Food and Agriculture Organization of the United Nations

Integrating agriculture in National Adaptation Plans (NAP–Ag) Programme

Experiences of integrating agriculture in sectoral and national adaptation planning processes

Case study

Viet Nam

July 2020

Contents

©FAO

This publication was made possible by the Integrating Agriculture in National Adaptation Plans (NAP-Ag) Programme, led by the United Nations Development Programme (UNDP) and the Food and Agriculture Organization of the United Nations (FAO), with generous support from the International Climate Initiative (IKI) of Germany's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU). The contents are the responsibility of the authors and do not reflect views of UNDP, FAO or the BMU. The publication was prepared under the supervision of Rohini Kohli (UNDP) and Julia Wolf (FAO).

Authors

Srijita Dasgupta (FAO) led the writing of this case study with input from Janto Simon Hess (UNDP). Contributors to the case study include Bui My Binh (MARD), Tran Dai Nghia (MARD), Thai Anh Nguyen (FAO), Bui Viet Hien (UNDP), Beau Damen (FAO), Hang Thi Thanh Pham (FAO), Rohini Kohli (UNDP) and Theresa Wong (FAO). The case study was reviewed by Chu Van Chuong, National Director of NAP-Ag Programme in Viet Nam (MARD). The author thanks Shanali Pethiyagoda, Rebecka Ramstedt, Melanie Pisano, Amy Knauff and Claudia Tonini for editorial support. Contact: FAO-NAPs@fao.org

Citation

FAO & UNDP. 2020. Integrating Agriculture in National Adaptation Plans (NAP-Ag) Programme: Viet Nam Case Study. Rome.

Cover photo: ©FAO/N Tuan Anh

Highlights

- Agriculture (consisting of livestock husbandry, crop cultivation, forestry and fishery/aquaculture as the main sub-sectors) is one of Viet Nam's key economic sectors, contributing to about 14.6 percent of its GDP in 2018 (USAID and UNDP, n.d.) and employing about 35.6 percent of the labour force of the country (Nghia, 2017).

- The observed and projected negative impacts of climate change are likely to be detrimental for the agriculture sector and pose challenges for sustaining the livelihoods of the people dependent on this sector.

- Viet Nam highlighted several priority actions and key strategies under both adaptation and mitigation components in their nationally determined contributions (NDC), but also emphasised that adaptation to climate change is a priority of the government to reduce vulnerabilities and risks faced by climate change.

- The National Climate Change Strategy (NCCS) is the main national-level document that supports the development and the implementation of all major climate change-related initiatives in the country. An advisory committee called the National Committee on Climate Change (NCCC) supports the Prime Minister by proposing strategic responses and mobilizing resources for climate change- related activities.

- The Ministry of Agriculture and Rural Development (MARD) is the leading agency working on agriculture development in Viet Nam. The country is currently in the process of developing a National Adaptation Plan (2021-2030) as part of its plan for implementation of the Paris Agreement.

- Through stocktaking, vulnerability and climate risk assessments, loss and damage analysis, monitoring and evaluation indicator development, cost-benefit analysis (CBA), adaptation prioritisation exercises, and mainstreaming gender and other capacity development activities, NAP-Ag helped strengthen technical knowledge and capacities of ministerial staff to integrate adaptation planning into budgeting, and national and sub-national planning processes for the next five-year sectoral development plan and strategic vision for 2030. These activities have also helped to identify entry points and potential linkages between the NAP and the NDC priorities.

- MARD has developed a roadmap for adaptation planning in the agriculture sector, which provides a comprehensive picture of Viet Nam's adaptation efforts for guiding policy makers, planners and development partners to effectively identify and design interventions for the agriculture sector. The roadmap can be used as a guiding document or tool to ensure that the agriculture sector is adequately reflected in the national policy frameworks, in line with the NAP and NDC goals and targets.

- Coherence of work and coordination among different ministries and stakeholders at different scales, as well as lack of access to data, still pose significant challenges for mainstreaming climate change adaptation planning at different levels.

Case study objectives

This case study on Viet Nam is part of a series that describes the steps taken to formulate and implement National Adaptation Plans (NAPs), with an emphasis on adaptation in agriculture (including forestry, livestock and fisheries). This series will provide national policymakers with valuable information from colleagues and counterparts in Asia, Africa and Latin America who are on the same NAP journey, to address the multiple challenges posed by climate change to agriculture sectors and livelihoods.

Each case study describes the lessons learnt from the UNDP-FAO Integrating Agriculture in National Adaptation Plans (NAP-Ag) Programme, funded by Germany's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU) through the International Climate Initiative (IKI). The contribution of this work towards achieving national and international development and climate change goals (particularly the Paris Agreement and the Sustainable Development Goals) is also presented.

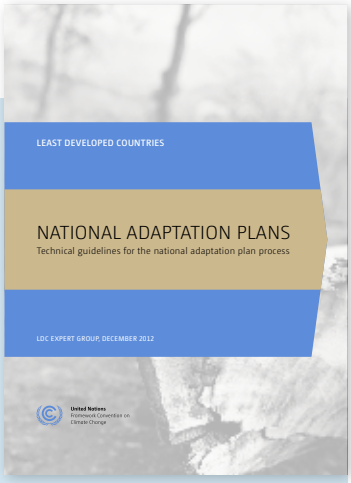
Where possible, the case study series aims to show the links between long-term adaptation planning/NAP process and activities supported by the NAP-Ag Programme in the country profiled, as well as the resulting impacts. The NAP-Ag process in Viet Nam started in October 2016 and has since then supported the Ministry of Agriculture and Rural Development (MARD) of Viet Nam to build capacities for prioritising adaptation planning and budgeting processes for the agriculture sector; to update Viet Nam's nationally determined contributions (NDCs) under the Paris Agreement; and to highlight the agriculture sector's priorities in the National Adaptation Plan (NAP). The country is still in the process of formulating its NAP and is expected to complete it by the end of 2020. The preparation of this case study is based on extensive reviews of country reports and publications, as well as interviews with the NAP-Ag country coordinators, NAP-Ag team members and representatives from responsible agencies such as MARD.

Box 1

National Adaptation Plans (NAPs)

National Adaptation Plans were established in 2010 as part of the Cancún Adaptation Framework to enhance urgent action on adaptation and were adopted by Parties to the United Nations Framework Convention on Climate Change (UNFCCC) (Decision 1/CP.16.). NAPs enable countries to identify, prioritize and implement the most needed medium– and long–term adaptation actions. They aim to:

- reduce vulnerability to climate change by building adaptive capacity and resilience; and
- ensure that towards is integrated into development planning in all sectors and at all levels of planning within the country.



©FAO/N Tuan Anh

"Viet Nam is facing losses and damages, which are beyond its resilience and capacity, even after thorough application of climate change adaptation measures and mitigation of greenhouse gas emissions.... Adaptation benefits go beyond the scope of each locality, community and country. Pro-active climate change adaptation is a contribution of Viet Nam to the global efforts to address climate change...."

Government of Viet Nam, 2015: 8

Adaptation and the Paris Agreement

The 2015 Paris Agreement recognises the urgent need for adaptation as a key component of global response to climate change. Section 9 of Article 7 of the Agreement states that "each Party shall, as appropriate, engage in adaptation planning processes and the implementation of actions". The Agreement requests that countries voluntarily initiate the process, enabling them to present adaptation goals, priorities, actions and needs in their NDCs. Most initial NDC submissions included a section on adaptation. The significance of the agriculture sectors in adapting to and mitigating climate change was acknowledged through the Decision on the Koronivia Joint Work on Agriculture (KJWA), which was reached at the UN Climate Change Conference (COP23) in November 2017.

Viet Nam ratified the UN Framework Convention on Climate Change (UNFCCC) in 1992 and signed the Kyoto Protocol in 1998. The intended nationally contribution (INDC) of Viet Nam, which later became the NDC, was submitted in September 2015 ahead of the Paris Agreement. Viet Nam highlighted several priority actions and key strategies under both adaptation and mitigation components in the NDC, but also emphasised that adaptation to climate change is a priority of the government. Viet Nam's NDC focuses on five main sectors, which are energy, transportation, agriculture, land use, land-use change and forestry (LULUCF) and waste management.

The following are the key climate change adaptation priority actions for 2021-2030 as included in the NDC:

- respond proactively to disasters and improve climate monitoring;
- ensure social security; and
- respond to sea level rise and urban inundation.

Building on the priorities of the National Climate Change Strategy (NCCS), which are food security, energy security, water security, poverty reduction, gender equality, social security, public health, livelihood improvements and the protection of natural resources, and through the implementation of the NDC goals, Viet Nam aims to enhance the adaptive capacities of human, socio-economic and natural systems. Viet Nam is also committed to implementing the Sendai Framework for Disaster Risk Reduction (2015-2030).

Box 2

Climate change and the Sustainable Development Goals (SDGs)

Climate change has implications for each of the 17 Sustainable Development Goals (SDGs). National Adaptation Plans (NAPs) play an important role as a means of SDG implementation. In the agricultural, livestock and forestry sectors, adaptation can contribute to sustainable food production systems and the development of resilient agricultural practices, and ultimately to SDG Goal 2 to achieve zero hunger. The SDG Goal 13 on climate change explicitly highlights adaptation as a key mechanism to combat climate change and its impacts, with targets to:

- strengthen resilience and adaptive capacity to climate-related hazards and natural disasters;
- integrate climate change measures into national policies, strategies and planning; and
- improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning.

©FAO/Nguyen Thuy Hang

Climate change and agriculture

Viet Nam has an extensive coastline, extending 3 260 km from the north to the south with a total land area of about 331 051.4 km^2. In its territory, the country has over 1 million km^2 of seawater and two major archipelagos, Hoàng Sa (city of Da Nang) and Tru'ò'ng Sa (Khánh Hòa Province). The topography of the country varies greatly between the different regions, with the north characterised by mountainous and hilly areas, and the south primarily by low-lying deltas. The Red River Delta in the north and the Mekong Delta in the south of Viet Nam are the most productive agricultural areas of the country. Based on the diverse topography and climate, the country has been categorised into eight different agro-ecological zones (Government of Viet Nam, 2019).

Viet Nam stands at the crossroads of progressive economic growth while facing the risks of dampened development due to the increasing impacts of the changing climate. Located in Southeast Asia, it is one of the most vulnerable countries to the rapidly changing climate (Germanwatch, 2019). Agriculture (consisting of livestock husbandry, crop cultivation, forestry and fishery/aquaculture as the main sub-sectors) is one of the key sectors, contributing about 14.6 percent toward its GDP in 2018 (USAID and UNDP, n.d.) and employing about 35.6 percent of the total labour force of the country (Nghia, 2017).

Since the Doi Moi Policy reforms, Viet Nam has experienced spectacular economic growth. The country has been developing rapidly with a GDP of USD 245 billion (as of 2018) in comparison to USD 31.2 billion in 2000 and USD 116 billion in 2010 (World Bank). The total population increased from 80 million in 2000 to 96 million in 2018 (USAID and UNDP, n.d.). The year 2018 has been particularly noteworthy, as the country experienced the highest economic growth since 2008 of 7.08 percent, inflation rate of 3.5 percent, unemployment rate of 2 percent and a trade surplus of USD 7.2 billion (United Nations Viet Nam, 2018). This rapid and sustained economic growth has made major transformations to socio-economic conditions, alleviating poverty and improving the overall food security status of the country. The agriculture sector played an important role in fostering this economic development (USAID and UNDP, n.d.).

"Agriculture remains the backbone of the Vietnamese economy and is pivotal for poverty alleviation in Viet Nam, especially in rural provinces where 66 percent of the population lives."

MARD, 2019

According to the Global Climate Risk Index 2019 (Germanwatch, 2019), Viet Nam ranked sixth among the ten countries most affected by extreme weather events. Between 1958 and 2014, average temperatures increased by about 0.62 °C (about 0.10 °C per decade), with a steep rise in the daily recorded highest and lowest temperatures (World Bank, 2017). Annual precipitation reduced in the north, while it increased in the south over a period of 57 years (Ministry of Natural Resources and Environment, 2016).

Almost 60 percent of the territory and 70 percent of the total population is exposed to hazards and extreme weather events like floods, droughts and storms (World Bank, 2017). Natural disasters and extreme weather events accounted for severe economic losses of about USD 6.4 billion and more than 13 000 deaths in the last two decades (Reliefweb, 2017). Among the extreme weather events that the country regularly faces, the severe droughts in the Mekong Delta region in 2016 were among the worst in the last 100 years, leading to detrimental impacts like saltwater intrusion and productivity losses of key crops. The intense droughts were linked to the unusual El Niño weather events in the southern region of the country. Climate change is projected to exacerbate the severity of existing natural hazards in Viet Nam.

Viet Nam is also highly susceptible to tropical storms and cyclones. In 2015, Typhoon Damrey hit ten provinces and caused widespread economic and infrastructure losses (damaged or destroyed 141 000 houses) and fatalities (104 people were killed). It was further reported that the cyclone destroyed 9 163 ha of rice lands, 20 783 ha of vegetable land and 69 900 agriculture cages (Reliefweb, 2017). The impact of these extreme weather events is increasing in intensity, and recovery time between the occurrences of such events is also becoming shorter, exposing a large proportion of the population to the vicious cycle of livelihood losses and poverty.

The rapidly changing climate poses significant threat to Viet Nam's agricultural production, natural resources and its food security status. The Red River Delta and the Mekong Delta, two of the most productive agricultural areas of the country, are at high risk of severe inundation, especially saltwater intrusion in the Mekong Delta from the projected increases in sea level. The National Climate Change Strategy of Viet Nam highlights that the country will not only suffer from loss of productive land, but will also see detrimental impacts in terms of reduced crop growth and yield, shifting of crop calendars increased pests, and diseases among livestock affecting their health and productivity. Water resources are likely to be impacted as well, while deforestation and degradation of biodiversity and forest areas will increase the incidences of floods, landslides and fires.

In 2014, the total greenhouse gas (GHG) emissions from the agriculture sector was 89.75 $MtCO_2e$, with the largest share (about 49.4 percent) coming from rice cultivation, followed by emissions from agriculture soils (26.7 percent), enteric fermentation (11.4 percent) and others (Ministry of Natural Resources and Environment, 2017; Crumpler, Dasgupta, Federici, Meybeck *et al.*, 2019).

Frameworks and institutions for climate change coordination

Viet Nam has been a frontrunner in climate change initiatives in Southeast Asia, in particular in its commitments toward achieving its NDC goals and targets. Table 1 lists some of the key climate-specific national policy documents developed since 2008 (Van Khiem, 2014).

Table 1

Key climate specific policy documents

Year	Title
2008 & 2012	Decision No. 158/2008/QD-TTg approving the National Target Program on Response to Climate Change (2008) and Decision 1183/QD-TTg (2012)
2011	Decision No. 2139/QD-TTg approving the national strategy for climate change (see Box 3)
2011	Decision No. 3119/QD-BNN-KHCN of MARD on approving programme of Green House Gas (GHG) emissions reduction in the Agriculture and Rural Development sector up to 2020
2013	Resolution No. 24-NQ/TW of the Party Central Committee Party of Viet Nam on the active response to climate change and the improvement of natural resource management and environmental protection
2013	Decision No. 899/QD-TTg of the Prime Minister approving the project "Agricultural restructuring towards raising added values and sustainable development"
2015	INDCs (later NDCs) of Viet Nam
2016	Decision No. 2053/QD-TTg approving the adjusted master plan on transport development in the northern key economic region through 2020 and orientations toward 2030
2017	Decision No. 622/QD-TTg of the Prime Minister approving the national action plan to implement the 2030 Agenda for sustainable development
2017	National REDD+ Action Program (Decision No. 419/QD-TTg), includes 24 key Policies and Measures (PAM)
2017	Decision No. 1670/QD-TTg of the Prime Minister approving the scheme on development of intelligent power grid in Vietnam
2017	Decision No. 819/QD-BNN-KHCN of MARD approving the Action Plan on response to climate change in agriculture and rural development in 2016-2020, vision to 2050
2019-2020	National Adaptation Plan

Box 3

The National Strategy on Climate Change

The **National Strategy on Climate Change** (Government of Viet Namt, 2011) is the main national document that supports the development and implementation of all major climate change-related initiatives in the country. This was issued in December 2011 by the then Prime Minister, with 'multi-century' visions and cross-cutting sectoral plans to build the country's capacity to adapt to climate change impacts while also reducing greenhouse gas emissions for sustainable growth and development.

Objectives

- to guarantee food security, energy security, water security, poverty reduction, gender equality, social security, public health, and better livelihood, as well as to protect natural resources in the context of climate change;
- to turn low-carbon economy and green growth into main orientations for sustainable development, and to turn lower emission and higher absorption of greenhouse gases into compulsory indicators of socio-economic development;
- to improve relevant parties' awareness, responsibility and capacity of coping with climate change;
- to develop scientific and technological potential and improve quality of human resources;
- to strengthen institutions and policies in order to effectively use financial resources for enhanced economic growth;

- to take advantage of opportunities presented by climate change for socio-economic development; to promote climate system-friendly lifestyles; and
- to collaborate with the international community on coping with climate change, in order to enhance international cooperation for effectively responding to climate change.

Implementing institutions: Ministry of Natural Resources and Environment (MONRE), Ministry of Planning and Investment (MPI), relevant line ministries and government institutions, and People's Committees of provinces and cities.

Several organisations are mandated to develop and/or oversee climate change response strategies and legislations that comprise the public institutional framework in Viet Nam (see Figure 1). The Ministry of Natural Resources and Environment (MONRE) is the focal point overlooking activities related to climate change in the country. It is also the national focal point for the UNFCCC and the Paris Agreement, and for all international agreements on climate change (including the preparation of the NDCs).

Under MONRE, the Department of Meteorology, Hydrology and Climate Change (DMHCC) is responsible for coordinating climate change-related activities and acting upon all responses and strategies. The Department of Legal Affairs (DLA) advises on jurisdictive issues (Nachmany *et al.*, 2015).

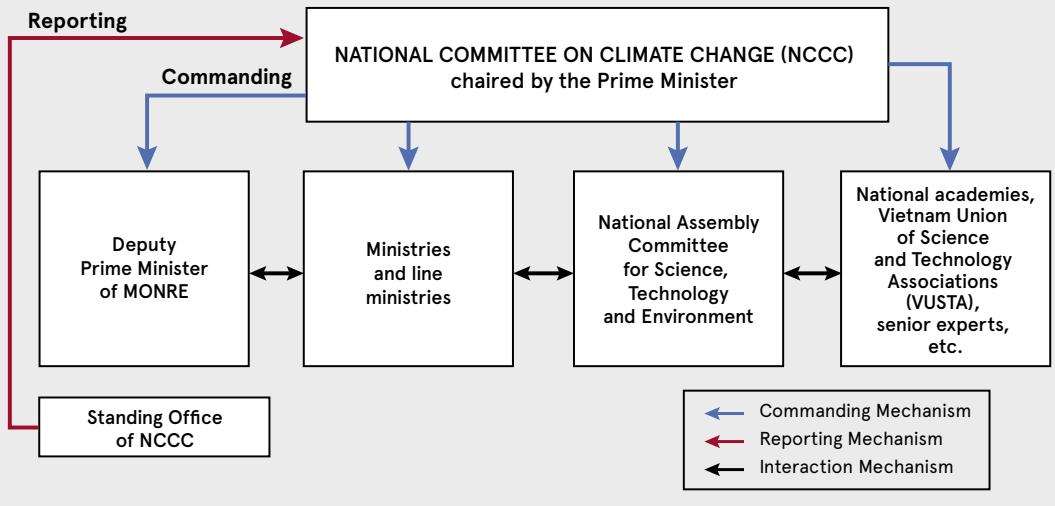
In 2015, MONRE launched an advisory council, the National Committee on Climate Change (NCCC), to support the country's Prime Minister by proposing strategic responses and mobilizing resources to climate change-related activities. It is the main advisory body overlooking activities on climate change adaptation and mitigation strategies in the country. The NCCC is chaired by the Prime Minister and is comprised of one Deputy Minister, relevant MONRE ministers, and representatives from other relevant ministries, research organisations and academic institutions (Nachmany, M. *et al.*, 2015).

Apart from MONRE, other ministries involved in planning and implementation of climate change initiatives in Viet Nam include the Ministry of Agriculture and Rural Development (MARD), the Ministry of Planning and Investment (MPI), the Ministry of Finance (MOF), the Ministry of Industry and Trade (MOIT), the Ministry of Construction (MOC), the Ministry of Transport (MOT), the Ministry of Science and Technology (MOST), the Ministry of National Defence (MND), the Ministry of Public Security (MPS), and the Ministry of Foreign Affairs.

MARD is the leading agency working on agriculture development in Vietnam. The country is currently in the process of developing a NAP (2021-2030) as part of the Paris Agreement Implementation Plan. The process is being led by MONRE, while MARD is acting as the head of the Technical Working Group on Agricultural Research and Development (ATWGARD).

Figure 1

Institutional Arrangements for Climate Related Initiatives in Viet Nam (MARD, 2019)



Adaptation planning for the agriculture sectors

The NAP-Ag Programme engages with the framework laid down by the UNFCCC Technical Guidelines for the NAP process (2012), which recommends four components in the preparation of a NAP:

Element A – Lay the groundwork and address gaps	**Element C –** Implementation strategies
Element B – Preparatory elements	**Element D –** Reporting, monitoring and reviewing

For the agriculture sector adaptation planning, FAO developed specific supplementary guidelines on Addressing Agriculture, Forestry and Fisheries in National Adaptation Plans (Karttunen, Wolf, Garcia and Meybeck, 2017). These are aligned with the elements of the NAP process, but also provide sector-specific guidance for each step of the processes (see Table 2), explaining how the agriculture sectors can further mainstream climate change and disaster risk reduction (DRR) in accordance with the NAP processes. Table 2 provides an overview of each step of these supplementary guidelines and corresponding key achievements reached in Viet Nam through the support of the NAP-Ag activities.

Element A focuses on setting the scene for integrating the agriculture sectors in the NAP and engaging agricultural stakeholders in the process of formulating and implementing the NAP. A NAP-Ag working group and taskforce has been established under MARD to overlook and support the adaptation planning processes. Several stocktaking exercises and vulnerability assessments have been conducted for four vulnerable sectors (crops, livestock, aquaculture and water resource infrastructure) along with mapping of stakeholders, policies and regulatory frameworks. Capacity- and knowledge-building trainings on adaptation were provided for public and private institutions. The NAP process was mentioned in the Prime Minister's Decision No. 2053/QD-TTg (2016) as a main task for the achievement of Viet Nam's NDC goals and targets, to be led by MONRE. Efforts have also been put in place to integrate agriculture in the national policies, and this key sector is identified as a priority sector in the Decision No. 2053/QD-TTg (2016) and in Viet Nam's NDC, to be further included in the NAP. MARD has also developed a Climate-Smart Agriculture Guideline document and a manual on adaptation monitoring and evaluation (M&E).

Element B analyses climate change scenarios, risks and vulnerabilities in the agriculture sectors, in an attempt to identify, select and prioritise medium- to long-term adaptation options. Using advanced climate models and climate change projections, trends and scenarios were developed for sub-sectors under the agriculture sector and a climate-smart country profile for Viet Nam was produced. A risk and vulnerability assessment framework was developed and implemented by the NAP-Ag project team to conduct assessments for the crop, livestock, aquaculture and water resources infrastructure subsectors. Additionally, using a multi-criteria analysis, climate change adaptation options for the relevant sub-sectors were also prioritised and cost-benefit analysis has been conducted for the relevant climate change adaptation options. An agriculture sector-specific climate change response strategy has been developed under the National Strategy on Climate Change (2011-2020).

Element C emphasises the development of strategies and enhancement of capacities to implement adaptation actions in the agriculture sectors. A sector-specific M&E framework to monitor climate change adaptation has been developed, and potential mechanisms have been identified for mainstreaming climate change adaptation in sector development plans for the period of 2021-2030. The NAP-Ag roadmap and M&E framework guidelines have been developed (at multiple levels) and were piloted using the NAP-Ag M&E framework in five provinces, in coordination with MARD, DARD (Department of Agriculture and Rural Development) and district levels to provide lessons learnt.

Element D aims to build effective monitoring and review systems to assess adaptation planning and implementation of agricultural adaptation actions, with a possibility for evidence-based learning and revisions. Several sectoral climate change adaptation options were identified. These can support the process of updating the NDCs. The climate change adaptation M&E framework for NAP-Ag was developed for monitoring the implementation of the adaptation options, along with a web-based reporting platform. Viet Nam has still not formulated its NAP and hence, while knowledge products are available for NAP-Ag, reporting on the progress of NAP implementation for the agriculture sector cannot be undertaken yet.

A NAP-Ag roadmap document for Viet Nam has been drafted and is currently under review by national and provincial stakeholders. The main purpose of the document will be to support MARD's efforts to develop analytical frameworks and plans to guide the adaptation efforts in all agricultural sub-sectors and to support the development of the agricultural components of the NAP for Viet Nam. The NAP-Ag roadmap is also expected to be integrated into a planning framework of Strategic Development Orientation for the Agriculture Sector for the 2021-2030 period and its vision for 2045.

Table 2

Integrating agriculture sector adaptation priorities, climate change and disaster risk management within a NAP framework

Step	A. Laying the groundwork and addressing gaps	Activities
A1	Initiate participation of representatives from the agriculture sectors in national adaptation planning, including clarifying mandates and engaging focal points for the different sectors	Integrated the NAP-Ag Programme as part of the broader set of initiatives to support Viet Nam's NAP process
A2	Take stock of existing vulnerability and risk assessments, knowledge, methodologies, possible capacity and institutional gaps, policies, plans and investment frameworks in the agriculture sectors	• Conducted vulnerability and impacts assessments to identify adaptation options and CBA for crop, livestock, aquaculture and water resources, including a set of recommendations and actions for inclusion into the NAP • Completed mapping of stakeholders, policies and regulatory frameworks
A3	Address capacity gaps and weaknesses in adaptation planning in the agriculture sectors	• Conducted capacity-building trainings and workshops on adaptation (including vulnerability assessment, gender and agriculture, loss and damages, CBA and M&E) • Developed guidelines for climate-smart agriculture and manual on adaptation M&E
A4	Assess and identify links between adaptation needs and development goals in the agriculture sectors	Discussions held on integrating climate change adaptation and responses into strategic development plan of agriculture sector in the 2011–2020 period and vision to 2045, and priority actions in the 2021–2025 period
Step	**B. Preparatory elements**	**Activities**
B1	Analyse current and future climate scenarios for production and sustainability	Conducted national climate modelling studies and analysis of long-term climatic conditions in Viet Nam and their impacts on agriculture production
B2	Assess climate impacts, risks and vulnerabilities, and identify adaptation options for the agriculture sectors	• Formulated vulnerability assessment framework for the NAP-Ag project team to conduct assessments at national, district and provincial levels for crop, livestock, aquaculture and water resources • Established knowledge-sharing platform on climate risks (www.climaterisk.org.vn)
B3	Select and appraise adaptation options in the agriculture sectors	• Identified adaptation options, based on report of stocktaking • Conducted CBA for the adaptation options
B4	Compile and communicate agricultural perspectives for NAPs	• Engaged national and local officials in the inter-sectoral NAP consultation meetings • Developed case study for NAP-NDC linkage, with specific focus on agriculture sectors, to inform the NDC update process • Drafted the NAP-Ag roadmap; currently under review
B5	Review the integration and alignment of climate change adaptation in the agriculture sectors in development planning and NAPs, including national, subnational, sectoral and sub-sectoral plans	Developed agriculture sector-specific climate change response strategy, under the National Strategy on Climate Change (2011-2020) (including both mitigation and adaptation)

Step	C. Implementation strategy	Activities
C1	Ensure appropriate priority for the agriculture sectors in NAPs	• Developed NAP-Ag M&E framework guidelines (at multiple levels) • NAP-Ag roadmap developed
C2	Develop a long-term adaptation implementation strategy that includes potential options for scaling up adaptation actions and leveraging climate finance	Reviewed Agriculture Development Strategy (ADS) and planning from climate change perspectives to develop a sector roadmap and a climate change adaptation M&E framework for ADS in the 2021-2030 period from 2021-2030 and vision to 2045
C3	Improve capacity for planning and implementing adaptation in the agriculture sectors	Conducted trainings and workshop on the participation of civil society organisations (CSOs) in NAP-Ag and NAP processes
C4	Promote coordination and synergies at the national and subnational level	Established NAP-Ag working group and taskforce under MARD
Step	**D. Reporting, monitoring and review**	**Activities**
D1	Prepare for monitoring adaptation planning and implementation in the agriculture sectors	Prepared the climate change adaptation M&E framework for NAP-Ag and its guidelines
D2	Review the national planning process, assessing how the agriculture sectors are being addressed	Ongoing
D3	Monitor and iteratively update the process of adaptation planning and implementation in the agriculture sectors	Piloted an M&E system for NAP-Ag with a set of indicators for further consideration in the NAP development process
D4	Conduct outreach on the process and report on the alignment of NAP/NAP–Ag progress and effectiveness	Developed knowledge products for NAP-Ag for wider dissemination

NAP-Ag Programme support

The NAP-Ag Programme was launched in Viet Nam in 2016 with the primary objective of identifying potential entry points for mainstreaming climate change adaptation priorities for the agriculture sector in the sectoral development plans to contribute towards the NAP development processes. At the national level, several climate change adaptation and DRR initiatives are already in place, which provided a strong basis for further building and linking to Vietnam's sustainable development and low-carbon economy trajectory goals. Climate change adaptation with a focus on agriculture will be an important component of Viet Nam's NAP. It is reiterated in the national Plan to Implement the Paris Agreement issued with Government Decision 2053/QD-TTg.[1]

The NAP-Ag Programme in Viet Nam achieved several milestones during the project phase. Through multiple vulnerability and impact assessments, adaptation priority exercises, loss and damage analyses, and cost-benefit analyses of key agriculture subsectors such as crops, livestock, fisheries and water resources, the project supported MARD to integrate activities related to climate change adaptation in the national and sectoral strategies for the 2021-2030 period and to develop an implementation roadmap for Viet Nam's NDC. Further, to successfully integrate adaptation priorities in the NAP, the capacities of MARD officials and other stakeholders in the agriculture sector were built through rapid capacity assessments, the formation of a Technical Working Group within MARD, the development of guidelines on prioritizing climate-responsive investments (especially in the Mekong Delta) and trainings for national and provincial officials on valuation of climate change impacts.

Box 4

NAP-Ag programme outcomes

1. **Strengthen technical capacity** – Building up partner countries´ use of appropriate tools and analyses to assist key ministries with investment planning and budgeting.
2. **Develop integrated roadmaps for NAPs** – Creating a roadmap of economically viable, gender-responsive, medium- and long-term adaptation options for the agriculture sectors.

1 Decision No 2053/QD-TTg of the Prime Minister dated on the 28/10/2016 in assurance of the Plan to Implement the Paris Agreement on Climate Change.

3. **Improve evidence-based results for NAPs** – Developing and introducing impact assessment frameworks for the agriculture sectors, which generate evidence-based results and can be used in policy dialogues (e.g. on adaptation planning and monitoring, tracking and reporting).
4. **Promote agricultural NAPs through advocacy and knowledge-sharing** – Sharing and providing information to other countries and sectors on how to integrate adaptation needs into national planning and budgeting processes.

Some of the key activities and milestones achieved in the NAP-Ag Programme are briefly described below:

Revision and updating of Viet Nam's NDC

The NDC identify several key sectors that are vulnerable to the impacts of climate change, along with a list of possible adaptation and mitigation measures. During the revision and updating of the NDC, it was found that identifying successful adaptation strategies for the agriculture sector would require continuous technical support. The NAP-Ag project provided technical input and support to MARD to identify the adaptation priorities for the agriculture sector and to develop recommendations for sectoral planning and budgeting. This was done through stocktaking of climate change adaptation practices, an assessment of vulnerability and climate risk, and an evaluation of loss and damage in agriculture sectors. Through these activities, technical capacities were enhanced for data analysis, identification of agriculture sector's adaptation priorities, and development of monitoring and evaluation mechanisms consistent with the NDC goals and targets. These activities have also helped to identify the entry points and potential linkages between the NAP and the NDC priorities, thereby strengthening the coherence of adaptation planning in the agriculture sector and helping to develop integrated and effective climate change policies at different scales (FAO, 2019).

Development of a roadmap for adaptation planning in the agriculture sectors

The NAP-Ag process built on existing results and processes that are or will be implemented into the integrated planning framework, required for strategic interventions to effectively address the climate change risks and vulnerabilities in agriculture sector. Based on the learnings from the different activities implemented during the NAP-Ag project phase, a roadmap for adaptation planning in the agriculture sector has been developed to provide a comprehensive picture of Viet Nam's adaptation efforts for guiding policymakers, planners and development partners to effectively identify and design interventions for the agriculture sector. This roadmap can be used as a guiding document or tool to ensure that the agriculture sector is well-reflected in national policy frameworks, in line with the NAP and NDC goals and targets. The roadmap covers important information on the required actions, resources and support needed to effectively address identified gaps in the agriculture sectors' adaptation planning processes.

Building of the knowledge base for sectoral planning processes through vulnerability assessments and adaptation prioritisation exercises

The NAP-Ag Programme commissioned several studies, including climate change risk and vulnerability assessments for agriculture subsectors (crops, livestock, fisheries and water resources), a comprehensive review, and cost-benefit analysis to identify the most suitable adaptation options to support the development of sectoral plans. Additionally, an extensive mapping to identify stakeholders and policies was undertaken to lay out the current institutional arrangements for adaptation planning at the national and sub-national levels. An online climate risk data platform that collects important data, mapped and downscaled to a district level, has been established by the project. Further, a monitoring and evaluation system and indicators for adaptation in the agriculture sector was developed and piloted in five of the eight agro-ecological zones in Viet Nam. M&E guidelines were also developed with the potential to contribute toward MARD's existing M&E system. The Agriculture Development Strategy (ADS) and planning was revised using a climate change lens for the purpose of developing a sectoral roadmap and a climate change adaptation framework for the period of 2021-2030.

Based on these activities, a number of technical papers, documents, policy briefs and project proposals (for example, a Mekong Delta Plan) have been developed to continue the support required for the agriculture sector and to ensure that the priorities are integrated and reflected in the different national- and provincial-level plans and policies.

NAP-Ag-supported institutional capacity development for mainstreaming adaptation planning in the agriculture sector

During the project implementation phase, NAP-Ag identified several areas that required capacity-building and organized relevant workshops, consultative meetings and trainings on adaptation prioritisation and integration in the national and sub-national levels on risk and vulnerability assessments, linkages between gender and agriculture, loss and damages, cost-benefit analysis, and monitoring and evaluation of agriculture adaptation interventions. At the national level, a Technical Working Group was established in MARD to supervise and support the adaptation planning processes. Trainings and coaching were provided to technical staff and officers on economic valuation, including costing and cost-benefit analysis for climate change adaptation options. The program supported the MARD Department of Planning to organize a consultation workshop on integrating climate change into strategies and plans for the agriculture and rural development sector in the 2021-2030 period and a vision to 2045. The project also collaborated with UN Women and Viet Nam Women's Union for the provision of a workshop to enhance the capacity of the policymakers and stakeholders on gender mainstreaming in agriculture and rural development, as well as to identify how to address gender and women's economic roles within the climate change scenarios for the agriculture sector.

Lessons learnt

NAP-Ag has achieved several milestones since its inception in 2016. The following are the challenges, success factors and lessons learnt to date:

- **Capacity development is key to adaptation planning at several levels** – The need for capacity- and knowledge- building was identified at the inception of the NAP-Ag process, and focused support via trainings and workshops were provided to the relevant technical officers to strengthen their capacities to integrate recent science, tools and methodologies into the adaptation planning processes. The development of the technical guiding documents will ensure the continuity of support, as initiated under the NAP-Ag Programme, and will guide the relevant stakeholders and technical officers to successfully develop adaptation implementation plans for the agriculture sector and execute the action plans through identification of appropriate modalities.
- **Coordination between different government entities needs to be strengthened and is key to streamlining adaptation planning efforts** – Significant efforts have been undertaken during the NAP-Ag process to improve the inter-institutional formal and informal coordination within and among the relevant ministries, technical departments, sectoral agencies and other stakeholders. This will ensure their continued participation in the overall NAP process. While these efforts have helped to improve the awareness of the inter-sectoral activities and identify potential areas of collaboration for further work on adaptation planning, it has also been noted that vertical and horizontal coordination and alignment of work is still challenging in many cases due to limited synergies of work streams and unclear mandates in the different agencies. The NAP-Ag process provided the stepping stones toward building effective coordination, and it will be crucial to continue the collaborative effort in order to achieve the targets of the NAP and NDC.
- **Developing a strong knowledge base is essential for adaptation planning and integration in the national and sub-national levels** – Availability of climate data across agencies at different levels is still inconsistent, or information is not readily available for public access and dissemination. This poses a challenge for analysis and identification of appropriate interventions for mainstreaming adaptation planning into national and sub-national policies. By conducting vulnerability assessments, cost-benefit analysis and identification of adaptation priorities, NAP-Ag not only built on existing data and studies but also helped expand the data and knowledge base for more informed decision-making. These priorities are yet to be systematically or sufficiently reflected in the key documents, policies and programs pertaining to the agriculture sector. Additionally, a lack of coherence among different work streams and programs within the different agencies makes it difficult to mobilise resources and harness current and additional support.
- **Guidelines or standard operating procedures for integrating adaptation into planning and budgeting must be developed and adopted by certain departments** – The different ministerial staff and other stakeholders at the national and sub-national levels still lack adequate guidelines and mandates regarding the areas of work on climate change adaptation planning in the agriculture sector. The lessons learnt through the NAP-Ag process indicate the need to

establish clear guidelines and mechanisms to improve coordination among national, provincial and local governments, to strengthen communication of climate risks and response strategies, and to mainstream adaptation planning into the budgeting processes. The NAP-Ag roadmap can serve as a key guiding document for decision-makers and policymakers to identify the needs, opportunities and types of intervention required to address climate change impacts and risks in the relevant areas of work.

References

Crumpler, K., Dasgupta, S., Federici, S., Meybeck, M., Bloise, M., Slivinska,V., Salvatore, M., Damen, B., Von Loeben, S., Wolf, J. and Bernoux, M. 2020. *Regional analysis of the nationally determined contributions in Asia – Gaps and opportunities in the agriculture sector and land use sectors*. Environment and Natural Resources Management Working Paper No. 78. Rome, FAO. https://doi.org/10.4060/ca7264en (also available at http://www.fao.org/3/ca7264en/CA7264EN.pdf).

FAO. 2019. Workshop to wrap up NAP-Ag support in Viet Nam held in Ha Noi. (also available at http://www.fao.org/in-action/naps/news-events/detail/en/c/1201977/to-wrap-up-nap-ag-support-in-viet-nam-held-in-ha-noi.html)

Germanwatch. 2019. Global Climate Risk Index. (also available at https://germanwatch.org/en/cri).

Government of Viet Nam. 2011. National strategy on climate change (also available at www.chinhphu.vn/portal/page/portal/English/strategies/strategiesdetails?categoryId=30&articleId=10051283)

Government of Viet Nam. 2015. Intended Nationally Determined Contribution. (also available at https://www4.unfccc.int/sites/ndcstaging/PublishedDocuments/Viet%20Nam%20First/VIETNAM%27S%20INDC.pdf)

Government of Viet Nam. 2019. *Viet Nam's Roadmap for Adaptation Planning in Agriculture Sectors*, Ha Noi.

Karttunen, K., Wolf, J., Garcia, C. & Meybeck, A. 2017. Addressing agriculture, forestry and fisheries in National Adaptation Plans – Supplementary guidelines. Rome, FAO. 116pp. (also available at http://www.fao.org/3/a-i6714e.pdf).

Ministry of Natural Resources and Environment. 2016. Climate change and sea level rise scenarios for Viet Nam. Hanoi as referenced in the *Third National Communication of Viet Nam to the UNFCCC* (also available at https://www4.unfccc.int/sites/SubmissionsStaging/NationalReports/Documents/260315_Viet%20Nam-NC3-2-Viet%20Nam%20-%20NC3.pdf)

Ministry of Natural Resources and Environment. 2017. *The Second Biennial Updated Report of Viet Nam to the UNFCCC*. Hanoi. (also available at https://unfccc.int/sites/default/files/resource/97620135_Viet%20Nam-BUR2-1-Viet%20Nam%20-%20BUR2.pdf)

Nachmany, M., Fankhauser, S., Davidová, J., Kingsmill, N., Landesman, T., Roppongi, H., Schleifer, P., Setzer, J., Sharman, A., Stolle Singleton, C., Sundaresan, J., & Townshend, T. 2015. *Climate Change Legislation in Viet Nam. An Excerpt from the 2015 Global Climate Legislation Study. A review of climate change legislation in 99 countries*. (also available at www.lse.ac.uk/GranthamInstitute/wp-content/uploads/2015/05/VIETNAM.pdf)

Nghia, Tran Dai. 2017. *Support stocktaking and drafting of the agricultural component of Viet Nam's National Adaptation Plan process*.

Reliefweb. 2017. Typhoon Damrey. (also available at https://reliefweb.int/disaster/tc-2017-000159-vnm)

United Nations Viet Nam. 2018. *One UN Results Viet Nam*. (also available at https://vietnam.un.org/en/4075-2018-one-un-results-report)

USAID & UNDP. n.d. *Economics of Climate Change Adaptation: Agriculture Sector Analysis for Vietnam*. (also available at www.adaptation-undp.org/sites/default/files/resources/ecca-country-report-vietnam.pdf)

Van Khiem, M. 2014. *Vietnam National Strategy on Climate Change*. (also available at www.mrcmekong.org/assets/Publications/Events/2nd-CCAI-Forum/5-4-Viet-Nam.pdf)

World Bank. World Development Indicators Database. (also available at https://data.worldbank.org/country/vietnam)

World Bank. 2017. *Toward Integrated Disaster Risk Management in Viet Nam*. (also available at https://openknowledge.worldbank.org/bitstream/handle/10986/28871/120444-v2-PUBLIC-17027-Vietnam-Strategy-FULL-REPORT-Sep12-2017.pdf?sequence=1&isAllowed=y)




Further information

Guidelines:

- UNFCCC National Adaptation Plan – Technical guidelines for the National Adaptation Plan process (2012)
- Addressing Agriculture, Forestry and Fisheries in National Adaptation Plans – Supplementary guidelines (2017)

Viet Nam:

- Nationally Determined Contributions of the Socialist Republic of Viet Nam (2015)
- Decision 2139/QD-TTg National Climate Change Strategy
- UNDP, MARD & MONRE. 2018. Viet Nam's climate risk index. (also available at http://eng.climaterisk.org.vn/)
- UNDP & FAO. 2019. Case study. Enhancing adaptation planning for agricultural resilience in Viet Nam: Linkages between National Adaptation Plans (NAPs) and Nationally Determined Contributions (NDCs). (also available at www.vn.undp.org/content/dam/vietnam/docs/Publications/2019_UNDP_NAPNDC%20Case%20Study.pdf)

NAP-Ag:

- http://www.fao.org/in-action/naps/partner-countries/Viet%20Nam
- https://www.adaptation-undp.org/naps-agriculture/partner-countries/vietnam

↗ **Food and Agriculture Organization of the United Nations (FAO)**
www.fao.org/in-action/naps
FAO-NAPs@fao.org | Julia.Wolf@fao.org

↗ **United Nations Development Programme (UNDP)**
www.adaptation-undp.org/naps-agriculture
Rohini.Kohli@undp.org

↗ **Germany's Federal Ministry for the Environment, Nature Conservation and Nuclear Safety (BMU)**
www.bmu.de/en

↗ **International Climate Initiative (IKI)**
www.international-climate-initiative.com

Supported by:

Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

based on a decision of the German Bundestag