Urban Pathways

VIETNAM

POLICY ENVIRONMENT AND ADVICE PAPER

Wuppertal Institut

UN HABITAT
FOR A BETTER URBAN FUTURE

UN environment programme

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The Urban Pathways project helps delivering on the Paris Agreement and the NDCs in the context of the New Urban Agenda and the Sustainable Development Goals. It has established a facility in close cooperation with other organisations and networks active in this area to support national and local governments to develop action plans and concrete implementation measures to boost low-carbon urban development. This builds on UN-Habitat's role as "a focal point on sustainable urbanisation and human settlements including in the implementation and follow-up and review of the New Urban Agenda". The project develops national action plans and local implementation concepts in key emerging economies with a high mitigation potential. The local implementation concepts are being developed into bankable projects, focusing on the access to urban basic services to create a direct link between climate change mitigation and sustainable development goals.

Project concept

The project follows a structured approach to boost Low Carbon Plans for urban mobility, energy and waste management services that deliver on the Paris Agreement and the New Urban Agenda. The project works on concrete steps towards a maximum impact with regards to the contribution of urban basic services (mobility, energy and waste management) in cities to global climate change mitigation efforts and sustainable and inclusive urban development. This project makes an active contribution to achieve global climate change targets to a 1.5°C stabilisation pathway by unlocking the global emission reduction potential of urban energy, transport and resource sectors. The project will contribute to a direct emission reduction in the pilot and outreach countries, which will trigger a longer term emission reduction with the aim to replicate this regionally and globally to make a substantial contribution to the overall emission reduction potential.

Project aims

This project implements integrated urban services solutions as proposed in the New Urban Agenda providing access to jobs and public services in urban areas, contributing to equality and social coherence and deliver on the Paris Agreement and the Sustainable Development Goals.This is the first dedicated implementation action oriented project, led by UN-Habitat to deliver on inclusive, low-carbon urban services. Securing sustainability and multiplier effect, the project aims to leverage domestic and international funding for the implementation projects that will follow from this initiative

Urban Pathways

Urban Pathways Project and Replication Cities

ABSTRACT

In the context of formulating and implementing the Urban Pathways initiative for Vietnam, this paper analyses the administrative, legislative and political environment which influences policymaking at two levels of the government – the National and the Local/Provincial (Hai Phong). The paper outlines Vietnam's GHG emission reduction targets, as well as the parallel 'green growth' strategies and action plans currently being implemented within three sectors – energy, transport and resource management. The paper also identifies key decisionmakers within the country's public administration system, as well as policy recommendations.


Urban
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COUNTRY OVERVIEW

Vietnam has a population of 98.17 million (2021) and is located in Southeast Asia between the Mekong River Delta to the south, the Red River Delta to the north and the South China Sea to the east. Between the period of 1980-2015, Vietnam's rate of population growth in rural areas significantly declined to near zero, while the resultant migration has led to rapid urbanisation across all major cities. Although the country's current level of urbanisation is low at around 38.05%, it is projected that urban areas would accommodate over half of the country's population by 2045 (Vietnam Habitat III National Report, 2016). While one-third of the current urban population is presently concentrated in the two largest metropolitan regions of Hanoi and Ho Chi Minh City, Vietnam's secondary tier of the next three largest cities, namely, Can Tho, Hai Phong and Da Nang, is also deemed critical in addressing the future challenges of low-carbon growth.

Vietnam's economic transition to a lower-middle income country is achieved through intensive policy reforms which shifted a centrally-planned economy to a market-driven one and led to greater agricultural yields, manufacturing output and foreign investments. In 2016, Vietnam's GDP was 329.68 billion USD, while the GDP per capita was 3,526 USD in 2021 (World Bank, n.d.).

Vietnam currently contributes 0.8% of the world's total greenhouse gases (GHG) emissions and ranks 19th globally in terms of GHG emissions (Vietnamnet, 2017). For the period of 1990-2019, the country's cumulative GHG emissions were 438 MtCO2e. During the same period, GHG emissions for energy (electricity sub-sector) were 299.55 metric tons, for transport: 42.66 metric tons and waste: 20.63 metric tons (ClimateWatch, 2019).

SUMMARY OF VIETNAM´S NATIONALLY DETERMINED CONTRIBUTION (NDC)

Vietnam's Intended Nationally Determined Contributions (INDC) specify mitigation and adaptation targets for the period of 2021 to 2030. The INDC also differentiates between conditional and unconditional contributions with respect to the country's mitigation targets. Unconditional targets are defined as actions implemented using domestic resources, while conditional contributions are measures whose implementation is subject to receiving international finance, technology transfer and capacity building. Unconditional contribution: With domestic resources, by 2025 Vietnam will have reduced total GHG emissions by about 7.3% compared to the BAU scenario (equivalent to 52.9 million tonnes of CO2eq), and by 2030 Vietnam will have reduced total GHG emissions by about 9% compared to the BAU scenario (equivalent to 83.9 million tonnes of CO2eq).""Conditional contribution: The above-mentioned 9% contribution can be increased to 27% by 2030 (equivalent to 250.8 million tonnes of CO2eq). However, given that the GHG emissions for 2030 are projected to triple to 787.4 MtCO2e compared to 2010 level of 246.8 MtCO2e, the committed conditional reduction still falls below the BAU scenario (Vieweg et al., 2017). It is therefore essential that Vietnam's GHG mitigation efforts go beyond the INDC-mandated strategies.

Vietnam has completed and submitted its updated nationally determined contribution (NDC) to the UNFCCC Secretariat on September 11, 2020. In particular, Vietnam has increased its climate change response contributions. Accordingly, by 2030, Vietnam, with its domestic resources, will have reduced its total GHG emissions by 9% compared to the business as usual (BAU) scenario. This contribution can be increased to 27% when the nation can receive international support through bilateral and multilateral cooperation, and implementation of the new mechanisms under the Paris Agreement. The NDC mentions the following strategies which reflect the elements relevant to the Urban Pathways project: changing the fuel and energy structure in industry and transportation; shifting passenger and cargo transportation models; promoting efficient exploitation of renewable energy sources; and waste management.

Vietnam's Nationally Determined Contribution (NDC) under the United Nations Framework Convention on Climate Change (UNFCCC) defines that climate change adaptation must be linked to sustainable development. A clear link is also recognized between the mitigation and

adaptation elements of the NDC. The identified adaptation strategic tasks are: (i) enhancing adaptation efficiency through strengthening state management and resources; (ii) increasing the resilience and adaptive capacity of communities, economic sectors and ecological systems; (iii) reducing disaster risks and minimizing damages, getting ready to cope with increased natural disasters and climate extremes due to climate change. As regards the road sector, the updated NDC recognizes that both national and local road networks are at risk of being heavily impacted by climate change.

Vietnam would need to reduce its emissions to below 296 MtCO2e by 2030 and to below 248 MtCO2e by 2050 to be within its emissions allowances under a fair-share range compatible with global 1.5°C, as shown in Figure 1.

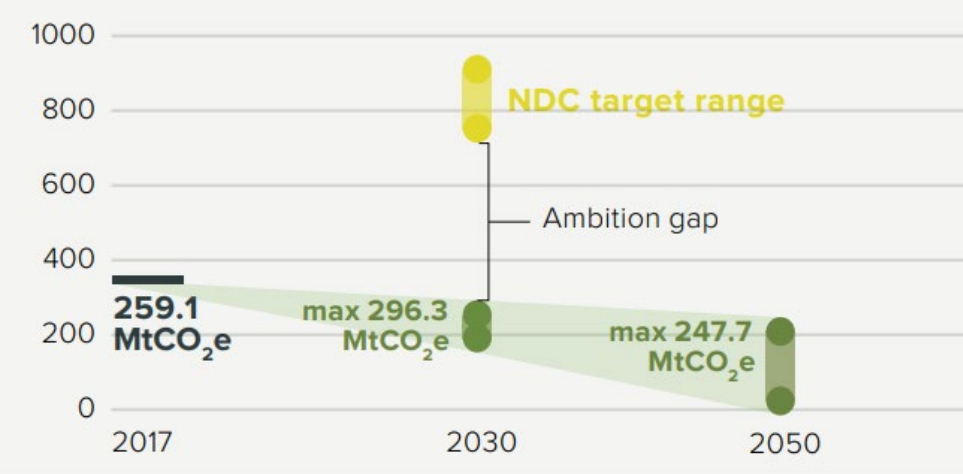

Figure 1. Vietnam's 1.5°C Pathway (MtCO2e/year). Source: Climate Transparency, 2020.

Vietnam's emissions (excl. land use) have increased by 335% between 1990 and 2017 to 363 MtCO2e in 2017. When considered by category, the energy sector has been the greatest driver of emissions. Vietnam's emissions projections show that under current policies, emissions will continue to increase steadily to reach 571 MtCO2e by 2030, well under Vietnam's conditional NDC of 748 MtCO2e or the unconditional target of 903 MtCO2e (excluding LULUCF).

POLICIES AND STAKEHOLDER MAPPING

Governance and Institutions

The Socialist Republic of Vietnam follows a one-party system of governance, where the governance is highly centralised at the national level. Vietnam's political and economic system is particularly governed by a cycle of Socio-Economic Development Strategies (SEDS) which are formulated for a period of 10 years each. Additionally, Vietnam also prepares Five-Year Plans, termed as Socio-Economic Development Plans (SEDP), which focus on the implementation the SEDS. This process constitutes a 'topdown system of planning', whereby the central authorities not only establish a development trajectory but also monitor and ensure that the programmes are duly implemented by all local governments (Albrecht et al., 2010).

The country of Vietnam has gone through monumental changes and transformations since 1950, passing through a long period of the world-wide known Vietnam War of the 1960s and 1970s, followed by the major changes politically, economically, culturally, strategically, and administratively as well as regionally and internationally. Since the 1986 "Doi Moi" (Renovation), Vietnam has gradually become one of the most dynamic emerging countries in the world with a high and steady economic growth rate for the past ten years.

Vietnam's National Green Growth Strategy (2011-2020 with a vision to 2050) puts forward targets for GHG (and energy) reduction, improving energy efficiency, and put forth conditional commitments for 2020, 2030 and 2050 (2020: 8%-10% reduction against 2010 levels; reduce annual GHG emissions by 1.5% to 2% annually in the period 2030 to 2050). The said strategy contains 17 action plans, including those that focus on transport systems and technologies. It also states a goal of reducing GHG emissions from energy activities (between 10%-20% reduction compared to the baseline). Other relevant strategies relate to energy infrastructure, sustainable urbanization and promotion of sustainable consumption and building green lifestyles.

The National Power Development Plan 2021-2030 was announced and lays down the strategies to achieve renewable energy targets set for 2030 (15-20% of total energy share) and 2045 (2030-2045). On energy efficiency, Vietnam has a comprehensive "Energy Efficiency and Conservation Law" (No. 50/2010/QH12) which took effect from 2011. It governs the issuance of a building energy benchmark system, and a building code - including stipulations on design, construction, and materials – towards energy savings and efficiency.

Vietnam's Transport Development Strategy (Decision No. 355/QD-TTg) aims to achieve "modern and high-quality transport systems with reasonable cost, safety, reducing environmental pollution and energy saving by the application of advanced transport technology, especially multi-modal transportation and logistics." It also underlines the goal of restricting the growth of private motorized vehicles to 4 million cars, and 40 million motorcycles (2020). Such targets are aligned with locally relevant master plans, such as the Hanoi Region Urban Transport Master Plan 2020 which sets out the strategic development framework for the region, and focuses on the development of a mass transit network (metro and BRT) which is envisaged to be fully operational by 2030. Vietnam's National Climate Change Strategy targets that 20% of buses and taxis would utilize compressed natural gas (CNG) and liquified petroleum gas (LPG) by 2020, and 80% by 2050.

In January 2022, the revised Law on Environmental Protection (LEP) 2020 came into effect (replacing an older law from 2014) (Vietnam Government, 2020b). The law introduces a domestic carbon market with an emissions trading scheme, where businesses will have an emissions quota that can be traded. The law also allows for a carbon tax. The effectiveness of the carbon market depends on the carbon price, and the cap on emissions. A high cap on emissions would undermine the effectiveness of a carbon price; monitoring and enforcement would be critical (Do & Burke, 2021). The Ministry of Natural Resources and Environment (MORE) is developing a decree related to carbon pricing (Thi Khanh et al., 2021).

NATIONAL GOVERNMENT

National Assembly:

The National Assembly is the premier legislative body in Vietnam deciding all domestic and foreign policy, and is democratically elected for a term of five years. The National Assembly creates the framework of legislation, while the National Government is responsible for providing guidance to all executive authorities on implementing the legislation (LSE and Grantham Research Institute, n.d.). Additionally, there is a Standing Committee which represents the National Assembly between its two annual meetings. The Standing Committee is tasked with the formulation of draft policy, which is subsequently approved by all the members of the Assembly for it to be legislated (UNDP, 2012). The National Assembly also elects the President as head of the State as well as the Prime Minister as head of the Central Government.

Central Government:

The National Government constitutes the executive arm of the National Assembly and the highest organ of State administration for the Socialist Republic of Vietnam (UN DESA, 2004). All legal and policymaking responsibilities are distributed between the National Assembly and the National Government. The responsibilities and sectoral tasks of National Ministries, as articulated in the INDC (The Socialist Republic of Vietnam, 2015), and those related to urban development (OECD, 2018) are elaborated as follows –

a. Ministry of Natural Resources and Environment (MONRE):

Lead and coordinate the periodic assessment of INDC-related GHG mitigation efforts with relevant ministries, sectors and localities Develop National Adaptation Plan (NAP)

Assess risks and vulnerability, determine adaptation needs and addressing loss and damage (L&D) issues; conduct related pilot projects independently

Raise public awareness regarding climate change and the Paris Agreement

Establish the MRV system for national scale GHG emission mitigation action

b. Ministry of Construction (MOC):

Lead and coordinate across ministries and provincial authorities the implementation of National Programme for Urban Development 2012-2020; guide local government agencies on implementing their Urban Development programmes

Pilot application of mechanisms, policies, market instruments in mitigation of GHG emissions in the construction sector, including adaptation in urban areas, low-carbon urban development and smart city projects

Prepare proposals for GHG mitigation from construction sector and funding of projects through Government Grants for the period of 2021-2030

c. Ministry of Transportation (MOT):

Pilot application of mechanisms, policies, market instruments in mitigation of GHG emissions from the transport sector, including, mode shift from private vehicles to public transport

Prepare proposals for GHG mitigation from transport sector and funding of projects through Government Grants for the period of 2021-2030

Plan and develop national and regional traffic systems in accordance with approved regional and urban development plans

d. Ministry of Industry and Trade (MOIT):

Prepares electricity development plans at the national level

Implementation of the 2030 Action Plan for the development of renewable energy

Development of policies to promote wind and solar energy generation

Develop mechanisms and policies to mobilize climate finance with a focus on development of renewable energy, economical and efficient usage of energy

Under MOIT, the Energy Efficiency & Conservation Office (EECO) supports implementation of National Energy Efficiency Programme

e. Ministry of Planning and Investment (MPI):

Issue guidance on how to implement the VGGAP at the provincial level

Balance the annual budget to ensure expenditure by ministries for implementing the National Urban Development Programme; mobilise Official Development Assistance (ODA) and promote investment from domestic and international sources in programmatic activities

Integration of climate change into

Develop national guidelines for climate change finance and investment; coordinate and allocate funds for energy sector proposals by line ministries and sectoral agencies.

f. Ministry of Finance (MOF):

Allocate funding to all concerned ministries forthe implementation of the National Urban DevelopmentProgramme

Provide guidance on the payment and settlementof funds for the formulation and implementation

of urban planning by provincial and localgovernments

- Formulation taxation and tariffs for the energy sector

g. Ministry of Home Affairs (MOHA):

Elaborate specific regulations and functions forurban governance; conduct research and proposemodels of urban authorities for managing urban systems

GOVERNANCE/ ADMINISTRATIVE STRUCTURE

The National Government is headed by the Prime Minister (PM), who is in-charge of the general administration, issuing national decrees, and taking the decisions regarding all national programmes. The PM is also a member of the National Assembly and her/his term follows that of the Assembly. The PM is assisted by multiple Deputy Prime Ministers and Cabinet Ministers who head their respective National Ministries. Each Cabinet Minister is assisted by numerous Vice-Ministers and bureaucrats. The PM has the right to nominate and dismiss the members of her/his cabinet with the approval of the National Assembly as well as cancel the ministries' directives (UN DESA, 2004). The general hierarchy of Vietnam's public administration is illustrated in Figure 2.

POLITICAL LANDSCAPE

The Communist Party of Vietnam (CPV) is the single largest party which bears the responsibility for all political decisions. The Party Congress of the CPV meets once every five years to elect the Party's leadership and its Central Committee and to deliberate on policy direction. The CPV is headed by the General Secretary and the Political Bureau (Politburo) is responsible for implementing the agenda decided by the Party Congress.

The CPV oversees the national policymaking procedure through the Central Committee which reviews draft bills. Moreover, this Central Committee also appoints the officials of the National Assembly, including its head, termed as the Deputy (UNDP, 2012). Such decision-making interconnections indicate a high degree of influence exercised by the CPV over both the National Government and the National Assembly.

Therefore, in the case of Vietnam, it is impossible to separate the political sphere of low-carbon/sustainable development from its administrative and legislative ones.

The resolutions passed in both the 11th Party Congress (2011) and 12th Party Congress (2016) indicate the CPV's strong commitment to rapid economic development which is accompanied with sustainable development. The 11th Congress established sustainable development and environmental protection as a cross-cutting requirement for the Vietnam's SEDS 20112020 and SEDP 2016-2020. Furthermore, the 12th Congress also emphasised the relation between the county's economic development with the UN's 2030 Sustainable Development Goals

(SDGs), and the need to proactively address climate change (Ho Chi Minh National Academy of Politics, 2017).

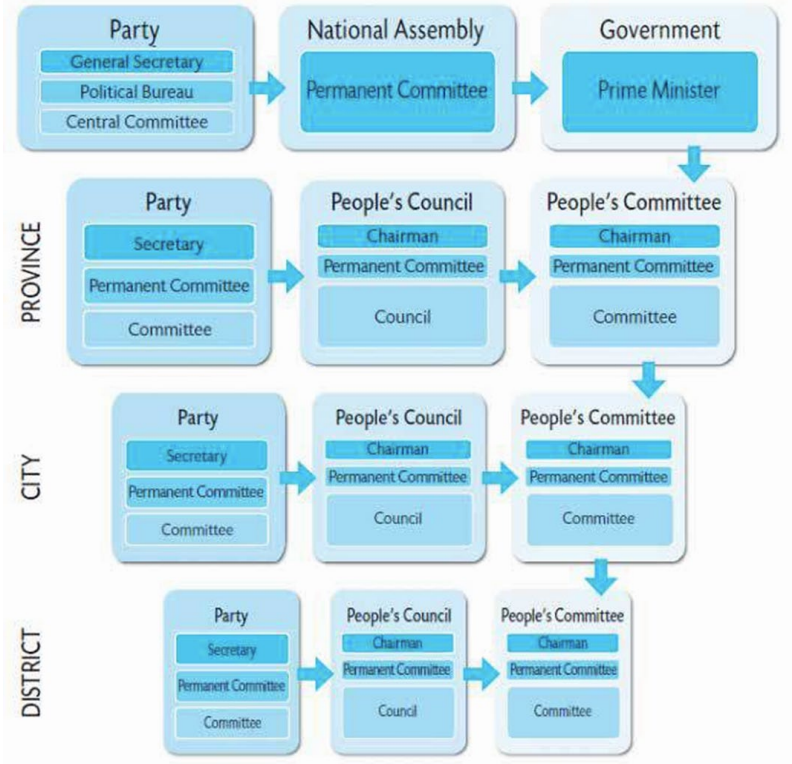

Figure 2: Vietnam's system of governance system with its hierarchy of four administrative tiers (Source: Albrecht et al., 2010)

PROVINCIAL/LOCAL GOVERNMENT

Vietnam's local government system is composed of three levels of public administration – (a) Provincial, (b) Districts, and (c) Wards/Communal. The provincial government forms the second level of governance below the State and also includes the five cities that are administered directly by the Central Government. The five largest 'provincial cities' include – Hanoi, Ho Chi Minh City (HCMC), Danang, Can Tho and Hai Phong.

Vietnamese cities are further classified in 6 classes – 'Class I' to 'Class V' along with a 'Special Category' at the apex, based on demographic characteristics, infrastructure development and

socio-economic importance. This classification has significant implications on the city's policy-related and administrative autonomy as well as access to development funding. The 'Special Category' includes two of the largest urban centres of Hanoi and HCMC, which produce a combined GDP over a one-third of the national GDP (OECD, 2018). Hai Phong is Vietnam's third largest city and categorised as 'Class I'.

Governance/Administrative structure: All provincial governments in Vietnam are divided into two primary bodies – the executive body (Provincial People's Committee) and the legislative body (People's Council). Both these bodies are closely connected in terms of organisation, functions, tasks and power (OECD, 2016). The People's Committee is headed by the Chairman who is the equivalent of the city's mayor. The members of the People's Committee are appointed by the People's Council which is itself democratically elected for a term of five years. Provinces are further divided into administrative units which contain urban districts, rural districts and island districts, where applicable. For example, the 15 districts of provincial Hai Phong are further sub-divided into 223 smaller governance units, comprising of 70 wards, 10 towns and 143 communes.

From a legal perspective, Vietnam's local government forms the embodiment of the State administration at the city level (Albrecht et al., 2010). In other words, local governments serve primarily to implement the nationally-sanctioned plans. This is also reflected in the fiscal dependency of the provinces over the Centre. Additionally, individual departments of the provincial government are tasked with the responsibilities which directly correspond with their National Ministries. For e.g., the Department of Transport reports to both the Ministry of Transport and to the local People's Committee.

Implementing a low-carbon development projects is not the prerogative of a single department but a shared responsibility between multiple authorities. These functions are outlined as follows

a. **Urban development planning:** - Department of Construction
- Provincial People's Committee (PPC)

b. **Urban transport:** - Department of Construction (DOC)
- Office of Urban Management - Provincial People's Committee (PPC)

c. **Solid waste management**: - Office of Urban Management - Department of Construction (DOC) – urban waste

- Department of Natural Resources and Environment (DONRE) – rural waste

d. **Electricity generation, supply and transmission:**

- Vietnam Electricity (EVN), a public-sector company and its subsidiary (North Power Corporation)

e. **Air quality/GHG emissions monitoring:**

- Department of Natural Resources and Environment (DONRE)
- Department of Transport (DOT) - Department of Industry and Trade (DOIT)

f. **Financial planning and management: -** Department of Planning and Investment (DPI) – inter-departmental coordination for investments

- Department of Finance (DOF) – budget preparation and execution

g. **Vietnam National Shipping Lines (Vinalines):**

The Port of Hai Phong, which is a prominent driver of the city's economic development, is owned, managed and operated by the National Government through this public-sector company

All administrative functions undertaken by line departments are supervised by the People's Committee. The People's Committee also performs the critical task of coordinating, developing and executing an overall budgetary plan based on the individual plans of all aforementioned administrative units. The budgetary plans are discussed and approved by the People's Council and passed on the Central Government for a final approval. Lastly, the People's Committee is also in-charge of implementing the National Socio-economic Development Plan (SEDP) within their administrative territory.

As with the national level, the Communist Party of Vietnam (CPV) is an important actor in the local government. At this scale, decision-making is shared between the CPV and the Fatherland Front, which is an equally important political stakeholder. Fatherland Front (FF) is a coalition of social movements, sectoral and professional organisations, and aligned towards the CPV's agenda. The FF serves as a public interface for the CPV and enables the mobilisation of public support and participation for the Party's programmes.

POLITICAL LANDSCAPE

All administrative decisions are taken according to the Party's directives, while the FF plays an essential role in appointing candidates for various political functions (Albrecht et al., 2010). However, despite such an omnipresence of CPV across the political spectrum, implementation of the State's sustainable development agenda remains weak at the local level (Ho Chi Minh National Academy of Politics, 2017). This is attributed to inadequate coordination between agencies, unclear communication between Central and local governments, as well as conflicting actions due to the prioritisation of economic activities over environmental protection (OECD, 2018).

Few megatrends are shaping the future of Vietnam. The country's population is rapidly aging and global trade is declining. Environmental degradation, climate change, and the rise of automation are growing. The COVID-19 crisis presents unprecedented challenges that might undermine progress towards development goals.

The Vietnamese government won international recognition for its strict handling of the COVID-19 pandemic in its early stages. Although subsequent waves have been harder to control, Vietnam's economy has continued to grow at the highest rate in Southeast Asia. Future challenges for the country include how to continue economic liberalization and societal opening while maintaining stability and a relatively low level of inequality. To rise to these challenges, Vietnam needs to dramatically improve its performance to implement policies particularly in finance, environment, digital transformation, poverty/social protection, and infrastructure, according to the World Bank's latest Systematic Country Diagnostic Update.

SECTOR REVIEW: ENERGY

Vietnam's energy sector is the largest contributor to its GHG emissions, accounting for over half of the country's total emissions (WRI – CAIT, n.d.).

The largest driver of overall GHG emissions are CO2 emissions from fuel combustion. In Vietnam, electricity and heat generation accounted for half the CO2 emissions in 2019. The second largest sector for CO2 emissions is industry (29%), followed by transport (16%). Sector coupling through the electrification of transport and industry and the transition to renewables in power generation would help decarbonise these sectors.

Fossil fuels still make up 84% of Vietnam's energy mix (counting power, heat, transport fuels, etc). Coal has significantly increased between 2018 and 2019 in Vietnam's energy supply, whereas biofuel use has dropped.

Energy generation is characterised by high reliance on fossil-fuel sources, with coal and oil each accounting for one-third of the current energy mix. The National Government considers coal-fired power generation to be essential for energy security, which is projected to account for half of the energy mix by 2030 (IEA and OECD, 2016). Moreover, the nationwide demand for electricity is estimated to increase four-fold by 2030, driven by the present and future high rates of both economic development and urbanisation (Social Republic of Vietnam, 2015). With such forecasts, the promotion and rapid implementation of energy efficiency and renewal energy-related measures is essential for Vietnam to achieve its INDC targets. Vietnam's clean energy transition is in-principally supported by all three climate-related Central policies, namely, the National Climate Change Strategy, National Green Growth Strategy and Environmental Protection Law. Based on these, legislations and strategies focussed towards implementation have also been recently framed. These include – (a) Law on Economical and Efficient Use of Energy, which prescribes energy audits, tax incentives for manufacturers, and mandatory energy efficiency labelling; (b) Renewable Energy Strategy 2015, which set targets for increased share of renewable energy, promotion of natural gas usage, fixed price and subsidies for wind power; (c) An Investment Law which provides fiscal incentives and export credits to increase renewable energy investment; and (d) Energy Efficiency Building Code which lays down technical specifications for design, construction and retrofitting of all civil buildings. However, despite the presence of an elaborate national policy framework, the implementation of its underlying strategies has been slow and often lacks enforcement at the local level (Vieweg et al., 2017).

Solar, wind, geothermal and biomass account for 7.5% of Vietnam's energy. For reference, large hydropower accounted for roughly 10% of Vietnam's energy supply in 2018. Vietnam is becoming a solar energy leader in the region. However, coal and gas remain dominant fixtures in power development planning for baseload power. Vietnam needs an inclusive pathway away from coal and gas towards renewable energy. Huge opportunities exist for economic recovery and employment to reskill power sector employees. Government could avoid the risks of perpetuating the current fossil fuel based economy and instead explore and implement opportunities for a just transition. Failure to account for the real costs of fossil fuels, such as price volatility and limited cost reductions of mature technologies, will increase power bills in the long-term. As plans to invest in fossil fuels are prioritised over cheaper, renewable technologies, the risk of stranded assets in future increases and produces unnecessary cost risks.

The draft Power Development Plan 8 (PDP8) outlines an additional 17 GW of mostly onshore wind power by 2030. Despite recent expansion (9GW in 2020), planned solar capacity amounts to just 2 GW by 2030. The PDP8 plans an additional 17 GW of coal and 22 GW of gas by 2030, where fossil fuels would still constitute nearly half the power mix instead of being phased out by 2025 and 2034, respectively, for a 1.5°C pathway.

TRANSPORT

The transport sector accounted for 20% of the total final energy consumption in Vietnam in 2017 (IEA, 2019). In APERC's (2019b) Outlook, domestic transport demand has a sharp increase with a compound annual growth rate of 3.7% (from 2015-2050). Road transport accounts for 97% of domestic transport energy demand in the same period (APERC, 2019b).

In Vietnam, the transport sector plays a critical role in the socio-economic development with its GDP contribution reaching about 2.78% in 2019.

The country's vehicle fleet has been rapidly growing at an annual growth rate of about 13.7% and 9% for automobiles and motorbikes, respectively. With these growth rates, Vietnam has a high traffic density with more than 3.2 million automobiles and 36.6 million motorbikes in circulation in 2018. Motorcycles are the main means of transport in Vietnam, reaching about 92% of the total vehicle fleet in circulation. The fast growth rate of road vehicles has exerted negative impacts on the environment and life quality. In fact, the transport sector has been identified as one of the main emissions sources causing air pollution with a CO2 emissions annual growth rate of 6 to 7%. Therefore, the transport sector is one of the key sectors targeted to achieve the climate change mitigation goals.

Vietnam has the highest per capita ownership of motorcycles in the world, with motorbikes accounting for 96% of the country's total number of vehicles (OECD, 2018). In urban areas, motorcycles are the most preferred choice for mobility because of its low relative price as well as lack of reliable public transportation. Furthermore, given the rapid economic development of the country, there has been a steep growth of car-ownership. Car-sales in Vietnam have recorded an annual growth of 39% since 2012, which is one of the highest in the region (ASEAN Automotive Federation, 2016).

WASTE MANAGEMENT

Vietnam's high dependence on private motorised vehicles powered by fossil fuels has resulted in negative consequences in three critical transport-related attributes – (a) GHG emissions: Transport presently accounts for 12.7% of the total GHG emissions of Vietnam (WRI – CAIT, n.d.); (b) Air quality: Air pollution in urban areas, particularly, Particulate Matter concentration, is significantly higher compared to other Asian cities (OECD, 2018); and (c) Road Safety:

Vietnam registered one of the highest rates of traffic-related fatalities in Southeast Asia at 25 deaths per 100,000 inhabitants, a majority of which involved motorcycle riders (WHO, 2015). The current national policy framework that addresses urban transport is a resolution termed 'Strategy for Development of Vietnam's Transport through 2020, with a vision toward 2030' (2013). The policy identifies the development of public mass transit systems as one of most effective solutions to decongest Vietnam's urban centres and improve road safety. Although construction of roads and highways still accounts for the largest share of transport-sector investments, this is gradually changing. The two largest cities of Hanoi and HCMC, in cooperation with international development agencies, have initiated a range of public transport projects. These include – Hanoi's Bus Rapid Transit (BRT) system (14.5 km; operational since January 2017) and Metro (13 km; under construction), and HCMC's BRT (23 km; planned) and Metro system (19.7 km; under construction). Whether these projects enable a successful modal shift to low-carbon mobility in Vietnamese cities remains to be seen after they become fully operational.

The Vietnamese Government has been applying a number of solutions to promote sustainable development through four focus areas: sustainable development, green growth, climate change, and environmental protection laws. As already known, EVs have the potential to reduce GHG emissions in the transport sector. Vietnam can achieve a 20% reduction of CO2 emissions in the transport sector in 2030 compared to BAU by setting up a clear roadmap for EV adoption in the period from 2020 to 2030. Specifically, Vietnam would have to reach 30% of E2Ws in the motorbike fleet by 2030; 5% sales share for EVs in 2025 and a 30% share in 2030; and a 10% sales share for EV buses in the period from 2020 to 2030.

WASTE MANAGEMENT

Vietnam has grown so rapidly, and waste generation has increased so much, that the collection, transport, disposal and treatment systems and the financing for these systems, has been unable to keep up with the increased volumes of waste being produced. In 2014, the waste sector represented 7% of emissions (excluding LULUCF) (MNRE, 2019). In 2018 the Prime Minister approved the National Strategy for General Management of Solid Waste to 2025 with a 2050 vision, which included energy recover and GHG reduction (MNRE, 2019). The total amount of solid waste across the country is predicted to increase to 54 million tons by 2030 (World Bank, 2018). There are 660 landfills in Vietnam receiving some 20,200 tons of waste daily. Out of these 660 waste disposal sites across the country, only 30% can be classified as engineered landfills with daily coverage of waste. The cities of Hanoi and Ho Chi Minh City (HCMC) have mega landfills covering areas of 85 ha and 130 ha respectively. Most of landifills have no compactor, landfill gas collection, leachate treatment or environmental monitoring system and are poorly managed, mostly due to lack of funding. This is causing multiple environmental and health problems and risks particularly in areas with high waste generation levels and population density.

In the past decade, the National Government has issued three successive decisions, approved by the Prime Minister, that serve as policies for governing solid waste management. These comprise of – (a) The 2008 Decision which outlined a plan up to 2020 for the nationwide construction of treatment facilities; (b) The 2009 Decision which set targets for treatment of industrial, hazardous and non-hazardous waste up to 2025; and (c) The 2012 National Strategy for Environmental Protection which supplements the 2008 Decision in order to strengthen the implementation of waste treatment-related initiatives.

Vietnam has committed itself to move towards collecting, transporting and treating 100% of non-household waste by 2025 and 85% of waste discharged by households by 2025 in urban areas through its recently approved revised National Strategy on Solid Waste Management. Priority is envisaged to be given to large-scale treatment facilities using modern technologies with a substantial focus on recycling and upgrading landfills to prevent environmental and health impacts. Municipalities, regional and central governments, however, are currently struggling with the collection, transport, treatment and disposal of the growing waste streams. Vietnam has grown so rapidly and waste generation has increased so much, that the collection, transport, disposal and treatment systems and the financing for these systems, has been unable to keep up with the increased volumes of waste being produced. With a population of 1.96

CITY EXAMPLE: HAI PHONG

million (2015), Hai Phong is the third largest city in Vietnam. The city plays a critical role within the region owing to its strategic location within the Red River Delta and along the coast of the South China Sea, as well as its proximity to the capital city of Hanoi, situated 100 km to the east. The Port of Hai Phong is the largest container port in northern Vietnam, which has resulted in the city becoming one of the largest marine distribution centres with a concentration of multiple large-scale manufacturing, industrial complexes and international free-trade zones.

From the perspective of low-carbon urban development, Hai Phong's local governmental policies are connected with corresponding national strategies. Three of these policies are especially important. The first one is the National Green Growth Strategy (2012) which aims at a 30% GHG emission reduction by 2030. Based on this policy, the city has framed its own Green Growth Strategy Action Plan (2014). Along with the intent of achieving low-carbon growth for urban and industrial areas, this plan also aims at developing Hai Phong as a 'Green Port City'.

The second major policy document is the National Socio-economic Development Plan (SEDP). Based on the SEDP's directives, the local department for planning and investment (DPI) prepares the city's five-year master plans (the current one being for the 2016-2020 period). The plan sets targets for GDP growth, poverty reduction, industrial production, taxation and public expenditure.

Thirdly, Hai Phong also adheres to a spatial master plan prepared at the national level by the MOT, which guides the city's urban planning and port development projects. For effective implementation of these multiple plans, it is essential that the local government builds synergies between diverse actions and facilitates coordination among all line agencies.

Hai Phong's sectoral challenges and solutions which align with the city's 'green growth' plans are outlined below –

(a) Energy: Hai Phong's electricity consumption is set to triple by 2020 compared to 2013 levels (OECD, 2016). As a result, the city faces the challenge of supplying a growing demand for power, especially for the industrial and construction sectors, through sustainable sources. This is being addressed by promoting solar water heaters, incentivising solar-panel sales and using solar energy for street-lighting.

(b) Transport: Similar to with all other Vietnamese cities, the dependence on motorcycles is extremely high in Hai Phong. 78% of households own a motorbike (2014) and the mode accounted for over two-thirds of total trips (OECD, 2016). To address the present lack of efficient public transport, the city could invest in strengthening the existing bus network. The city also has a proposal of introducing 220 electric buses, which is yet to be implemented.

(c) Waste: Hai Phong produces significantly higher solid waste per person at 475 kg annually compared to megacities such as Bangkok (640) or Hong Kong (490). Also, the city's future urban waste generation is likely to increase given the high rate of urbanisation (OECD, 2018). Hai Phong's solid waste generation is estimated to grow fourfold by 2025 (OECD, 2016). This is particularly alarming, since a significant portion of the city's waste is of hazardous type released by the industrial sector. Although the 'Class I' cities in Vietnam, including Hai Phong, have a high rate of waste treatment at 87%, the system could further benefit from waste-to-energy conversion plants and recycling facilities.

RECOMMENDATIONS

- Vietnam's climate strategies need to be rebalanced to include strong policies and investments for adaptation as well as mitigation. The new strategies now emphasize mitigation, but as a highly vulnerable country, Vietnam also needs to invest significantly in building resilience given the serious impact of climate change on growth. The imbalance between mitigation and adaptation is most visible, which introduces several energy intensity targets (nationwide and sectoral), but no equally specific targets in terms of adaptation - even though the strategy recognizes the importance of resilient agriculture, transport, and cities.

- All the new strategies and Vietnam's NDC need to be updated to reflect recent commitments, including those made at COP26. For example, the net-zero carbon emission target has yet to be factored into any national or sectoral strategies (including the energy sector's PDP8).

- Greater consistency is needed across key climate policy documents. The new commitments and strategies, prepared by different ministries, set targets and priorities in inconsistent ways, complicating the vision and potentially hindering implementation.

- Local government should enhance institutional factors that improve the efficiency of public services and allow full and equitable involvement of stakeholders in the citizen-centred provincial governance systems.

- Prioritize renewable energy in national power planning. There are alternative scenarios where renewables (excluding hydropower) could account for up to 30% of capacity by 2030. These alternative scenarios, which are aligned with Vietnam's Nationally Determined Contribution (NDC) commitments, require regulatory support and incentives to leverage private sector investment now seeking opportunities to invest in Vietnam.

- Facilitate rapid renewable energy deployment (in particular, offshore wind) by improving the regulatory framework, including transparent and competitive procurement procedures (auctions) to encourage private sector participation. Feed-in tariff (FIT) policy should be replaced by a transparent, predictable, and coordinated auction-based scheme for procurement of energy projects, starting with solar, onshore wind, and offshore wind (for which domestic resources are amongst the best in the world), and then extending it to other technologies.

- Identification of an appropriate power generation mix should be based on principles of least-cost power supply and strengthening of the sector's financial viability within the context of the

long-term policy target of reducing emissions by eventually phasing out the use of unabated fossil fuels, starting with coal. Revision and timely approval of the draft PDP8 is necessary to set the power sector on the pathway for achieving net-zero emissions by 2050.

- There is still a lack of pioneer legislation in solid waste management such as the regulation on the market of solid waste. Economic tools for solid waste management and decentralization in solid waste management are still unclear. Up to now, the control and restriction of pollution sources are facing many difficulties due to weak resources. Therefore, it is necessary to develop a roadmap for solid waste sources control and treatment. Determining the priority order in each phase for each type of solid waste is also a specific need.

- To successfully attract the participation of the public sector, the legal system on solid waste management must stipulate provisions in details, including the identification of obligations and responsibilities of all stakeholders, i.e. State management agencies on solid waste and emission owners (residents, households, businesses, etc), terms, articles on how to treat waste at its source during collection, transportation and disposal. Relevant regulations must be enforced, which means that the authorities have to control waste management at different stages from the time of waste generation to the final disposal.

- Need for the enforcement of the National Strategy on Integrated Solid Waste Management of up to 2025, vision towards 2050 and an assessment of the accomplishments, considering the first targets established, which should be reached by 2020.

- For cities with large populations and land scarcity for infrastructure, small-sized EVs should be widely used because they have been proven to save energy and parking space. In addition, it is essential to develop a specific strategy to manage and control the smart grid when demand for EVs is increasing.

- Make public transport more attractive and private vehicle use less attractive. Vietnam needs to substantially upgrade public transport networks by investing in metro lines (starting by completing several pending projects in Hanoi and HCMC) and BRT, using electric buses when feasible. It also needs to scale up bus services, promoting compressed natural gas as fuel to reduce air pollution, and improve first- and last-mile solutions, such as shared e-bikes and scooters, and safe sidewalks.

- Support a transition to electric vehicles through standards, incentives, and investments in public charging stations and electric bus pilots. In the near term, scaling up the e-mobility transition would require setting realistic, yet ambitious, targets for EV development, followed with technical, safety, and environmental standards and test protocols for EVs, batteries and charging infrastructure. It is also important to establish visible and accessible EV charging infrastructure/battery swapping stations at high-traffic parking areas and destinations, and to fund electric bus pilot programs in cities

- Develop a systematic approach to using nature-based solutions. To harness the protective function and economic contribution of ecosystems (including mangroves and sand dunes), a systematic approach to their rehabilitation, conservation, monitoring, and management is essential. Relevant policy, regulatory, and legal frameworks must be strengthened, and lessons from past initiatives should be consolidated to inform technical guidelines and future programs.

- Regulations are also needed to avoid unchecked urban development that leaves too little porous green space, further increasing runoff and flood risks. In addition, risk-sensitive land use and urbanization plans must be enforced through construction norms and building regulations. The quality of construction and the role played by building regulations are key determinants of climate resilience.

REFERENCES

Albrecht D., Hocquard H., and Papin P. (2010). Urban Development in Vietnam: The Rise of Local Authorities. Local Authorities and Urban Development Division, AFD.

ASEAN Automotive Federation. (n.d.). Annual Statistics Report. Retrieved from http://www.

asean-autofed.com/statistics.html

Ho Chi Minh National Academy of Politics. (2017, November 08). Features. The Communist Party of Vietnam leads the country to achieve rapid and sustainable development. Retrieved from http://english.hcma.vn/home/ features/the-communist-party-of-vietnam-leadsthe-country-to-achieve-rapid-and-sustainabledevelopment-205

LSE and Grantham Research Institute. (n.d.). Vietnam's Legislative Process. Retrieved from http://www.lse.ac.uk/GranthamInstitute/country-profiles/vietnam/#executive

OECD and International Energy Agency (IEA). (2016). Reducing emissions from fossil-fired generation: Indonesia, Malaysia and Viet Nam. OECD. (2016). Green Growth in Hai Phong, Viet Nam, OECD Green Growth Studies. OECD Publishing. Paris.

OECD. (2018). OECD Urban Policy Reviews: Viet Nam. OECD Publishing. Paris.

The Socialist Republic of Vietnam. (2015). Intended Nationally Determined Contribution of Viet Nam. Hanoi.

The Socialist Republic of Vietnam. (2016). National Report for United Nation Conference on Housing and Sustainable Urban Development

(Habitat III). Hanoi.

The Socialist Republic of Vietnam. (2016). Plan for Implementation of The Paris Agreement. Hanoi.

United Nations Department of Economic and Social Affairs (DESA). (2004). The Socialist Republic Of Viet Nam: Public Administration Country Profile.

United Nations Development Programme (UNDP). (2012). Research Report: Legislative Processes and Procedures of The National Assembly of Vietnam.

VietnamNet. (n.d.). Vietnam ranks 27th in greenhouse gas emissions. Retrieved from http://

english.vietnamnet.vn/fms/environment/185103/ vietnam-ranks-27th-in-greenhouse-gas-emissions.html

Vieweg M., Fakete H., and Luna L. (2017). Implementation of Nationally Determined Contributions: Viet Nam Country Report. German Environment Agency.

World Bank. (n.d.). Vietnam Country Overview. Retrieved from http://www.worldbank.org/en/ country/vietnam/overview

World Health Organisation. (2015). Global Status Report on Road Safety 2015. Geneva.

World Resources Institute. (n.d.). Climate Access Indicators Tool (CAIT) Climate Data Explorer. Retrieved from http://cait.wri.org/profile/Vietnam

Binh, Nguyen Trong. (2021). Good Local Governance in Vietnam – Based on the Vietnam Public Administration Performance Index in Recent Years. Public Administration Issues, no 5 (Special Issue I, electronic edition), pp. 73–88 (in English). DOI: 10.17323/1999-5431-2021-0-5-73-88

CECODES, VFF-CRT, RTA & UNDP (2022). The 2021 Viet Nam Governance and Public Administration Performance Index (PAPI 2021): Measuring Citizens' Experiences. A Joint Policy Research Paper by Centre for Community Support and Development Studies (CECODES), Centre for Research and Training of the Viet Nam Fatherland Front (VFF-CRT), Real-Time Analytics (RTA), and United Nations Development Programme (UNDP). Ha Noi, Viet Nam.

Climate Action Tracker (CAT). (2020a). "Vietnam (Update of 30 November 2020)." https://climateactiontracker.org/ countries/Vietnam/pledges-and-targets/ (2020b). "Vietnam." CAT Climate Target Update Tracker. https://climateactiontracker.org/climate-targetupdate-tracker/viet-nam/

Energy Policy Tracker. (2020). "Energy Policy Tracker." Countries. https://www.energypolicytracker.org/about/

Germanwatch. (2019). Global Climate Risk Index 2020. Who Suffers Most from Extreme Weather Events? Berlin. http://www.germanwatch.org/sites/germanwatch.org/ files/20-2-01e Global Climate Risk Index 2020_14.pdf

Government of Vietnam. (2019). Vietnam National Energy Efficiency Program 2019-2030. https://aeds. aseanenergy.org/policy/national-energy-efficiencyprogramme-vneep-for-the-period-of-2019-2030

Lam D. Nguyen & Ali Farazmand (2022) Introduction to the Special Issue on "Public Administration and Policy in Vietnam", International Journal of Public Administration, 45:1, 1-3, DOI: 10.1080/01900692.2021.2018186.

Ministry of Industry and Trade (MOIT). (2018). Vietnam – National Energy Efficiency Program 2019 – 2030. http://documents1.worldbank.org/curated/ en/598851561961183317/ pdf/Vietnam-National-EnergyEfficiency-Program-2019-2030.pdf

World Bank Group, 2022. Vietnam Country Climate and Development Report. International Bank for Reconstruction and Development. Available at: https://www.ifc.org/wps/wcm/connect/a52f8663-a441-46a7-9871-e9835f6274bb/CCDR+Vietnam+Full+report_01.07_FINAL.pdf?MOD=AJPERES&CVID=o7eWXxE&ContentCache=NONE&CACHE=NONE

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