



STRAIGHT TO THE POINT

- » Vietnam aims to reduce greenhouse gas (GHG) emissions by 8 percent by 2030, with the possibility of surpassing the target to 25 percent, conditional on international support.
- » Key mitigation sectors are energy; agriculture; land use, land use change, and forestry (LULUCF); and waste management.
- » Disaster management and related adaptation measures are priorities for the country going forward; Vietnam is already receiving support and making progress in these areas.
- » Vietnam has robust national legislation covering climate change as well as Climate Action Plans (CAPs) at the provincial level.
- » The National Climate Change Committee and the track record on development partner engagement form the foundation for NDC implementation.
- » Developing opportunities for a robust renewables investment environment could strongly align Vietnam's climate and sustainable development goals.

BACKGROUND

FIGHTING CLIMATE VULNERABILITIES WITH GROWTH

Cited as one of the most vulnerable countries to climate change due to its high population density, coastal areas, low elevation, and exposure to cyclones, Vietnam is at risk of losing the progress it has made in poverty reduction and economic development. Climate vulnerabilities include flooding, landslides, saltwater intrusion, abnormal rainfall patterns, sea level rise, and typhoons—all of which affect Vietnam's agricultural sector, which represents 17 percent of GDP (2017). However, the country has shifted from a historically agrarian economy (in 1989, agriculture contributed 42 percent of GDP¹) to one focused on industry (39 percent of GDP, 2017) and services (44 percent of GDP, 2017). Still, nearly half of the labor force is engaged in agriculture.²

During the past ten years, the country has experienced considerable growth—fluctuating from a high of 7.13 percent to a low of 5.23 percent.³ Growth for 2016 was lower than projected, explained by environmental issues—specifically drought and salinization—that impacted agriculture, and low oil prices that impacted the extractive sector. In part to offset economic fluctuations, Vietnam has received financial and technical support from the International Monetary Fund (IMF) and the World Bank.⁴

Vietnam has made progress reducing poverty levels and achieving macroeconomic stability. However, the country is still vulnerable to economic shocks. Rural populations are at risk of returning to poverty because of slowing growth in the labor force. Macroeconomic stability has been positively influenced by two factors. Since 2011, Vietnam's lending interest rate has decreased from 16.95 to 6.96 percent⁵, meaning that this potential barrier for investment has been significantly lowered over the past few years. Over the same time frame, Vietnam's domestic credit to the private sector as a percentage of GDP has increased from 101.79 to 111.93 percent⁶, showing promising signs for the future.

¹ https://cdn.loc.gov/master/frd/frdcstdy/vi/vietnamcountrystooocima_o/vietnamcountrystooocima_o.pdf
² World Bank, 2017, Vietnam Overview.
³ <http://data.worldbank.org/indicator/NY.GDP.MKTP.KD.ZG?end=2016&locations=VN&start=2007>

⁴ <https://www.imf.org/external/am/2016/speeches/pro6e.pdf>
⁵ <http://data.worldbank.org/indicator/FR.INR.LEND?locations=VN>
⁶ <http://data.worldbank.org/indicator/FS.AST.PRVT.GD.ZS?locations=VN>



As part of its effort to address fiscal challenges, the government of Vietnam has been developing an economic reform strategy for 2017-2021 to improve competitiveness; pursue sustainable development; maintain social security protection; rapidly reform the banking sector and financial markets; promote private economic development; and implement free trade agreements.⁷

The country contributes 0.5 percent of global greenhouse gas (GHG) emissions, and is working towards developing a low-carbon and green economy, while strengthening its mitigation efforts in energy, industry, transport, agriculture, waste, and land use, land use change, and forestry (LULUCF) sectors.⁸ Climate change is being mainstreamed in Vietnam's existing economic development plans, the National Socio-economic Development Strategy (2011-2020), and Socio-economic Development Plan (2016-2020). The latter aims to more broadly achieve macroeconomic stability and it identifies actively responding to climate change as a key part of this effort.⁹

COUNTRY AMBITION

SECTOR-SPECIFIC STRATEGIES TO MITIGATE AND ADAPT

Vietnam has recognized that reducing its climate vulnerability is a key priority, and in its Nationally Determined Contribution (NDC) has pledged an **eight percent GHG emissions reduction by 2030 against a business-as-usual (BAU) scenario, with the possibility of surpassing that benchmark to 25 percent, conditional on international support.** The national plan for implementation of the Paris Agreement identifies 68 priority tasks to be carried out from 2016 to 2030 by all ministries, agencies, communities, and the private sector toward the achievement of Vietnam's NDC.¹⁰

To meet its targets, Vietnam is focusing its efforts on climate governance and activities in key sectors such as energy, transportation, agriculture, and waste management.

- » **Energy //** Reducing energy use and improving efficiency and effectiveness of use are priority areas. Vietnam intends to develop a renewable energy technology market, optimize the use of renewable energy sources (on- and off-grid), and develop the financial and technical mechanisms and policies necessary to support such initiatives. One of the critical challenges lies in achieving the right balance amongst different fuel sources (e.g., hydro power, solar, wind, coal, gas) to meet the country's energy needs.
- » **Transportation //** The country intends to develop more public transit, divert more freight transport to rail transport and extend use of inland water ways, and establish fuel consumption and emissions standards. Additionally, Vietnam aims to encourage buses and taxis to use compressed national gas (CNG) and liquefied petroleum gas (LPG).
- » **Agriculture, Land Use, and Forestry //** Vietnam seeks to improve sustainable forest management and policies to attract private sector investment for afforestation, reforestation, and biodiversity conservation projects. As a member of REDD+ (Reducing Emissions from Deforestation and Forest Degradation Program), it also aims to better integrate both international and domestic resources for related projects. Further, Vietnam has identified farming, livestock, and fisheries as opportunity areas for GHG emissions reduction and looks to develop processes and technologies for activities such as by-product and waste reuse.

⁷ <http://www.worldbank.org/en/country/vietnam/overview>

⁸ INDC 2015. <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Viet%20Nam%20First/VIETNAM%20275%20INDC.pdf>

⁹ <http://www.chinhphu.vn/portal/page/portal/English/strategies/strategiesdetails?categoryId=30&articleId=10057712>

¹⁰ NDCP Final Proposal – Vietnam



- » **Waste Management** // Vietnam aims to enhance waste management practices and capacity through communication and raising awareness of reducing, reusing, and recycling waste as well as the implementation of modern waste treatment technology.
- » **Governance** // Vietnam intends to strengthen institutions and integrate climate change into development strategies and plans, develop a national GHG inventory system, and establish systems for Monitoring, Reporting, and Verification (MRV) at national and sectoral levels.

Many adaptation measures have been underway prior to the ratification of the Paris Agreement, but Vietnam has since identified critical institutional needs, namely financing, technology, and the lack of a monitoring and evaluation (M&E) framework. It has identified three main priority areas for climate change adaptation in the 2021-2030 period:

- » **Disaster Risk Management** // Improve climate-monitoring and weather forecasting systems, implement disaster prevention plans, develop infrastructure, and create plans for residential areas frequently affected by storm surges, floods, and land erosion.
- » **Social Security** // Improve regulations for infrastructure, public facilities, and housing, ensure food security, implement community-based adaptation, deploy integrated water resources management, and improve quality of coastal forests (in particular: Mekong and Red River deltas).
- » **Sea Level Rise** // Implement integrated coastal zone management, use sea level rise scenarios for land use planning, implement anti-inundation measures such as resilient urban infrastructure, upgrade crucial sea and river dykes, and build new large urban drainage infrastructure.

STATE OF PLAY

INTEGRATING SUBNATIONAL AND SECTORAL ACTIONS

Vietnam has a variety of policies, frameworks, strategies, and laws that support emissions reduction and climate change mitigation, many of which have been in place prior to the Paris Agreement. These lay the groundwork for further progress and coordination on climate. Key policies in support of the NDC include:

- » National Plan for Implementation of the Paris Agreement
- » Renewable Energy Development Strategy (2015)
- » Law on Environment (2014)
- » Law on Natural Disaster Prevention and Control (2013)
- » Resolution No. 24-NQ/TW on “Proactively responding to climate change, enhancing natural resource management and environmental protection” (2013)
- » National Action Plan on the Implementation of the 2030 Agenda (2017)
- » National Green Growth Strategy (2012)
- » National Climate Change Strategy (2011)
- » Law on Economical and Efficient Use of Energy (2010)



Of note is the country's implementation of Climate Action Plans (CAPs) at the provincial level, which have guidelines dating back to 2010 prepared by the Ministry of Natural Resources and Environment (MONRE) and the National Target Program to Respond to Climate Change (NTP-RCC).¹¹ This endeavor gave birth to many best practices for local governments to use in implementing their climate agendas. As part of these local agendas in Vietnam, the Ministry of Planning and Investment (MPI) has approved the decision to require the integration of climate change considerations into Socio-Economic Development Plans (SEDPs) while the Ministry of Construction (MoC) has similarly approved requirements to consider climate change in urban master and construction plans.

Moreover, several ministries are actively pursuing action on mitigation, including:

- » Provincial Green Growth Action Plans (MPI, in collaboration with UNDP, USAID, and GIZ)—currently developed and being implemented in 30 provinces and cities¹²
- » Green Action Plan to Reduce CO₂ Emissions from Vietnam's Civil Aviation Sector 2017-2020 (MOIT, MPI, and Ministry of Transport, MoT)¹³
- » Private sector engagement on mitigation (MPI)—mobilization through modalities on Public Private Partnerships (PPPs) for infrastructure and power generation; creation of favorable environment for private investment¹⁴
- » Green Credit Initiative (State Bank, in collaboration with GIZ)¹⁵

In terms of policy reforms and financing for climate-related initiatives, Vietnam initiated a Support Program to Respond to Climate Change (SP-RCC) until 2020 that provides a platform for cross-sectoral policy dialogue and coordinated financing with development partners including Agence Française de Développement (AFD), Japan International Cooperation Agency (JICA), Canadian International Development Agency (CIDA), World Bank (WB), Australian Department of Foreign Affairs and Trade (DFAT), and Export-Import Bank of Korea (K-Eximbank). SP-RCC serves as a platform between development partners and government agencies to identify policy reform priorities. The SP-RCC policy matrix includes actions to improve: disaster preparedness and climate monitoring; food and water security in the context of climate change; response to sea level rise and disaster risk in vulnerable areas; sustainable forest protection and development; reducing GHG emissions under the SEDP; strengthening government capacity; community capacity development; and increasing investment. Based on completion of agreed milestones, development partners provide budgetary support to the Vietnamese government to increase the fiscal space for climate change actions.

Additionally, several Nationally Appropriate Mitigation Actions (NAMAs) have been under development in a variety of sectors such as renewable energy, building, waste, biogas, transportation, cement, agriculture, fertilizer, and steel. Other development cooperation exists on topics of climate, green growth, and NDCs, including projects related to energy World Bank, European Union, Denmark, GIZ, KfW, green growth planning at the provincial level (Belgium), and the Mekong Delta (Netherlands).

Partners such as the UNDP, UNEP, and GIZ are assisting Vietnam with both mitigation and adaptation assistance including establishing frameworks for NAMA development, as there is still a need for technical expertise. Two NAMA projects were recently officially registered: “Supporting Program for Wind Power Development in Vietnam” and “Biogas for Onsite Power Generation for medium/large Pig Farms.”¹⁶ A USD 7.8 million UNDP-Global Environment Facility mitigation portfolio supporting non-fired brick production, development, and promotion of LED technology, and energy efficiency improvements for commercial

¹¹ <http://i-s-e-t.org/resources/policy-tech-reports/climate-action-plans-in-vietnam-experience.html>

¹² <http://www.vn.undp.org/content/vietnam/en/home/presscenter/pressreleases/2017/01/12/viet-nam-makes-progress-in-promoting-green-growth.html>

¹³ https://www.icao.int/environmental-protection/Lists/States_Action_Plans/Attachments/132/VNM_action_plan_on_CO2_emissions_reduction.pdf

¹⁴ <http://ccap.org/assets/Mobilizing-Finance-for-the-Implementation-of-climate-Change-Green-Growth-Strategies-Dr.-Pham-Hoang-Mai-Vietnam.pdf>

¹⁵ <http://english.vov.vn/economy/germany-supports-vietnam-in-green-credit-development-294937.vov>

¹⁶ <http://www4.unfccc.int/sites/nama/SitePages/SearchResults.aspx?k=vietpercent20nam&cs=Thispercent20Site&u=httppercent3Apercent2Fwww4.unfccc.intpercent2Fsitespercent2Fnama>



and high-rise residential buildings is ongoing. On adaptation, a USD 29 million UNDP-Green Climate Fund project helps to improve the resilience of vulnerable coastal communities. A [euro] 10.3 million BMUB-funded GIZ project is providing Support for Implementation of the Paris Agreement.

Furthermore, Vietnam has made significant progress in reforestation, afforestation, and forest protection as part of its REDD+ Strategy—a central piece of the country’s climate change mitigation efforts. The Prime Minister approved Vietnam’s REDD+ Strategy, through which Vietnam aims to protect and improve the size and quality of existing plantation and natural forests, while linking national goals to GHG emissions reduction; encouraging green growth; and mobilizing international support. The REDD+ program will contribute to the realization of Vietnam’s NDC goal to reduce total GHG emissions by 8 percent by 2030.

NDC PARTNERSHIP ENGAGEMENT

Vietnam is an active and engaged participant in the NDC Partnership, including serving on the Partnership’s Steering Committee. Notably, on 28 June 2017, a workshop was held in Vietnam with representatives of MPI, MONRE, and development partners involved in the Partnership to discuss the planned review and update of Vietnam’s NDC. The process for NDC review is central to Partnership engagement.

UNDP and GIZ are supporting NDC review in Vietnam. Three sub-national forums intending to engage all 63 provinces on the Paris Agreement and NDCs have been convened to support the review process. Further collaboration is planned around developing tools to support inter-ministerial coordination as well as analytical work on how to enhance institutional arrangements. Under the UNDP NDC Support Program, UNDP will also support several technical inputs to an NDC roadmap as well as prepare guidance for integrating NDC targets into national, sectoral, provincial, and city level planning and budgeting.

The World Bank’s NDC Support Facility is financing a project on “NDC Implementation through Enhancing Multi-sectoral and Inter-ministerial Coordination,” which will provide technical expertise and support for consensus-building efforts toward the objective of identifying investment opportunities and specific policy actions to achieve the country’s NDC goals by 2030. Two other Support Facility projects focus on industrial climate competitiveness, aiming to roll out technical guidance for low-carbon and energy-efficient “eco industrial parks”, including investment planning; and green transport, in collaboration with the Ministry of Transport and linked to the new National Climate Change Committee.

The NDC Partnership sees substantial opportunity for investment, coordination, and collaboration. This is why the Partnership has decided to move forward with Vietnam to bring all partners together to develop a NDC Partnership NDC Partnership Plan to create collective impact. This process is already underway in Vietnam, coordinated between UNDP, GIZ, and the World Bank, to help the government converge planning with implementation and impact.

OPPORTUNITIES FOR PARTNERSHIP

LEVERAGING THE POWER OF GOOD DATA AND TOOLS

Key gaps in the implementation of Vietnam’s NDC include data availability, technical assistance, enabling environment for renewable energy investment, further integration into national planning and enhanced institutional arrangements, and alignment of its NDC with Sustainable Development Goals (SDGs).



Vietnam has already taken substantial steps to lay out the basic planning and institutional foundations for implementing its NDC. The priority is now to focus implementation, including details of the specific responsibilities of various stakeholders and ensure a shared ownership of the commitments and required actions moving forward. An opportunity to integrate the NDC plans and ensure alignment of goals is also provided by the new economic reform strategy for 2017-2021.

Digging deeper into where efforts can be enhanced, reliable and available data present a sizeable challenge that will hinder successful mitigation and adaptation programs. Data availability and access is essential for planning, implementing, monitoring, and evaluating programs. Collaboration amongst institutions with reliable data (such as GSO/MPI) and amongst institutions with research and analytical capacity is crucial for accurate planning and monitoring.¹⁷ Vietnam could benefit from a national GHG inventory system and a Measurement, Reporting, and Verification (MRV) system at all levels, on which JICA and GIZ are providing support.¹⁸

Another major opportunity relates to technical capacity. Vietnam has stated its need for tools to assess climate change impacts and vulnerabilities, technology for sustainable water resources, agriculture, forestry, and aquaculture, and more. For example, in the case of disaster response, hydro-meteorological forecasting systems need to be updated, assessment and monitoring systems of sea level rise need to be established, and plans are needed for developing resilient infrastructure and disaster risk management.

EXPLORING THE GREAT POTENTIAL FOR RENEWABLE ENERGY

The country offers significant opportunities to attract investment for renewables and deploy renewable energy technologies. Room for improvement exists in developing an enabling environment for investment, including finding commercial terms that can secure private sector investors at a greater scale.

While Vietnam prioritizes adaption, Implementing Partners are already engaged with the country in developing and implementing its NAMAs. The NDC Partnership has an opportunity to ramp up its engagement by advocating for a robust renewable energy sector. By supporting Vietnam in making significant progress on renewables, progress on NDC implementation can be accelerated, and potentially move beyond the eight percent goal.

Clean energy investments for 2011-2015 totaled USD 1.44 billion with an upward trend over this time frame. The growth rate from 2013-2015 for clean energy investments was 24.12 percent, while electricity demand is predicted to increase nine percent annually by 2030 with continued potential for growth and investment. Ninety-eight percent of the Vietnamese population already has access to electricity, but the intensity of the country's electricity use is likely to increase with development.¹⁹ This is particularly true in rural areas, where there are no programs targeted to promote clean energy use.

As an overall goal, Vietnam aims to prioritize the development of renewable energy power production, increasing the utilization rate of renewables to about seven percent in 2020 and more than ten percent in 2030.²⁰ The current largest share in the total renewable power capacity is coming from hydropower, although a big move in development of power from other sources is being seen as well, including raising the total capacity of solar power projects to about 850 MW by 2020, 4 GW by 2025, and 12 GW by 2030. In early 2016, the government of Vietnam approved adjustments to the 7th Vietnam Power Development Planning (PDP7-A) for the period 2011-2020 to increase the role of low-carbon technologies. Electricity generation required in Vietnam would also reduce about 20 and 18 percent by 2020 and 2030, respectively.

¹⁷ NDCP Viet Nam Proposal

¹⁸ <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Viet%20Nam%20First/VIETNAM%2027S%20INDC.pdf>

¹⁹ <http://global-climate.org/en/country/vietnam/#/details>

²⁰ <http://www.vn.undp.org/content/dam/vietnam/docs/Publications/Mr%20Thuc.pdf>

²¹ <http://www4.unfccc.int/ndcregistry/PublishedDocuments/Viet%20Nam%20First/VIETNAM%2027S%20INDC.pdf>



In its NDC, Vietnam outlines its aim to “innovate technologies and apply advanced management and operation procedures for efficient and effective use of energy in production, transmission, and consumption, especially in large production facilities where energy consumption is high” as well as “remove obsolete and energy-consuming technologies in energy production and consumption systems.”²¹ However, the availability of low-cost coal power and petroleum products—partially due to energy subsidy structures—remains a critical challenge to renewable power pursuits. Moreover, challenges are faced regarding technical aspects of grid integration given renewables’ intermittent nature. Aligning Vietnam’s objective to innovate its energy sector with the development motivations behind pursuing coal would be a key area for support.

One of the barriers to increased renewables investment is addressing the perceptions of cost and potential of renewables as well as assistance with the technical and administrative regulation necessary to realize large-scale renewables deployment and investment in transmission and distribution infrastructure. This situation poses an opportunity for the Partnership, as it is not only an area for financial investment but also for institutional capacity building and stakeholder engagement. Education and raising awareness are essential for buy-in on renewable energy technologies, their accessibility, and their capacity, as is alignment and coordination on technical and regulatory needs to enable significant deployment.

SOUTH-SOUTH EXCHANGE: RENEWABLE POTENTIAL

In regard to its renewable energy pursuits, Vietnam can look at India, a country which faces poverty extremes and has strong development aspirations, and at the same time sees a major renewables commitment—generating at least 40 percent of electricity from non-fossil sources by 2030, and increasing solar power capacity to 100 GW by 2022²²—as compatible with its development goals.

²² <http://www.wri.org/blog/2016/05/india-charts-roadmap-achieve-ambitious-solar-targets>

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The NDC Partnership is guided by its partners and assisted by a Support Unit hosted by the World Resources Institute (WRI). The Partnership is co-chaired by the Governments of Germany and Morocco.

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