

# Chapter 10

## Disaster Resilience and Climate Change Adaptation in Viet Nam

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# Disaster Resilience and Climate Change Adaptation in Viet Nam

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## 10.1 Background

Viet Nam is a strip of land shaped like the letter ‘S’ bordered by China to the north, the Lao People’s Democratic Republic and Cambodia to the west, the East Sea to the east, and the Pacific Ocean to the east and south. The country’s total length from north to south is 1,650 kilometres (km). Its width (east–west) is 600 km at its widest point in the north, 400 km at its widest point in the south, and 50 km at its narrowest point. Its coastline is approximately 3,260 km long and its inland border is 4,510 km long. The country is located in both a tropical zone and a temperate zone. Viet Nam is one of the countries most affected by natural disasters and climate change. Storms and floods are the most frequent and severe natural disasters affecting Viet Nam.<sup>1</sup> Severe droughts, the intrusion of saline water, landslides, and other natural disasters are also hindering the country’s development. Extreme disasters have been occurring more frequently in recent years, causing increasing levels of damage to the population and significantly impacting the economy (United Nations Development Programme, 2015).

In response to this accelerating trend of disasters and climate change, the Government of Viet Nam and the Communist Party of Viet Nam have approved policies, strategies, and relevant policies with major objectives, tasks, and requirements for the entire country, each region, and each economic sector. Viet Nam’s agricultural sector plays a central role in the country’s economy. However, it also is the most vulnerable sector in the context of climate change and natural disasters. Therefore, it is highly necessary to develop an adaptation roadmap for disaster resilience and climate change.

<sup>1</sup> Each year, Viet Nam has been enduring 10–12 typhoons, which have caused 74 floods, on average, in the river systems.

## 10.2 Overview of Viet Nam's Current Policy System on Climate Change and Disaster

### 10.2.1 | The Objectives of the Communist Party of Viet Nam in Responding to Climate Change

In light of the challenges posed by climate change and rising sea levels, the Communist Party of Viet Nam approved an early Central Resolution on Active Response to Climate Change, Strengthening Natural Resources Management and Environmental Protection.<sup>2</sup>

The resolution outlines the primary goals, targets, and tasks for the country as well as each economic sector in the context of climate change. According to the resolution, necessary responses to climate change include (i) capacity building for forecasting, warning, active prevention and mitigation, and adaptation to climate change; (ii) promoting measures to prevent and control the impact of high tides, inundation, and salinity intrusion due to rising sea levels; (iii) mitigating greenhouse gas (GHG) emissions; and (iv) protecting and developing natural ecosystems to enhance the absorption of GHGs.

### 10.2.2 | Government Strategies

The government has also issued three relevant strategies: (i) the Sustainable Development Strategy for Viet Nam 2011–2020, (ii) the National Strategy for Natural Disaster Prevention, Response and Mitigation to 2020,<sup>3</sup> and (iii) the National Strategy on Climate Change.<sup>4</sup>

The objective of the Sustainable Development Strategy for Viet Nam 2011–2020 is 'mitigating and responding to climate change, disaster prevention.' Its tasks are (i) building and strengthening the adaptive capacity and adaptability of people and natural systems to protect natural resources in the context of climate change, (ii) improving quality of life, (iii) ensuring environmental security and sustainable development, (iv) raising awareness and responsibilities, and (v) building capacity for responding to climate change and disaster prevention among stakeholders (Government of Viet Nam, 2012).

<sup>2</sup> Resolution No. 24/NQ/TW dated 3 June 2013.

<sup>3</sup> Decision No. 172/QĐ-TTg dated 16 November 2007.

<sup>4</sup> Decision No. 2139/QĐ-TTg dated 5 December 2011.

The National Strategy for Natural Disaster Prevention, Response and Mitigation to 2020 includes the following statements:

- (i) Disaster management includes preparedness for, response to, and recovery from the consequences of disasters to ensure sustainable socioeconomic development, national security, and defense systems.
- (ii) Government agencies, social organisations, economic organisations, the armed forces, citizens, and foreign organisations and individuals living in the territory of Viet Nam all are duty-bound to engage in disaster prevention, response, and mitigation.
- (iii) Disaster prevention, response, and mitigation are joint actions by the government and citizens that effectively utilise state resources as well as all possible resources from the community, national and international organisations, and individuals.
- (iv) Disaster prevention, response, and mitigation shall be integrated into the socioeconomic development master plans and plans of every region and sector, as well as nationwide.
- (v) Disaster prevention, response, and mitigation shall be prioritised to ensure disaster preparedness, while the impacts of global climate change, storm surges, and other extreme climate phenomena continue to be studied to determine appropriate response actions.
- (vi) Disaster prevention, response, and mitigation shall succeed and apply traditional experience and learned lessons, and combine them with modern knowledge and technologies through international cooperation (Government of Viet Nam, 2007).

The main goals of the National Strategy on Climate Change related to climate change adaptation and disaster resilience are (i) to build the capacity of the entire country and simultaneously implement measures to adapt to the impacts of climate change and reduce GHG emissions, thus ensuring the safety of life and property while promoting sustainable development; and (ii) to enhance the capacity of people and natural systems to adapt to climate change, while developing a low-carbon economy to protect and improve the quality of life, ensuring national security and sustainable development in the context of global climate change, and actively working with the international community to protect the global climate system.

This strategy has four specific objectives:

- (i) to ensure food security, energy security, water resources security, poverty reduction, gender equality, social security, public health, livelihood improvement, and the protection of natural resources in the context of climate change;
- (ii) to develop a low-carbon economy with green growth as the main trend in sustainable development, mitigate GHG emissions, and increase GHG absorption capacity (which have gradually become compulsory indicators of socioeconomic development);
- (iii) to raise awareness, assign responsibility, build the capacity of related parties to respond to climate change, develop scientific and technological potentials, boost the quality of human resources, create institutions and policies, develop and use financial resources to improve the competitiveness of the economy and Viet Nam's position, take advantage of opportunities for socioeconomic development offered by climate change, and develop and scale up the lifestyle of the country's population through a climate-friendly consumption pattern; and
- (iv) to contribute actively to the international community in responding to climate change, and strengthen Viet Nam's international cooperation activities to respond effectively to climate change.

The tasks of the strategy include the following:

- (i) respond proactively to natural disasters, monitoring changes in the climate, implementing early warning systems, and reducing losses due to natural disasters;
- (ii) ensure the security of food and water resources;
- (iii) respond actively to rising sea levels in vulnerable areas;
- (iv) protect and develop forests sustainably, while enhancing GHG absorption and conserving biodiversity;
- (v) mitigate GHG emissions to contribute to protecting the global climate system;
- (vi) strengthen the leading role of the state in responding to climate change;
- (vii) build a community to respond effectively to climate change;
- (viii) develop advanced science and technology to respond to climate change;
- (ix) strengthen international cooperation and integration to enhance national standing in climate change issues; and
- (x) diversify financial resources and focus on effective investment (Government of Viet Nam, 2011).

### 10.2.3 | Disaster Resilience and Climate Change Response in Laws

The Resolution No 24-NQ/TW approved some relevant laws such as the Law on Land, Law on Environmental Protection, Law on Irrigation, and Law on Forestry, and integrated articles or chapters regarding climate change response into these laws. In general, according to the current regulations and requirements of the laws, when designing relevant planning and plans, such as land use planning and environmental protection planning, policymakers should consider the factors of climate change and response measures.

### 10.2.4 | Climate Change Response Plan for the Agricultural Sector

After the government approved the National Strategy on Climate Change, the Ministry of Agriculture and Rural Development also issued a climate change response plan for the agricultural sector in Viet Nam. The plan focused on the following five objectives:

- (i) Strengthen institutional capacity, policy, science, and technology for responding to climate change in agricultural and rural development in 2016–2020 with a vision to 2050 towards sustainable agriculture.
- (ii) Increase value added, improve livelihoods, and protect the environment and the population from the negative impacts of climate change.
- (iii) Mobilise resources and the participation of organisations and individuals at home and abroad to implement activities to adapt to climate change and reduce GHG emissions in the fields of cultivation, husbandry, aquaculture, forestry, irrigation, salt production, and rural development in the agricultural and rural development sector for 2016–2020 with a vision to 2050 to maintain the industry growth rate at 20%, reduce the poverty rate, and reduce GHG emissions by 20% in each 10-year period.
- (iv) Take initiative in coping with and preventing natural disasters, preventing floods and saltwater intrusion, consolidating river and sea dykes, and ensuring the safety of reservoirs, civil works, and technical infrastructure to mitigate natural disasters in the agriculture and rural development sector in the context of climate change for 2016–2020, with a vision to 2050.
- (v) Develop human resources, strengthen international cooperation, and participate in international negotiations to raise the position of the agriculture and rural development sector in 2016–2020, with a vision to 2050 with regard to responses to climate change.

The plan also outlined the following tasks: (i) improve and develop policies and mechanisms; (ii) build information and communication capacity; (iii) review, adjust, and manage the planning of agriculture and rural development to respond to climate change; and (iv) strengthen international cooperation in response to climate change. In particular, the plan detailed tasks for each agricultural subsector, including cultivation, livestock, fisheries, forestry, irrigation, and the salt industry.

### 10.3 Organisational System and Relevant Stakeholders

At the national level, Viet Nam has two committees, the National Climate Change Committee and Central Steering Committee for Natural Disaster Prevention and Control, in addition to the Ministry of Agriculture and Rural Development, that are responsible for coordinating natural disaster responses and reporting to the Prime Minister.

The National Committee on Climate Change was established in 2012. The president of the committee is the Prime Minister and its vice-presidents are the Deputy Prime Minister and the Minister of Natural Resources and Environment. The committee is composed of ministers and leaders of relevant agencies and directors of research institutes. It is responsible for advising the Prime Minister in decision making related to studying, proposing, directing, coordinating, and cooperating on climate change-related issues; addressing important multi-sectoral and multi-ministerial problems; and managing the national programme on climate change; as well as implementing international cooperation on climate change.

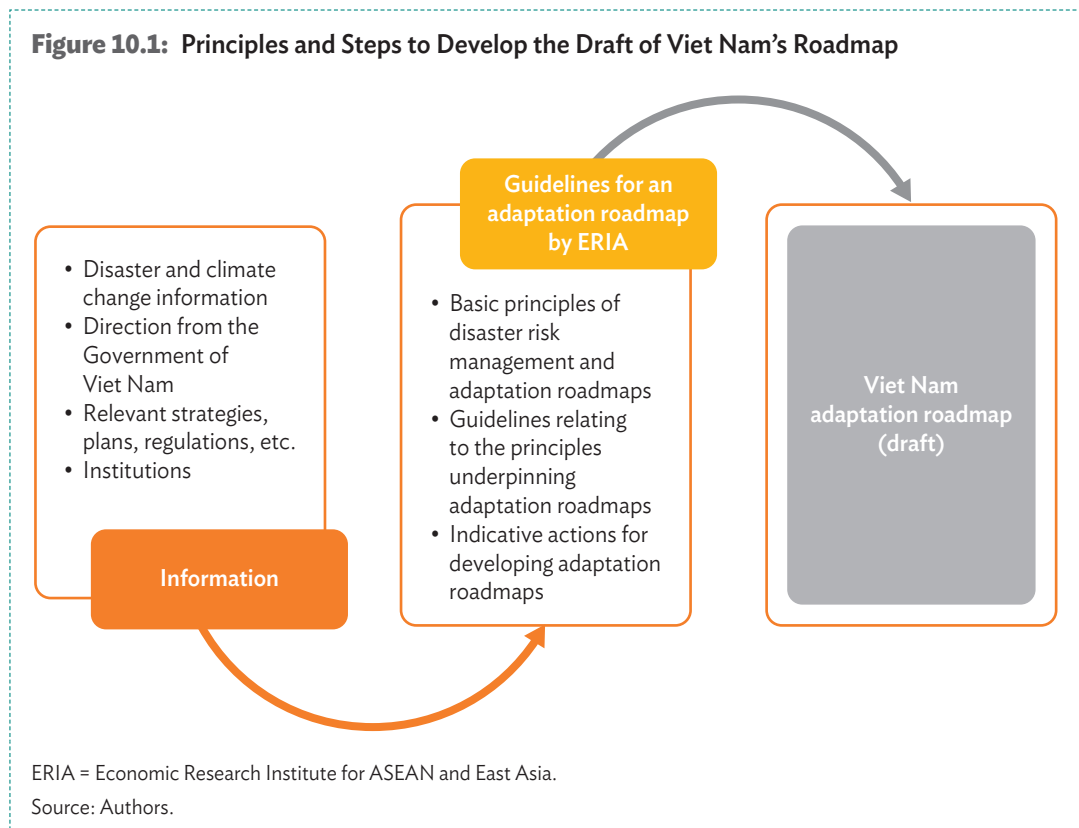
There are 18 ministries and other government agencies concerned with climate change and natural disasters in Viet Nam.<sup>5</sup> In addition to the Ministry of Natural Resources and Environment and the Ministry of Agriculture and Rural Development, other line ministries and government agencies also have functions and responsibilities related to climate change and natural disasters. At the local level, the Provincial People's Committee,

<sup>5</sup> These are the Ministry of National Defense; Ministry of Public Security; Ministry of Information and Communications; Ministry of Education and Training; Ministry of Natural Resources and Environment; Ministry of Agriculture and Rural Development; Ministry of Health; Ministry of Industry and Trade; Ministry of Science and Technology; Ministry of Labor, War Invalids and Social Affairs; Ministry of Finance; Ministry of Transport; Ministry of Planning and Investment; Committee for Ethnic Affairs; Ministry of Foreign Affairs; Ministry of Justice; Ministry of Construction; Ministry of Culture, Sports and Tourism; Ministry of Home Affairs; State Bank of Viet Nam; Committee for Ethnic Minority Affairs; Voice of Viet Nam; Viet Nam News Agency; Viet Nam Television; Viet Nam Social Security; Viet Nam Academy of Science and Technology; and the Viet Nam Academy of Social Sciences.

District People’s Committee, and Commune People’s Committee are delegated to implement and control government policies on climate change and natural disasters. In addition, the Vietnam Farmers’ Union, Vietnam Women’s Union, Central Committee of the Ho Chi Minh Communist Youth Union, and nongovernment organisations also play relevant roles in responding to climate change and natural disasters.

## 10.4 Disaster Resilience and Climate Change Adaptation Roadmap in Viet Nam

The Viet Nam Disaster Resilience and Climate Change Adaptation Road Map was developed based on the goals of the Communist Party of Viet Nam, strategies on disaster prevention and climate change response, and the guidelines of the Economic Research Institute for ASEAN and East Asia on disaster resilience and climate change adaptation (Figure 10.1). This is illustrated in Appendix 10.1.





## References

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**Appendix 10.1: Indicative Actions, Institutions, and Timeframes  
 for the Adaptation Roadmap in Viet Nam**

Strategic Policy Choices/Actions	Main Stakeholder	Relevant Stakeholders	Timeline
<b>A. Promote public awareness</b>			
1. Develop regional and subregional programmes on DRR and climate change impacts, causes, and best adaptation practices.	MONRE	MARD, provincial authorities	1–3 years
– Raise awareness, responsibilities, and capacity for responding to climate change and disaster prevention among stakeholders.	MONRE	MARD, Provincial People's Committee	1–3 years
– Establish programmes to build capacity for forecasting, warning, active prevention and mitigation, and adaptation to climate change.	MONRE	Provincial authorities	
2. Develop sectoral guidelines and training on public participation in adaptation programmes.	MONRE	MOIT, MARD, MOET	1 year
– Develop SMART programme and training.	MONRE	MOIT, MARD, MOET	1 year
– Develop detailed programme and training on each agricultural sector (cultivation, fisheries, forestry, the salt industry, etc.).	MARD	MONRE, local's people committee	1 year
3. Devise gender-specific strategies to deliver the DRR and climate risk information.	MOLISA	Vietnam Women's Union, MONRE, MARD	1–3 years
– Integrate gender into climate change and disaster programmes, planning at the national and local levels, and agricultural sector (cultivation, fisheries, forestry, etc.).	MOLISA		1–3 years
4. Share local knowledge with environmental and sectoral agencies to disseminate examples of public participation improving adaptation responses.	Commune, district, and provincial people's committees	Viet Nam Television, Voice of Viet Nam, Viet Nam News Agency	1–3 years
<b>B. Improve scientific agencies</b>			
1. Develop and regularly update public online databases on disaster and climate risk indicators.	National Climate Change Committee, Central Steering Committee for Natural Disaster Prevention and Control	MONRE, MARD	5 years

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**Appendix 10.1: Continued**

Strategic Policy Choices/Actions	Main Stakeholder	Relevant Stakeholders	Timeline
<ul style="list-style-type: none"> <li>Promote measures to prevent and control the impact of high tides, inundation, and salinity intrusion due to sea-level rise.</li> </ul>	MONRE	MARD, relevant institutes	1–5 years
<ul style="list-style-type: none"> <li>Proactively respond to natural disasters, monitor climate, and provide early warning systems to reduce losses due to natural disasters.</li> </ul>	MARD	MONRE, relevant institutes	1–5 years
2. Upgrade and expand targeted research and educational programmes and/or sectoral research training for scientists and institutions, among others.	MOST	MARD, MONRE, MPI, MOIT, GSO	1–3 years and continuous
<ul style="list-style-type: none"> <li>Enhance the application of information and communications technology in the agricultural sector.</li> </ul>	MARD	MOST, local authorities	1–3 years and continuous
3. Publicise the regional knowledge centre and create satellite offices to disseminate relevant information to affected communities.	Provincial People's Committee; District People's Committee; Commune People's Committee, local NGOs	MARD, MONRE	
4. Maximise the effectiveness of current acts and programmes by developing clear procedural guidelines regarding climate change adaptation.	MARD	MONRE, MPI, MOIT, Provincial's People Committee	Continuous
<b>C. Set feasible standards or benchmarks for structural measures</b>			
1. Review best international practice procedures for infrastructure standard setting, develop national guidelines, and strengthen or expand the application of zoning concepts in setting national standards.	VAST, VASS	Relevant institutes	1–3 years
2. Strengthen the instruments for social and economic impact assessment of new infrastructure by developing a clear methodology drawing on best international practices, adjusted to national and local contexts.	MPI	MOST, MONRE, VASS, VAST	1–7 years
3. Provide necessary climate and economic information, collaborate on the analysis, and facilitate consultation with industry.	MPI	MONRE, MARD, MOIT	1–3 years
4. Provide information on social and community impacts of the proposed standards.	Universities, institutes <sup>a</sup>	Local authorities	1–3 years and continuous

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### Appendix 10.1: Continued

Strategic Policy Choices/Actions	Main Stakeholder	Relevant Stakeholders	Timeline
<b>D. Develop new programmes to strengthen non-structural measures</b>			
1. Develop a focussed and well-packaged programme for the most vulnerable locations that integrate targeted structural measures with non-structural measures, including a funding mechanism for scaling up.	63 provincial people's committees; NGOs	MONRE, MARD, MOST, MPI	
2. Develop a set of regulatory incentives to support voluntary initiatives, using existing good practices.	MARD	MONRE, MPI, MOIT	3 years
3. Provide training and capacity building to policymakers and private-sector operators for better no-regret adaptation management focussing on international best practices that are locally appropriate.	MONRE	MARD, MOST, MOET, MOIT, universities, institutes <sup>a</sup>	7 years and continuous
4. Periodically update sectoral guidelines for monitoring and adding new sectors of growing impact.	MARD	MONRE, Provincial People's Committee	Continuous
<b>E. Improve cross-sectoral coordination</b>			
1. Strengthen existing formal mechanisms such as strategic environmental assessment and environmental impact assessment statements and Sustainable Development Goals to involve environmental authorities in designing structural and non-structural measures.	MONRE	MARD, MPI, MOIT	1–3 years
2. Coordinate the development of a strategic adaptation framework for using global environmental financing instruments.	MOF	MPI, MONRE, MARD, MOIT	1–5 years
3. Remove tariff and non-tariff barriers related to key stable food items.	MOIT	MARD, MONRE	1–3 years
4. Empower local governments to oversee regional climate change adaptation programmes and foster cross-sectoral coordination.	Sectoral agencies and civil society		
5. Develop sectoral guidelines to overcome specific identified gaps and facilitate uptake of best practices.	MONRE	MARD, MOIT, MPI	1–3 years

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**Appendix 10.1: Continued**

Strategic Policy Choices/Actions	Main Stakeholder	Relevant Stakeholders	Timeline
<b>F. Augment financial resources</b>			
1. Explore innovative financing instruments including insurance programmes, catastrophe bonds, and other risk-transfer products to support future developments via a global climate change agenda.	Local financial institutions, insurance companies, and international financial institutions		1–5 years
2. Strengthen and enhance the domestic financial market to allow financial institutions to mobilise finance from and transfer risks to the market, while enhancing financial inclusion.	MOF, State Bank of Vietnam	MARD, MOIT	1–3 years
3. Develop a consistent budgetary framework for integrating disaster and climate risks and set it as input into consistent and realistic delivery mechanisms related to the most vulnerable sectors, communities, or households in a transparent way.	MOF	Ministry of Trade, MARD	1–3 years
4. Link trade and business promotion incentives to adaptation financing, ensure heavy representation within regional and international adaptation funding institutions, and help shape allocation decisions.	MOIT	MPI, Provincial People's Committee	1–3 years
5. Develop and implement medium-term capacity strengthening action plans, as well as a training and staffing plan to meet growing mandates.	MPI	MONRE, MARD, MOIT, MOST, etc.	1–5 years
<b>G. Strengthen capacity for regional cooperation</b>			
1. Introduce an enhanced methodology for DRR and climate prediction at the regional level, strengthen early warning systems for international river basins, and carry out economic impact assessments of collective cross-border actions.	Vietnam Institute of Meteorology, Hydrology and Climate Change	Relevant institutes, universities	1–3 years
2. Share and promote regional best practice examples of mainstreaming adaptation practices in sectoral planning.	ASEC		Short to medium term (1–5 years)
– Strengthen international cooperation and integration to enhance national standing in climate change issues.			
3. Provide the technical and human resources needed for effective management of cross-border climate change impacts, and make clear the roles and responsibilities of all parties involved in collective actions.	MOFA	MONRE, MARD	Short to medium term (1–5 years)

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### Appendix 10.1: Continued

Strategic Policy Choices/Actions	Main Stakeholder	Relevant Stakeholders	Timeline
4. Develop a network of regional centres within appropriate existing institutions to provide high-quality training and knowledge to produce a high standard of professionalism across countries.	ASEC	MONRE, MARD, MOIT, MOFA	Continuous
5. Establish an ASEAN Climate Change Adaptation Centre to accommodate the translation of climate policies, climate technologies, and climate education as well as data analysis, and incorporate these in national development plans.	ASEC	MOFA	Medium to long term

ASEAN = Association of Southeast Asian Nations, ASEC = ASEAN Development and Management Consulting, DRR = disaster risk reduction, MARD = Ministry of Agriculture and Rural Development, MOET = Ministry of Education and Training, MOF = Ministry of Finance, MOFA = Ministry of Foreign Affairs, MOIT = Ministry of Industry and Trade, MONRE = Ministry of Natural Resources and Environment, MOST = Ministry of Science and Technology, MPI = Ministry of Planning and Investment, NGO = nongovernment organisation, VASS = Vietnam Academy of Social Sciences, VAST = Vietnam Academy of Science and Technology.

<sup>a</sup> E.g. the National Economic University, Hanoi Agriculture and Rural University, Vietnam National University, Institute of Strategy and Policy on Natural Resources and Environment, Institute of Policy and Strategy for Agriculture and Rural Development, Central Institute for Economic Management, and Vietnam Institute of Economics.

Source: Authors' compilation.