

INTRODUCTION

The nationally determined contributions (NDC) established under the Paris Agreement represent the commitments of nations to reduce their greenhouse gas emissions and adapt to climate impacts. Vietnam's updated NDC was approved by the Prime Minister on 24 July and submitted to UNFCCC in September 2020.

With domestic resources, by 2030 Vietnam will reduce its total greenhouse gas (GHG) emissions by 9% (increased to 10% as declared at COP26) compared to the Business-As-Usual Scenario (BAU). With international support through bilateral and multilateral cooperation the reduction in GHGs could reach 27%.

This knowledge product was designed to give a quick overview of the policy process that Vietnam is undertaking to ensure that its agriculture sector contributes towards meeting the nation's climate targets. With this complex process, information contained in this publication continues to develop, but it is hoped that the step-by-step information will build for coordinated action in support of this goal.

This publication was a collaboration between the UNEP's Climate and Clean Air Coalition, the GIZ Climate Smart Land Use in ASEAN project and IRRI.

UNEP's global voluntary partnership Climate and Clean Air Coalition helps promote the reduction of SLCP strategies as part of the mitigation commitments to Vietnam's NDCs.

The GIZ Climate-Smart Land Use (CSLU) project contributes to increasing resilience to climate change, reducing or removing GHG emissions and increasing productivity and incomes in the agriculture and forestry sectors within ASEAN.

GLOSSARY

AEZ - Agro-Ecological Zone
AFOLU - Agriculture, Forestry and Other Land Use
CCAC - UNEP's Climate and Clean Air Coalition
CH₄ - Methane
CSLU - Climate-Smart Land Use
DoSTE - Department of Science and Technology
EF - Emission Factors
GHG - Greenhouse Gas
IPCC - Intergovernmental Panel on Climate Change
IRRI - International Rice Research Institute

LULUCF - Land Use, Land Use Change and Forestry
MARD - Ministry of Agriculture and Rural Development
MONRE - Ministry of Natural Resources and Environment
MRV - Measurement, Reporting, Verification
N₂O - Nitrous Oxide
NAMAS - Nationally Appropriate Mitigation Actions
NAP - National Adaptation Plan
NDC - Nationally Determined Contributions
SLCP - Short-Lived Climate Pollutants
UNEP - United Nations Environment Programme
UNFCCC - United Nations Framework Convention on Climate Change

NDC AND MRV DEVELOPMENT FOR AGRICULTURE IN VIETNAM

POLICY PROCESS

THE NDC IMPLEMENTATION PROCESS

The NDC under the Paris agreement is a climate action plan representing the country's commitment to reduce emissions and adapt to climate impacts.



THE MARD-VIETNAM'S UPDATED ACTION PLAN 2021 – 2030 WITH VISION TO 2050

- Mitigation of GHG
- Adaptation to climate change
- Resources preparation
- Transparency system (MRV)
- Institutional and policy development

THE NAP

- to help Vietnam effectively use resources
- improve its financial and technical management and coordination capacity
- avoid repetition
- promote the participation of communities, the corporate sector and international organizations supporting Vietnam to achieve its sustainable development goals.

NDC IMPLEMENTATION IN AFOLU SECTOR

2.1 THE NDC IMPLEMENTATION PLAN OF THE AFOLU SECTOR

The sub-sectoral NDC implementation plans in Vietnam are conducted coincidentally with the Agriculture and Rural Development sector's new strategic development planning cycle (2021-2030, vision to 2050) and the process of updating the Climate Change Response Action Plan of the sector (2021-2030, vision to 2050). The parallelly implemented processes will ensure consistency, integration and integrity of NDC supporting policy development.

The combined targets for Energy, Agriculture, LULUCF, Waste and IP, in collaboration with both domestic and international support, amount to a CO₂e reduction of 250.8 million tonnes.

THE GOALS FOR THE THREE NDC IMPLEMENTATION PLANS IN CROP AND LIVESTOCK PRODUCTION AND LULUCF (AFOLU) INCLUDE:

- Specifying the particular mitigation interventions which ensure and promote the contribution of each sub-sector to the NDC's mitigation targets within MARD and for the national commitments according to the updated NDC (2020);
- Increasing the adaptive capacity of production systems (especially in crop sector) and forwards to agricultural sustainable development.

2.2. MARD'S DEVELOPMENT OF NDC IMPLEMENTATION PLAN

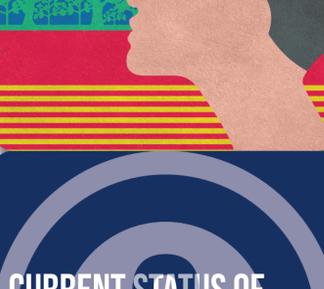
THE DoSTE OCTOBER 21, 2020 DOCUMENT:

- Integrates the updated Vietnam NDC 2020 contents/measures into socio-economic development strategies, plans, and planning frameworks in the period 2021 - 2030 (vision to 2050).
- Propagates and disseminates the updated NDC-2020 contents, and monitoring and evaluation of NDC implementation results to report to the MONRE annually.

EXAMPLES OF SUPPORT OF VIETNAM'S CLIMATE AMBITIONS FROM THE AGRICULTURE SECTOR:

The BMU funded project "Support to Vietnam for the Implementation of the Paris Agreement" (VN-SIPA) government, in GIZ assists the Vietnamese government in establishing the framework conditions for NDC implementation. With MARD the project currently works towards the goals of:

- NDC Implementation Plans for livestock, crop production and LULUCF sub-sectors
- Establishment of a M&E system for climate change adaptation for the agricultural sector
- Preparation of two case studies on L&D on provincial level
- Support of climate smart agricultural (CSA) development in Ha Tinh



UNEP'S CLIMATE AND CLEAN AIR COALITION'S (CCAC)

Agriculture institutional strengthening coordination is being supported in Viet Nam to sustainably increase the level of action to reduce short-lived climate pollutants from the sector by promoting inter-ministerial coordination and scaling-up of activities through access to finance.

CCAC supported the International Rice Research Institute (IRRI) in reviewing existing monitoring, reporting, and verification tools and guidelines for adjusted water management in rice, especially in the Mekong delta area.

Tools developed by the IRRI for use in MRV are featured and described specifically for Vietnam, analyze the MRV methodologies for reduced methane emissions in rice production and provide a suite of tools and a methodology to monitor NDC progress at a national level.

This novel approach to assessing the MRV provides expert-based recommendations for transparency in the NDCs. It also helps to define an MRV framework for Vietnam's NAMA's for the rice sector.

CURRENT STATUS OF MRV PROCESS IN AFOLU SECTOR OF VIETNAM

3.1 MRV IN UPCOMING DECREE ON GHG EMISSION AND OZONE LAYER PROTECTION

MEASUREMENT (M)

The GHG office assigned by the government takes inventory of GHG's and measures the results of the GHG emission reduction plan.

The Ministries measure the results of the GHG reduction policies, regulations, strategies, programs, plans and other measures.

REPORT (R)

The same office prepares annual reports on GHG emissions to MONRE, Ministries and People's Committees.

The relevant ministries prepare annual sector-level GHG emission measurement reports.

MONRE formulates the national GHG emission reduction report in accordance with UNFCCC member state requirements.

VERIFICATION (V)

The verification unit under the said emissions office evaluates compliance to the MRV process procedure in field/local level reports on GHG mitigation.

The ministries carry out the GHG inventories on the field.

THE VIETNAM NDC 2020 IMPLEMENTATION ROADMAP

- Up to end of 2025: conduct an inventory, develop and implement a GHG emissions plan following NDC implementation plans.
- From 2026 to 2030: implement mitigation of GHG according to the targets in the sectors/subsectors' plans of mitigation.
- Up to 2030: completed MRV system
- Up to 2030: sector-based Ministries develop detailed GHG emission reduction plans and monitor the progress towards set milestones.



3.2. MRV FOR THE NDC MEASURES IN THREE SUB-SECTORS' NDC IMPLEMENTATION AND MRV ROADMAP

PHASE 1 – ESTABLISHMENT (TO END 2021)

Testing the data-sharing network and inform the Department of Crop Production and Department of Livestock Production of MARD. Establishing the legal framework for developing MRV guidelines.

PHASE 2 – OPERATION (2022-2025)

Implementing and monitoring data collection/ measurement. Adoption of standardized data collection, reporting and verification formats.

PHASE 3 – COMPLETION (2026-2030)

Refining the final system, based on lessons learned and in compliance with accuracy, completeness and transparency and consistency in MRV.

3.3 WHAT DOES THE MRV SYSTEM LOOK LIKE IN RICE?

RICE PRODUCTION IN VIETNAM

In Vietnam, rice production is very common in the extensive plains of the AEZs. The combined regions comprise of nearly six million hectares of rice producing land, of which the Mekong River Delta (MRD) rice land covers a staggering four million plus hectares.

KEY FINDINGS

- There is an enormous variability in EFs for the country as a whole as well as within individual AEZs.
- Collectively, these data clearly show that EFs for CH₄ emissions in Vietnamese rice production are well above the default IPCC value given for Southeast Asian rice production.
- Integrated over all regions and seasons, the newly generated EFs for CH₄ emission from Vietnamese rice production correspond to at least 200% of the IPCC Tier 1 defaults. The new data is similar to the EFs previously used by the MONRE in the Central region, slightly lower in the North region and much higher in the South region.

METHODOLOGY OF GHG MEASUREMENTS

All emission measurements used the closed chamber approach for field sampling in combination with laboratory analysis of CH₄ and N₂O concentrations. The field design consistently encompassed three replicates with IPCC baseline management.



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