transparency systems in the agriculture and land-use sectors: <ul style="list-style-type: none"> ● Bangladesh ● Bhutan ● Cambodia ● Mongolia ● PNG ● Australia (Q&A) <p>During the presentations countries will be asked to follow a short survey on preparedness for the ETF. The session will close with reflection on the results and the presentations.</p>	Moderator: Alessandro Ferrara & Beau Damen, FAO
11:15-11:45	Learning activity: Race for Paris	

Time	Session	Responsible/ Focal Point
11:45–12:30	<p>Session 3.C Unpacking challenges with transparency for mitigation - MRV</p> <p>Format: Presentations and discussion on experiences and initiatives to develop MRV systems to measure and monitor mitigation actions in the agriculture and land-use sectors:</p> <p>David Chen, E-READI SNKE and Agrig8</p> <ul style="list-style-type: none"> - Introduction to arriving at community-driven baselines and MRV - Google project <p>Mathieu van Rijn, FAO</p> <ul style="list-style-type: none"> - Experiences from forestry and REDD+ <p>Dr Suman George, Murdoch University</p> <ul style="list-style-type: none"> - Establishing Landscape level GHG to measure and monitor mitigation actions in the agriculture and land-use sectors 	<p>Moderator: David Chen, E-READI SNKE and AgriG8 CEO</p>
12:30-13:30	Lunch	
	SESSION 4: Opportunities to scale up finance with the compliance and voluntary carbon markets	
13:30-14:00	<p>Session 4.A.1</p> <p>Format: Presentations on development with market and non-market climate finance to support countries to scale-up low emission and resilient agriculture:</p> <p>Ioannis Vasileou, World Bank</p> <ul style="list-style-type: none"> - Overview of Climate Finance in AFOLU (non-carbon market) following COP27 developments <p>Albert Magalang, EMB-DENR</p> <ul style="list-style-type: none"> - Article 6 and Carbon Market Opportunities for AFOLU sector in the region 	<p>Moderator: Beau Damen, FAO</p>
14:00-14:10	Physical and Mental Health Check and Review	

Time	Session	Responsible/ Focal Point
14:10-15:00	<p>Session 4.A.2 Different perspectives on developments in the carbon markets</p> <p>Format: Short introductory presentations followed by a panel discussion on key developments and initiatives related to voluntary and compliance GHG offset markets and related results-based financing:</p> <p>Russ Cullinane, South Pole</p> <ul style="list-style-type: none"> - Experiences with compliance and voluntary carbon market projects for the AFOLU sectors <p>Zhuo Cheng, World Bank</p> <ul style="list-style-type: none"> - Results Based Climate and Carbon Finance and Low Carbon Agriculture -Transformative Carbon Asset Facility and SCALE <p>Andika Putraditama, Lestari Capital</p> <ul style="list-style-type: none"> - Financing Science Based Target Initiatives for Net Zero <p>Asako N.G. Takimoto, ART TREES</p> <ul style="list-style-type: none"> - REDD+ and results-based payments (RBP) 	<p>Moderator: Marci Baranski, UNEP</p>
15:00-15:15	Coffee Break	

Time	Session	Responsible/ Focal Point
15:15-16:30	<p>Session 4.B Opportunities and challenges - Emissions reductions from rice and other agriculture crops, forest management & REDD+ market-based climate finance and GHG offsets</p> <p>Format: Panel Discussion on lessons learned from key sector oriented projects and initiatives from around the region:</p> <p>Ye Win Paing, Helvetas - Implementing Alternate Wetting and Drying practice in Myanmar</p> <p>Ole Henriksen, GIZ Thailand - Thai Rice NAMA</p> <p>Deviah Aiama, WBCSD - Rice Nature-based Solutions Accelerator--WBCSD</p> <p>Romeo V. Labios, SEARCA - WISE Carbon Farming</p> <p>Regan Pairojmahakij, RECOFTC - Forest Management and REDD+</p> <p>Boonrod (Tik) Yaowapruek - Key gaps and needs to ensure agriculture and land-use sectors can benefit from compliance and voluntary GHG markets</p>	Moderator: Marci Baranski, UNEP and Beau Damen, FAO
16:30-17:00	Bilateral consultations between participants and experts	Facilitated by: Dada Bacudo, E-READI SNKE
17:00-17:30	Feedback, Summary and Reminders	
Day 3: Friday, 16 December 2022		
8:30-8:45	Review and Objectives	

Time	Session	Responsible/ Focal Point
08:45-09:45	<p>Session 4.D Country preparedness to access climate finance via the GHG offset markets</p> <p>Format: Presentations and discussion from selected countries on work to date to get prepared to access climate finance for agriculture and land-use mitigation activities via compliance and voluntary GHG offset markets:</p> <ul style="list-style-type: none"> ● Cambodia ● India ● Philippines ● Mongolia ● Vietnam ● Australian Carbon Trading System 	<p>Moderator: Srijita Dasgupta and Beau Damen, FAO</p>
09:45-10:00	Coffee Break	
	SESSION 5: Defining Pathways to Net Zero	
10:00-11:30	<p>Session 5.A</p> <p>Group Exercise: Defining the next steps including actions to:</p> <ul style="list-style-type: none"> - Move toward implementation of LTS priorities for agriculture and land-use - Define pathways as guidance for decarbonization or carbon neutrality within the AFOLU sector - Enhance systems for transparency in agriculture and land-use - Strengthen preparedness to access climate finance via the GHG offset markets - Engage partners from public and private sector and civil society 	<p>Rathana Peou, E-READI SNKE</p>
11:30-11:45	Mentimeter Survey for ASEAN	
11:45-12:15	<p>Session 5.B Summary and Ways Forward Feedback from Participants</p>	
12:00 -12:30	<p>Closing Remarks</p> <p>FAO : Beau Damen ASEAN CRN: Dr Margaret Yoovatana E-READI: Jeorg Meier</p>	

Time	Session	Responsible/ Focal Point
12:30-13:30	Lunch	
13:30	Departure for FIELD TRIP – AFTERNOON	