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Introduction to the profiles: These "Transport and Climate Profiles" are part of the research work entitled "Transport NDC Gap Analysis for Low- and Middle-Income Countries (LMICs) in Asia and the Pacific" which is being implemented and builds on the work of the Asian Transport Outlook (ATO), a project initiated and supported by the Asian Development Bank (ADB). ATO is also being supported by the Asian Infrastructure Investment Bank (AIIB). The research is being co-funded by UKAID through the UK Foreign, Commonwealth and Development Office (FCDO) under the High-Volume Transport (HVT) Applied Research Program managed by DT Global International Development UK LTD (DT Global). The research is being implemented under HVT057 (Transport Decarbonisation Index - https://transport-links.com/funded-projects/transport-decarbonisation-index-tdi) whose lead research supplier is the Partnership on Sustainable, Low Carbon Transport. These profiles are designed to complement the main report of the research entitled *Bridging the Gap: A Deep Dive into NDCs and Transport Policy Landscapes in Low- and Middle-Income Asian Economies*. While intended as supplementary materials, they also function as standalone knowledge products. All the related knowledge products will be made available through https://asiantransportoutlook.com/analytical-outputs/ndc-analysis and https://asiantransportoutlook.com/analytical-outputs/fransportclimateprofiles/

The Asian Transport Outlook (ATO) is an initiative that aims at strengthening the knowledge base on transport in the Asia-Pacific region. It supports the planning and delivery of transport-related assistance in Asia, supports wider transport policy making, and helps track global and regional processes related to sustainable development. For example, ATO is the monitoring mechanism for the Aichi 2030 Declaration on Environmentally Sustainable Transport – Making Transport in Asia Sustainable (2021-2030) which was adopted by more than 20 countries in Asia-Pacific through the High Level Environmentally Sustainable Transport Forum (EST) that is organized by the United Nations Centre for Regional Development (UNCRD)-DSDG/UN DESA, along with its partners. For more information, visit asiantransportoutlook.com

This profile is structured into two main sections: Data Insights and Policy Insights. Under "Data Insights", individual components at the intersection of transport and climate change are detailed. Similarly, the "Policy Insights" section outlines various policy documents, measures, and targets.

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Transport and Climate Profile: Viet Nam

2024

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Executive Summary

Vietnam, a lower-middle-income country in Southeast Asia, faces a significant challenge in balancing its growing transport sector with its climate change commitments. This comprehensive narrative analyzes the country's transport sector's impact on climate change, highlighting key data trends, policy documents, and opportunities for decarbonization.

CO2 Emissions

• In 2023, Viet Nam's transport sector emitted 39.3 million tonnes of CO2, accounting for 11% of the nation's total emissions. While the sector's CO2 emissions had been growing at an alarming 8% annually before the Paris Agreement and SDGs, the growth rate has slowed to 2% since 2015. In 2022, the road sector was responsible for 84% of transport CO2 emissions, a decrease from the 96% average between 2000 and 2015. In comparison, the Asia-Pacific road sector contributed 89% of transport CO2 emissions in 2022. Viet Nam's transport sector CO2 emissions intensity with GDP has also decreased from 52.4 gCO2 per USD in 2000 to 26.2 gCO2 per USD in 2023, performing better than the Asia-Pacific average of 32.0 gCO2 per USD and its peers in the low and lower middle income and South East Asia averages.

Energy Consumption

- In 2021, the transport sector consumed 459,114 terajoules of energy, primarily from oil products.
- The road sector accounts for 87% of transport energy consumption, highlighting the need for a shift towards cleaner fuels and electrification.

Adaptation and Resilience:

• Adaptation and resilience are crucial for Vietnam, as it faces an estimated average annual loss of 48.57 million USD to its transport infrastructure due to various hazards. The majority of these losses, 68%, are attributed to roads, followed by 27% in rail, and 4% in airports. In the broader South East Asia subregion, the estimated average annual loss to transport infrastructure is a substantial 10,341 million USD, equivalent to 0.02% of the subregion's GDP. Vietnam ranks 131st out of 208 countries in terms of national road vulnerability, highlighting the need for improved resilience in its road network. Moreover, 37% of Vietnam's population lives in low-elevated coastal zones, making them vulnerable to climate change-related hazards.

Vehicle Fleet

• In 2022, Viet Nam had 922 vehicles per thousand population, surpassing the Asia-Pacific average of 577 and the South East Asia subregion's 505. 2-wheelers dominate the vehicle fleet (94%), while electric vehicle imports are increasing, reaching 4.7% of total road vehicle imports in 2023. Although electric vehicle imports have grown, the South East Asia subregion has a higher share of electric imports (16.1%). Viet Nam's Emobility Readiness Index score is 83/100, indicating good progress in transitioning towards electric mobility.

Urban Transport

- Vietnam has limited urban rapid transit infrastructure, with only 0.96 kilometers of urban rapid transit per million urban population in 2021.
- Public transport access remains a challenge, with only no city having 80% or more of the population with convenient access.

Investments

- Official development assistance (ODA) in the transport sector decreased from 7320.8 million USD in 2010-2015 to 5046.6 million USD in 2016-2022
- Public-private partnerships (PPPs) are increasingly contributing to transport investments, particularly in the road sector.

Policy

In Vietnam, a comprehensive policy landscape exists with 33 transport-related documents, including 8 specifically addressing climate. The Nationally Determined Contribution (NDC) 2022 Update outlines an economy-wide emissions reduction target of 8% by 2030 compared to the business-as-usual scenario, potentially increasing to 25% with international support. While no specific transport emissions target is set, the broader policy documents encompass targets for various aspects like alternative fuels, infrastructure, and road safety.

NDC Gaps and Policy Alignment

• There are significant gaps between Viet Nam's Nationally Determined Contributions (NDCs) and transport policies, as the NDCs lack specific targets for transport-related GHG emissions. While the NDCs outline economy-wide emissions reduction goals, they do not translate into actionable targets for the transport sector. This misalignment hinders the development of effective policies and measures to address the sector's substantial contribution to emissions. Although Viet Nam's broader transport policy documents contain various targets related to alternative fuels, infrastructure development, and road safety, they are not explicitly linked to the NDCs' climate objectives. Consequently, the transport sector's potential to contribute to climate change mitigation and adaptation remains underutilized.

Policy Opportunities

- This includes investing in public transport infrastructure, promoting electric vehicle adoption, improving fuel efficiency standards, and incentivizing a shift towards cleaner fuels.
- Vietnam can also leverage international climate finance to support its transition to a low-carbon transport sector.

Vietnam's transport sector faces significant challenges in aligning its growth with its climate change commitments. By addressing the gaps in policy implementation and prioritizing sustainable transport solutions, Vietnam can pave the way for a greener and more resilient future



Transport and Climate Profile

Population (2024) 99.5 million

Urban population

40%

Below 18 y.o.

28%

Population density 315 persons per sqkm Rural population

60%

materials that are exported.



(4)

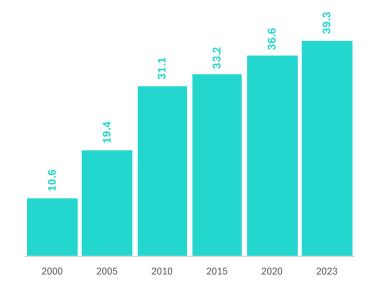
Subregion

South East Asia

Gross domestic product

I. Transport and Climate Change

Transport fossil CO2 emissions, million tonnes



In 2010, transport contributed 20% of total fossil CO2 emissions. By 2023, transport contributed 11%.

Share of transport CO2 emissions by mode (2022)

|Road | Rail 84.4% 0.3% (4)| Navigation | Aviation **7.7**% 7.7% (4)

Income class

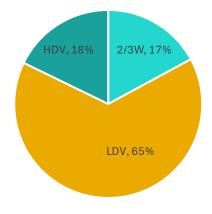
Low and lower middle income

GDP per capita (PPP, 2023)

Navigation and aviation only includes domestic transportation

Between 2000-2015, road transport contributed 96% in transport fossil CO2 emissions. Between 2016-2022, road transport contributed 86%.

Road transport CO2 emissions (well-to-wheel), share by mode (2022)



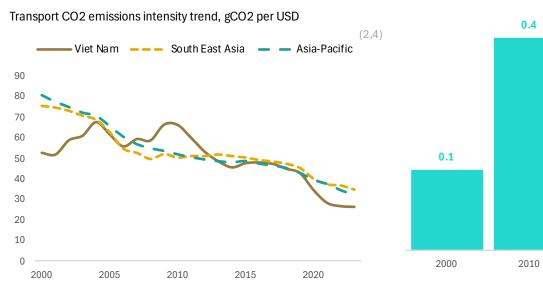
Transport CO2 emissions intensity (2023)

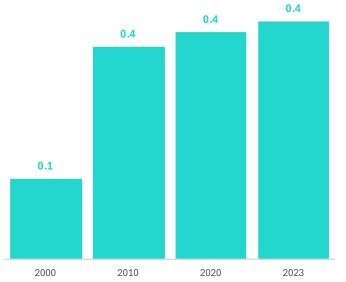
Transport fossil CO2 emissions per capita, tonnes

26 gCO2 per USD

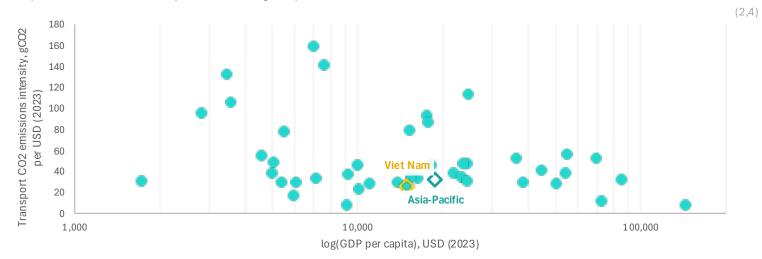
Asia-Pacific average is 32 gCO2 per USD







Transport CO2 emissions intensity in Asia-Pacific, gCO2 per USD



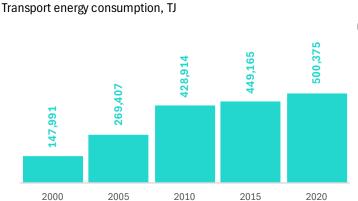
(6)

(6)

(6)

100%

II. Transport Energy Consumption





0%

Road

Rail

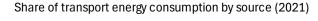
|Road

8.4%

(2,6)

86.8%

| Navigation



20%

Share of transport energy consumption by mode (2021)

| Rail

0.2%

4.6%

| Aviation

40%

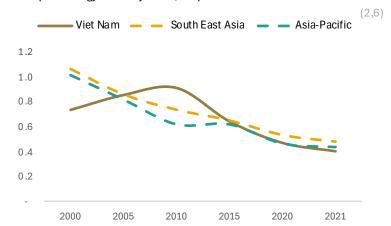
60%

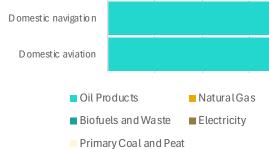
80%

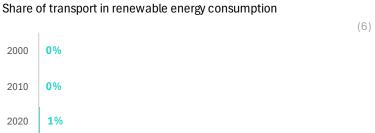


Asia-Pacific average is 0.4 MJ per USD

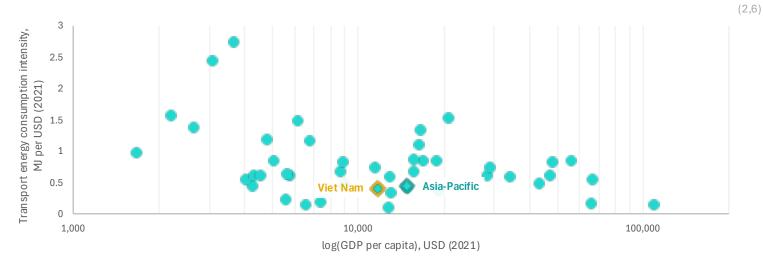
Transport energy intensity trend, MJ per USD

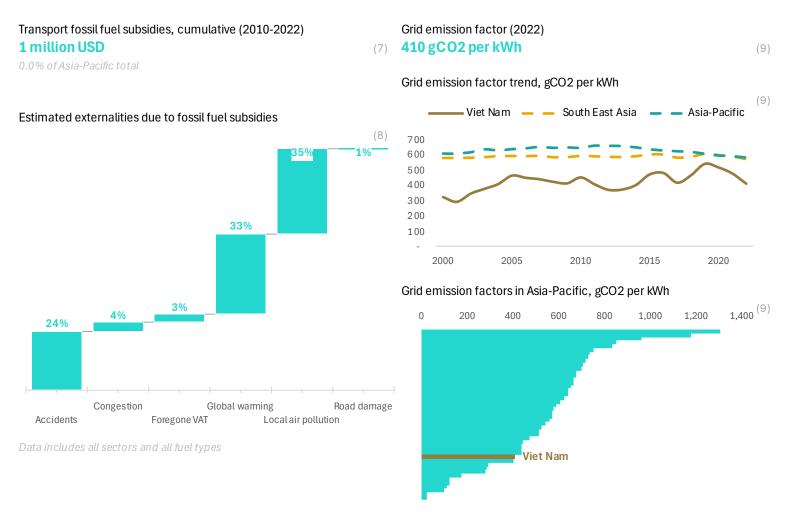






Transport energy intensity in Asia-Pacific, MJ per USD





III. Adaptation and Resilience

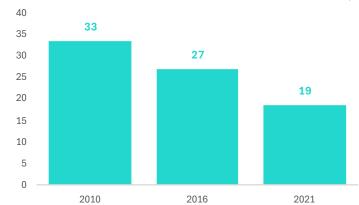
Average annual losses to transport infrastructure due to hazards Average annual losses to transport infrastructure due to hazards, (2023)as a share of GDP, in Asia-Pacific (2023) 0.5% (10) 49 million USD (10)0.0% 0.1% 0.2% 0.3% 0.4% |Road | Rail **68%** 27% | Ports | Airports 0% 4% National road vulnerability index ranking (2023) 131st out of 208 countries (11)**Viet Nam** Share of population in low elevated coastal zones (2018) **37**% (12)

IV. Other Externalities

Road crash fatalities (2021)

17.2 thousand deaths

Road crash fatality rate per 100 thousand population



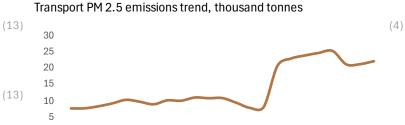
Asia-Pacific average is 16 fatalities per 100 thousand population

Rural access index (2023)

91%

Rural population without access to all-season roads (2023)

5.5 million



2010

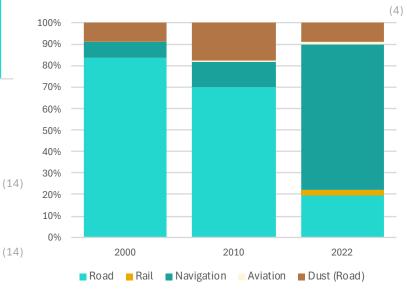
2015

2020



2005

0 — 2000



V. Vehicle Fleet

Road vehicles (2022)

90.5 million vehicles

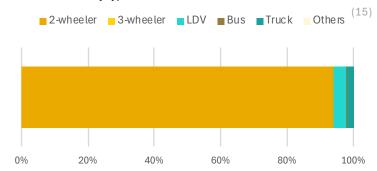
Road vehicle motorization rate (2022)

922 vehicles per thousand population

Road vehicles include 2- and 3-wheelers, LDVs, buses and other informal public transport, trucks, and other unclassified types

In 2000, Viet Nam had 168 vehicles per thousand population. By 2022, this has increased to 922 compared with Asia-Pacific average of 577 in 2022.

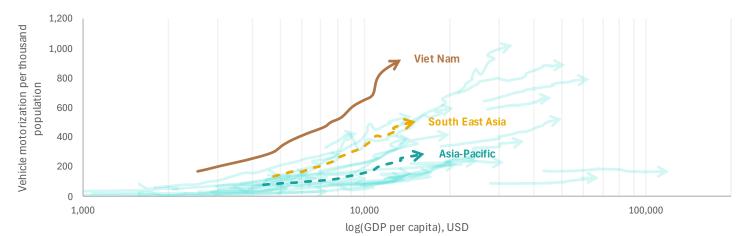
Share of vehicles by type



(15)

(1,15)

Vehicle motorization per thousand population in Asia-Pacific (2000-2022)



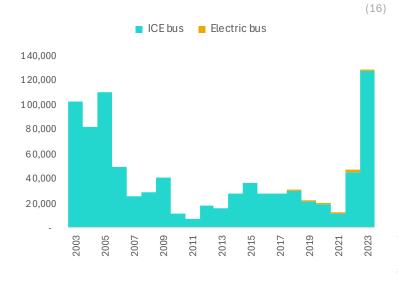
Bus import value (2015-2023)

344.3 million USD

Bus vehicle production, units

(16)

Bus import value, thousand USD



Electric road vehicle import value (2017-2023)

221.4 million USD

E-mobility Readiness Index (2024)

|Overall | 83/100

(16)

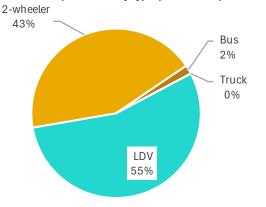
(16)

Electric road vehicle share in total road vehicle import value trend

(18)

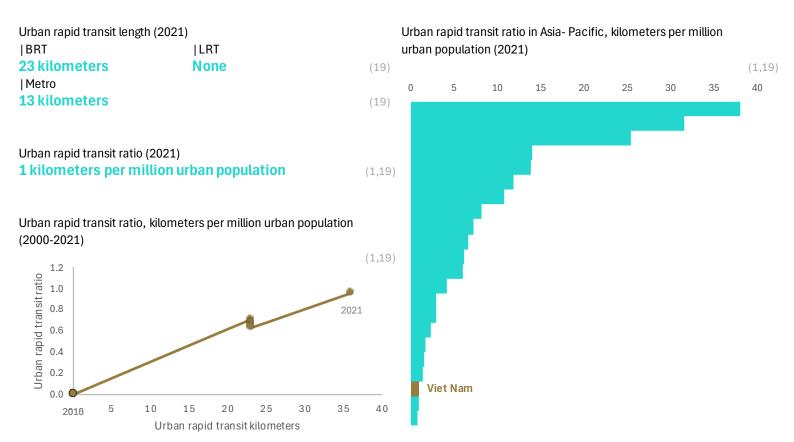
(16)

Electric road vehicle import share by type (2017-2023)



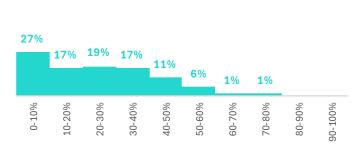
0.0%	0.1%	0.0%	0.0%	0.2%	0.6%	4.7%
2017	2018	2019	2020	2021	2022	2023

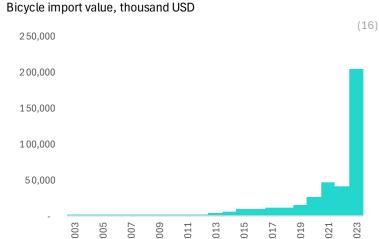
VI. Urban Transport



(20)

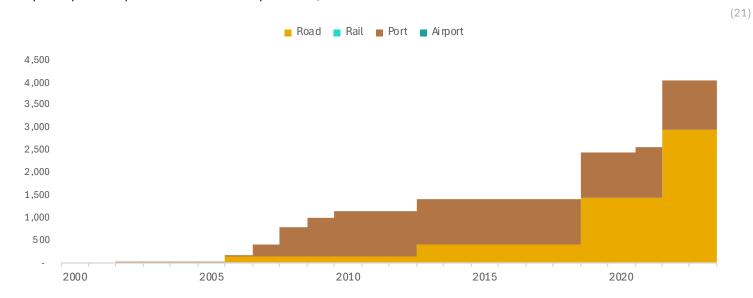
Share of cities by level of access to public transport (out of 70 cities)





VII. Transport Investments

Public-private partnership investments in the transport sector, million USD



Official development assistance in the transport sector, million USD





VIII. Transport and Climate Policy Documents

Transport-related policy documents in Viet Nam

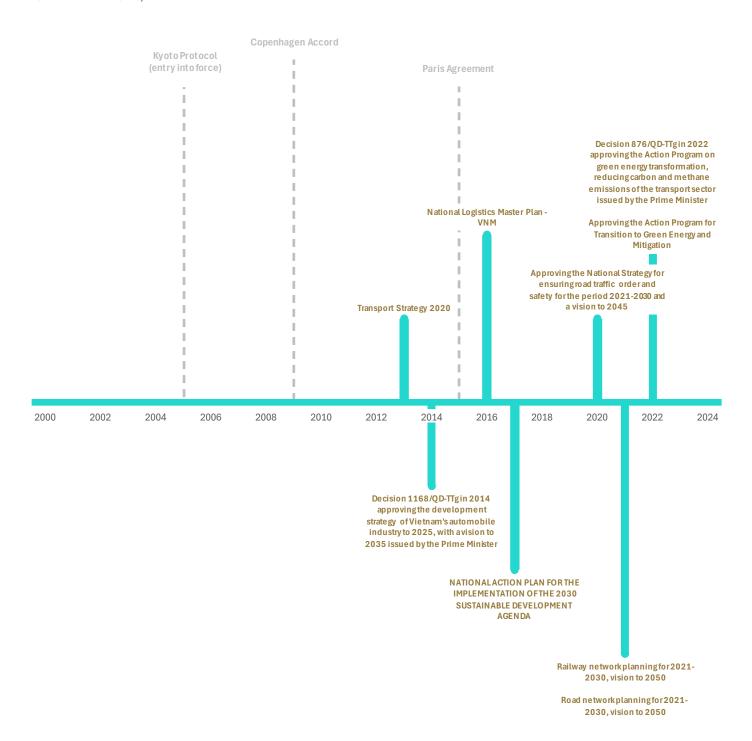
Selection made based on the number of climate change mitigation and adaptation policy measures

Nationally Determined Contributions of Viet Nam

 $\textbf{2015:} Intended \, \textbf{N} \, \textbf{ationally Determined Contribution of Viet Nam (2015)}$

2020: Updated Nationally Determined Contribution - VNM

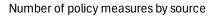
2022: Viet Nam NDC 2022 Update



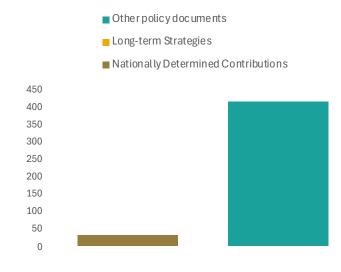
IX. Representation of Transport in Key Climate Policy Documents

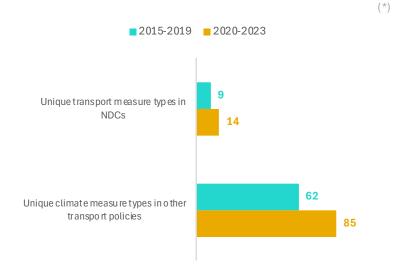
Nationally Determined Contributions						
		Road	Rail	Domestic	Domestic	Urban
		transport	transport	navigation	aviation	transport
Viet Nam NDC 2022 Update (adopted in 2022)	Mitigation measures Mitigation targets	Yes	Yes	Yes	Yes	
	Adaptation measures Adaptation targets	Yes	Yes	Yes	Yes	
Long-term Strategies		Road	Rail	Domestic	Domestic	Urban
		transport	transport	navigation	aviation	transport
None	Mitigation measures Mitigation targets Adaptation measures Adaptation targets					

X. Distribution of Transport and Climate Policy Measures in Policy Documents

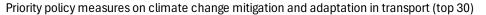


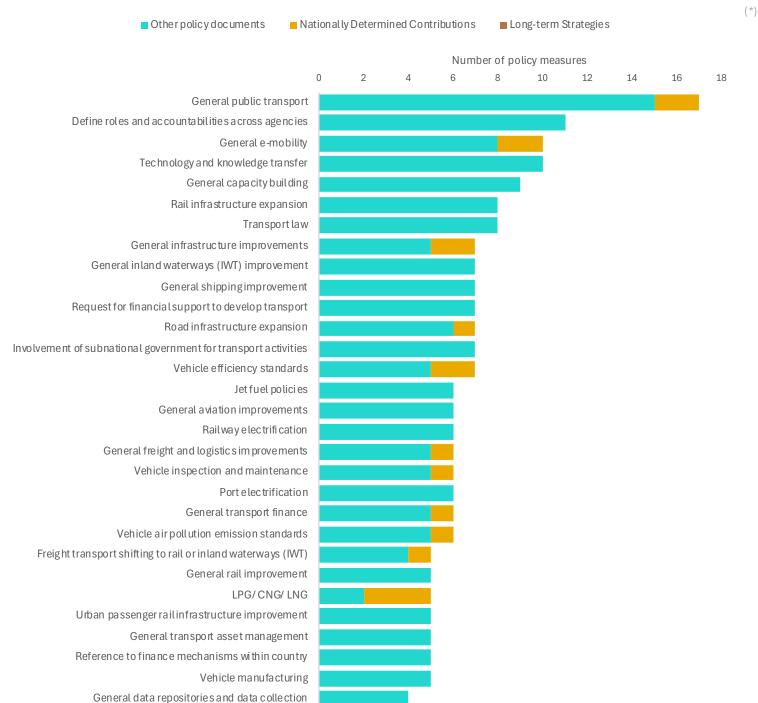
Integration of climate ambition, unique number of policy measures in (*) NDCs and other transport policies



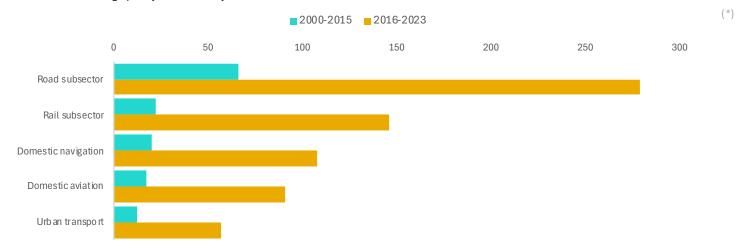


XI. National Policy Priorities on Transport





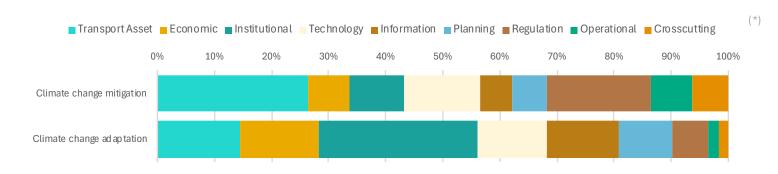
Number of climate change policy measures by subsectors



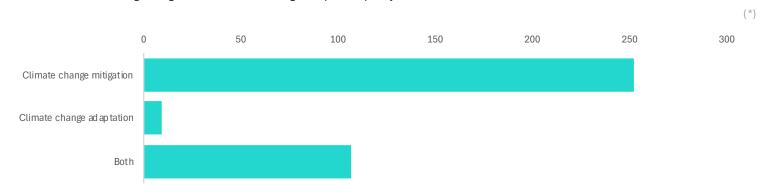
Number of climate change policy measures by passenger vs. freight



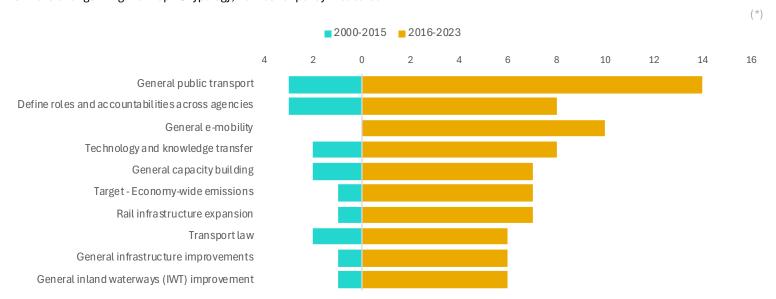
Transport-related climate change policy measures by framework



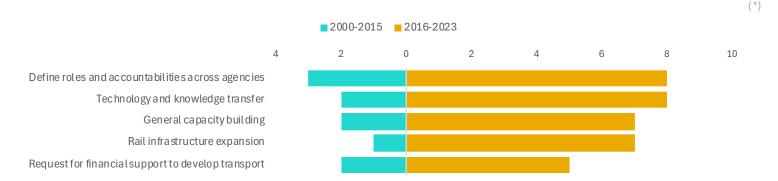
Number of climate change mitigation vs. climate change adaptation policy measures



Climate change mitigation top 10 typology, number of policy measures



Climate change adaptation top 5 typology, number of policy measures



XII. Direct GHG Targets

This table contains transport-relevant (e.g. economy-wide; sector-specific) GHG emissions targets as explicitly mentioned in the policy documents of Viet Nam

Document	Year published	Target	Target year
Economy-wide emissions			-
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	With domestic resources, by 2030 Viet Nam will reduce GHG emissions by 8% compared to BAU, in which: - Emission intensity per unit of GDP will be reduced by 20% compared to the 2010 levels; - Forest cover will increase to the level of 45%. The above-mentioned 8% contribution could be increased to 25% if international support is received through bilateral and multilateral cooperation, as well as through the implementation of new mechanisms under the Global Climate Agreement, in which emission intensity per unit of GDP will be reduced by 30% compared to 2010 levels	2030
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	By 2030, total greenhouse gas emission nationwide reduces by 43,5% compared to the business as usual (BAU) scenario.	2030
Decision No. 1658/QD-TTg (National Green Growth for 2021-2030 period, with a vision by 2050)	2021	Target to 2030: The intensity of greenhouse gas emissions as a percentage of GDP to decrease by at least 15% compared to 2014.	2030
Decision No. 1658/QD-TTg (National Green Growth for 2021-2030 period, with a vision by 2050)	2021	Target to 2050: The intensity of greenhouse gas emissions as a percentage of GDP will be reduced by at least 30% compared to 2014.	2050
Vietnam National Energy Development Strategy to 2020 with an Outlook to 2050	2020	Reduce greenhouse gas emissions from energy activities compared to the normal development scenario by 15% by 2030	2030
Vietnam National Energy Development Strategy to 2020 with an Outlook to 2050	2020	Reduce greenhouse gas emissions from energy activities compared to the normal development scenario to 20% by 2045	2045
Net zero, carbon neutrality, and other long-term climate action			
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop a green transport system towards the goal of net greenhouse gas emissions to "zero" by 2050 .	2050
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	By 2050, total greenhouse emission nationwide achieves net zero emission; emission peaks in 2035 and reduces rapidly.	2050
Transport GHG emission			

XIII. Indirect Transport Climate Change Targets

Document	Year published	Target	Target year
Alternatively-powered rolling stock		<u> </u>	-
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	From 2035, use at least 10% sustainable fuel for some short-distance flights; use electricity and green energy for 100% of new passenger vehicles and other vehicles in airports.R74	2035
Audits/ star rating required for new road infrastructure for road safety			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	100% of newly built national highways and provincial roads (grade III or higher) and 75% of the total length of the national highway network being exploited reach the traffic safety level of 3 stars or more according to the standards of the Global road traffic safety assessment program.	2030
Ban of ICE sales			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	By 2040, phase out manufacture, assembly and import of automobiles, motorcycles and mopeds with fossil fuels for domestic use	2040
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	To step by step limit to stop the production, assembly and import of cars, motorcycles and mopeds using fossil fuel for domestic use .	2040
BRT			
Implementation of NDC for Transport in Viet Nam	2021	Shifting passenger transportation from private to public transport: BRT: 4 routes in 3 cities (13 routes in 5 cities - conditional)	2030
Bus fleet renewal			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	From 2025, use electricity and green energy for 100% new buses	2025
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	100% of buses will replace and invest in new electricity and green energy.	>2025
Decision No. 1658/QD-TTg (National Green Growth for 2021-2030 period, with a vision by 2050)	2021	the percentage of buses using clean energy in special cities and grade - I cities will reach 100% and at least 40 %, respectively, of new investment buses	2050

XIII. Indirect Transport Climate Change Targets

Document	Year published	Target	Target
Decision No. 1658/QD-TTg (National Green Growth for 2021-2030 period, with a vision by 2050)	2021	percentage of buses using clean energy in special urban centers is at least 15% of the total number of buses in operation and 10% of new buses in grade I cities	2030
General aviation improvements			
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	From 2040: All vehicles operating in the airfield use electricity and green energy (except for specific vehicles that have not yet used electric energy).	>2040
General e-mobility			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	achieve at least 50% vehicles using electricity and green energy; use electricity and green energy for 100% new taxis.	2030
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	By 2050, use electricity and green energy for 100% buses and taxis. By 2050: use electricity and green energy for 100% heavy equipment involved in traffic, meet green criteria for bus stations and rest stops; transition to use electricity and green energy for all material handling equipment using fossil fuels.	2050
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	The rate of vehicles using electricity and green energy will reach at least 50%; 100% replacement taxi, new investment using electricity, green energy.	2030
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	100% of road motorized vehicles and construction motorbikes participating in traffic will be converted to use electricity and green energy . 100% of buses and taxis will use electricity and green energy.	2050
Implementation of NDC for Transport in Viet Nam	2021	Electric motorbikes: 7% of total sold vehicles Conditional - Electric vehicles:14% of total vehicles sold Electric cars: increase target from 5% of total car sales in 2025 to 33% by 2030	2030
General education and behavior change			

XIII. Indirect Transport Climate Change Targets

This table shows non-GHG targets as specified in the policy documents in Viet Nam which indirectly benefit climate change mitigation and adaptation in the transport sector

	Year		Target
Document	published	Target	year

Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045

2020

2016

100% of traffic participants are educated and disseminated with knowledge and law on traffic order and safety and skills in safe traffic. Form a culture of safe traffic and self-discipline of people joining in traffic; Most of urban residents form the habit of taking part in traffic by public transport, walking and cycling Adjust the classification of driving licenses for road motor vehicles in accordance with the 1968 Vienna Convention on road traffic and vehicle characteristics in Vietnam; train and grant driving licenses to motorbikes with a cylinder capacity of less than 50cm3 or electric motorbikes with an engine capacity of less than 4kW. Continue to develop the application of modern technology in the management of training, driving test, and licensing. Open propaganda pages and columns on traffic safety and traffic culture, focusing on propagating and disseminating skills in accident prevention, vehicle control skills in safe traffic; consequences of road traffic accidents due to speeding, using drugs, alcohol, using mobile phones, not wearing a qualified helmet, not wearing a seat belt, not using seat for children in cars, especially the knowledge and skills of safe driving on highways. - Increase the time for propagating and guiding traffic safety on mass media, especially Vietnam Television, Voice of Vietnam, Local Radio and Television, the online radio channel system, social networks, digital media platforms. develop radio programs suitable to regional, religions, languages characteristics of many ethnic groups to communicate at grassroot level, broadcast on loudspeaker systems at the grassroot establishments accompanied by a question and answer column on traffic safety; continue implementing "Traffic Safety Year", "Traffic Safety Peak Month" and propagandize on Tet, ceremonies and festivals according to specific topics in localities. Complete and concretize criteria and behavior of traffic culture with vivid images; promote the propagation and dissemination of traffic culture criteria and behaviors. Organize advocacy campaigns to build traffic culture in agencies, units and enterprises nationwide. - Complete curriculum and teaching materials and include legal education content on traffic order and safety, traffic culture, skills in safe traffic in the main curriculum, in for-experience activities, extra-curricular activities for pupils, students; strength the coordination between families, schools and society in traffic safety education for students. - Include traffic safety education in the main curriculum for pupils, students at universities, pedagogical colleges, pedagogical secondary schools, vocational schools, especially for pupils and students at pedagogy units with specialties related to traffic safety teaching. - Universities, vocational schools research and develop training programs for disciplines, majors, and science subjects in the field of traffic safety assurance. - Propagate and educate to raise awareness and qualifications of the law enforcement forces on traffic order and safety. Introduce the content of law dissemination and education and law observance on traffic order and safety into regular activities of mass organizations, socio-political organizations and religious organizations. Continue to make the observance of the law on traffic order and safety a criterion for evaluating the quality of mass organizations, cadres, civil servants, public employees, and members, and an year-end ethical evaluation standard for pupils and students. - Strengthen propaganda and mobilization of people (especially in urban areas) to use public passenger transport vehicles, contributing to reducing traffic congestion and traffic accidents.

General freight and logistics improvements

Contribution of the logistics industry to GDP = 10 (Baseline = 5; 2020) Logistics Industry Growth Rate = 20-25 (Baseline = 15-20; 2020) Logistics Outsourcing Rate = 65 (Baseline = 40; 2020)

2030

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	Year		Target
Document	published	Target	year
General inland waterways (IWT) improvement			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	By 2040, use electricity and green energy for 100% new inland waterway vehicles. Apply criteria for green ports for 100% inland waterway ports; encourage inland ports and wharves that are operating in applying criteria for green ports.	2040
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	100% of vehicles using fossil fuels will be converted to electricity and green energy. 100% of equipment at ports and inland waterways will be converted to electricity and green energy.	2050
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	100% of newly built inland waterway vessels use electricity and green energy. 100% of newly built inland waterway ports apply green port criteria; encourage inland ports and wharves that are operating to switch to apply green port criteria.	2040
General public transport			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Public transport coverage is expected to reach 45% - 50% in Hanoi; 25% in Ho Chi Minh City; 25% - 35% in Da Nang; 20% in Can Tho; 10% - 15% in Hai Phong; at least 5% in class-I urban areas.	2030
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Public transport coverage is expected to reach at least 40% and 10% in special urban areas and class-I urban areas, in turn.	2050
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	The rate of public passenger transport in Hanoi will reach 45 % - 50%; Ho Chi Minh City reached 25 %; Da Nang reached 25% - 35%; Can Tho reached 20%; Hai Phong achieved 10% - 15%; at least 5% of urban areas of grade I.	2030
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	The rate of public passenger transport in special urban centers and grade-I cities will reach at least 40% and 10%, respectively.	2050
Decision No. 1658/QD-TTg (National Green Growth for 2021-2030 period, with a vision by 2050)	2021	The share of public passenger transport in urban areas in particularespecially, grade I urban centers will reach at least 20% and 5%, respectively;	2030

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Document	Year published	Target	Target
Decision No. 1658/QD-TTg (National Green Growth	-		year
for 2021-2030 period, with a vision by 2050)	2021	the rate of public passenger transport in special urban centers and urban centers of grade I will reach at least 40% and 15 %, respectively	2050
Implementation of NDC for Transport in Viet Nam	2021	Shifting passenger transportation from private to public transport: Bus: develop in 05 (13 - conditional) central level cities	2030
General shipping improvement			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Use electricity and green energy for ships which are built, converted and imported after 2035	2035
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	convert to use electricity and green energy for 100% ships which are operating inland from 2050. Use electricity and green energy for all vehicles and equipment in ports and aids to navigation or have equivalent measures for transition from 2050.	2050
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Invest in vehicles and equipment using electricity and green energy or have equivalent measures for transition in new and additionally invested ports from 2031.	>2031
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	New, converted or imported marine ships that use electricity and green energy after 2035;	>2035
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	From 2050, 100% of ships operating on domestic routes will switch to using electricity and green energy.	>2050
High-speed rail (HSR)			
Railway network planning for 2021-2030, vision to 2050	2021	North - South high-speed railway from Ngoc Hoi station to Thu Thiem station: double track, 1,435mm gauge, about 1,545 km in length.	2030
Jet fuel policies			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	From 2035, use at least 10% sustainable fuel for some short-distance flights; use electricity and green energy for 100% of new passenger vehicles and other vehicles in airports.R74	2035

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Decument	Year	Torque	Target
Document	published	Target Target	year
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	From 2050, transition to 100% green energy and sustainable aviation fuels for aircrafts to minimize GHG emissions. Net zero shall be achieved by carbon offset depending on available technology and remaining emissions.	2050
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	From 2035: Use at least 10% of sustainable fuel for some short flights; 100% of passenger vehicles and other vehicles in the airport are newly invested in using electricity and green energy	>2035
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	From 2050: Switch to using 100% green energy, sustainable aviation fuel for aircraft to minimize greenhouse gas emissions. Depending on the technological conditions, the remaining emissions are realized by carbon offsetting to achieve zero net emissions.	>2050
LPG/ CNG/ LNG			
Implementation of NDC for Transport in Viet Nam	2021	Conditional: Ethanol: E5 accounts for 40% of total amount of gasoline sold; No supply restrictions	2030
Measures to improve rural-urban connectivity			
Road network planning for 2021-2030, vision to 2050	2021	100% of district and commune roads will be of technical grade, meeting the transport demand in rural areas	2030
National motorcycle helmet law			
National Child Helmet Action Plan	2019	To increase helmet wearing rates among children in Vietnam to over 80% by 2030	2030
National road safety database			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Traffic safety database must be developed and completed with modern technology, synchronous connection, meeting the requirements of traffic safety management and research.	2030
National road safety strategy			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	The system of legal documents on traffic order and safety, the organization of the traffic safety management apparatus from the central to the local level must be completed with effective and effecient implementation. Develop and complete traffic safety manuals and handbooks on expressways, rural roads, etc. as applications on smart mobile device platform.	2030
Port electrification			

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	Year		Target
Document	published	Target	year
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Make transition to electricity and green energy for vehicles and equipment in existing ports and aids to navigation or have equivalent measures for transition from 2040.	2040
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Use electricity and green energy for all vehicles and equipment in ports and aids to navigation or have equivalent measures for transition from 2050.	2050
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Transition to electricity and green energy for 100% equipment used in inland ports and wharves. Invest in vehicles and equipment using electricity and green energy or have equivalent measures for transition in new and additionally invested ports from 2031.	>2031
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	All means and equipment at ports, marine signaling devices use electricity, green energy or take equivalent measures.	>2050
Rail infrastructure expansion			
Railway network planning for 2021-2030, vision to 2050	2021	Planning for 09 new railway lines, total length of 2,362 km by 2030	2030
Railway network planning for 2021-2030, vision to 2050	2021	The national railway network is planned to include 25 lines with a length of 6,354 km by 2050 Connecting Noi Bai international airport via two urban railway lines in Hanoi city (line 2 and line 6); connecting Long Thanh international airport via the North - South high-speed railway and the Thu Thiem - Long Thanh railway; connecting Tan Son Nhat international airport via urban railway (extended line 4b and line 2).	2050
Railway electrification			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	By 2040, partly stop manufacture, assembly and import of railway vehicles and equipment using fossil fuels.	2040
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	By 2050: use electricity and green energy for 100% rolling stocks; transition to electricity and green energy for 100% equipment using fossil fuels at stations. By 2050, transition to electricity and green energy for 100% inland railway vehicles using fossil fuels	2050

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Document	Year published	Target Target	Target year
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	to partially stop the production, assembly and import of railway vehicles and equipment using fossil fuels. Gradually invest in new and convert railway vehicles using fossil fuels to using electricity and green energy.	2040
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	To convert 100% of railway locomotives and wagons using electricity and green energy; converting 100% of equipment using fossil fuels to using electricity and green energy at stations.	2050
Reduction of transport/ logistics costs			
National Logistics Master Plan - VNM	2016	Logistics cost equal to of GDP = 13 (Baseline = 18; 2020)	2030
Regulation on school zones for road safety			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	100% of school gate area is located on national highways, provincial roads and urban main roads is ensured with traffic safety and traffic jam prevention.	2030
Road charging and tolls			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	100% of car owners use the electronic toll collection account for multi-purpose payment for road traffic services and pay fines for violations	2030
Road infrastructure expansion			
Road network planning for 2021-2030, vision to 2050	2021	The expressway network is planned to be 41 routes, with a total length of about 9,014 km The national highway network consists of 172 routes, with a total length of about 29,795 km	2030
Target - Road crash fatalities			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	In the period of 2031 - 2045, annually reduce road traffic accidents in all three criteria of traffic accidents, deaths and injuries, aiming to have no deaths due to road traffic accidents.	2045
Target - Transport activity			

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Document	Year published	Target	Target year
Railway network planning for 2021-2030, vision to 2050	2021	Transport: Cargo volume reached 11.8 million tons, accounting for about 0.27% market share; passenger transport volume reached 460 million passengers, accounting for about 4.40% of the market share (of which the national railway was 21.5 million passengers, accounting for a market share of about 1.87%). Cargo volume reached 7.35 billion tons.km, accounting for about 1.38% market share; passengers 13.8 billion passengers.km, accounting for a market share of about 3.55% (of which the national railway is 8.54 billion passengers.km, accounting for a market share of about 2.22%).	2030
Road network planning for 2021-2030, vision to 2050	2021	In terms of transportation, the volume of goods transported reached about 2,764 million tons (62.80% of the market share); passengers reached about 9,430 million passengers (90.16% market share); volume of domestic goods circulation reached about 162.7 billion tons.km (30.48% market share); domestic passengers 283.6 billion passengers.km drifted about (72.83% market share).	2030
Technical standards for road infrastructure			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	ensuring 100% of roads that are newly built, upgraded, renovated and being exploited are inspected and assessed in accordance with road safety regulations. Newly built, upgraded and renovated roads are considered to include dedicated lanes for motorcycles, motorbikes, bicycles and ensure safety for vulnerable traffic participants. 100% of the provincial road system, 50 - 80% of the district road system is built and fully installed with works and equipment to ensure traffic safety build roadside stations to serve the essential needs of drivers, passengers and vehicles along highways, national highways and provincial highways, ensuring drivers do not have to drive over 04 hours to have a break as regulated. a) Review, adjust and supplement technical standards and regulations on roads and traffic infrastructure works in the direction of approaching and applying modern technologies in traffic organization; develop and issue friendly road design technical manuals.	2030
Technologies supporting post-crash response			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	100% of expressways and national highways are equipped with a system of emergency stations, or in the service area of a medical facility capable of giving emergency assistance to a traffic accident victim, ensuring accessibility for traffic accident victims in the fastest time since receiving the emergency request information. All provinces and centrally run cities have emergency medical centers 115, ensuring the fastest access to traffic accident victims since the emergency request information is received. All general hospitals at district or higher level nationwide ensure emergency capacity and access to traffic accident victims in the fastest time since receiving information requesting emergency support. Study to establish new emergency medical stations or improve the capacity of existing medical facilities, ensure the ability to provide emergency traffic accident services as regulated, provide 24/7 on-standby service in general district hospitals, at roadside stations on expressways or at locations with an average service radius of about 50 km, and at the same time build a modern communication network, ensuring accessibility to victims within 30 minutes of receiving emergency request information. Promote the application of science and technology in the construction of the 115 medical emergency system nationwide.	2030
Traffic management			

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Document	Year published	Target	Target year
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	100% of highways, arterial national highways and routes has smart traffic management and operation systems (capable of detecting violations, non-stop electronic toll fee collection, flexible electronic road signs); putting in place smart urban traffic management and operation centers in centrally-run cities and localities in need	2030
Urban passenger rail infrastructure improvement			
Implementation of NDC for Transport in Viet Nam	2021	Shifting passenger transportation from private to public transport: Urban railway: 3 routes in 2 cities	2030
Vehicle manufacturing			
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	+ In 2035, the total vehicle production will reach ~ 1,531,400 units, of which: cars with 9 seats ~ 852,600 units, from 10 seats or more ~ 84,400 units, trucks - 587,900 units, and specialized vehicles - 6,500 units. + In 2035, domestically manufactured and assembled vehicles will account for ~ 78%, of which: cars with 9 seats will reach ~ 75%, from 10 seats or more will reach ~ 94%, trucks reach ~ 82%, and specialized vehicles reach ~ 23% In the period 2026 - 2035, continue to develop supporting industries for automobile production, striving to become an important supplier of a variety of components and spare parts for the regional and global auto industry. Meeting over 65% (by value) demand for components and spare parts for domestic automobile production and assembly. by 2035, cars with 9 seats will reach 55-60%, from 10 seats or more will reach 75-80%, trucks will reach 70-75%, and specialized vehicles will reach 60-70%. + In 2035, the total number of exported vehicles will reach ~ 90,000 units, of which: cars with 9 seats ~ 50,000 units, from 10 seats or more ~ 15,000 units, trucks ~ 25,000 units. The export value of components and spare parts reached ~\$10 billion.	2035
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	+ By 2025, the total vehicle production will reach ~ 466,400 units, of which: 9-seat cars ~ 237,900 units, 10 or more seats ~ 29,100 units, trucks - 197,000 units, and specialized vehicles ~ 2,400 units. + In 2025, domestically manufactured and assembled vehicles will account for ~70%, of which: cars with 9 seats will reach ~ 65%, from 10 seats or more will reach ~ 92%, trucks reach ~ 78%, and specialized vehicles reach ~ 18%. In the period of 2021 - 2025, starting to produce a number of important components in transmissions, gearboxes, engines (especially for passenger cars and light trucks), gradually participating in the product supply system support in the global value chain of the world automotive industry. by 2025, vehicles with 9 seats will reach 40-45%, from 10 seats or more will reach 50-60%, trucks will reach 45-55%, special-use vehicles will reach 40-45%; + In 2025, the total number of exported vehicles will reach ~ 37,000 units, of which: cars with 9 seats ~ 15,000 units, from 10 seats or more ~ 7,000 units, trucks ~ 15,000 units. The export value of components and spare parts reached ~ USD 5 billion.	2025
Vehicle scrappage scheme			
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Eliminate 100% of motor vehicles past their expiry date, homemade three or four wheeled vehicles are not allowed to join traffic; periodic emission control for motorcycles, motorbikes with gasoline engine participating in traffic.	2030

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Biofuels							
Updated Nationally Determined Contribution - VNM	2020	Shifting from conventional fuels to biofuel, natural gas and electricity	х	х	х	х	
Viet Nam NDC 2022 Update	2022	use of CNG and biofuels; use of electric motorbikes, cars, and buses	X				
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	promote blending and use of E5 gas for 100% of road motor vehicles	X				
Implementation of NDC for Transport in Viet Nam	2021	Encouraging the use of biofuel	Х			Х	
Development of transport plan/ policy							
Updated Nationally Determined Contribution - VNM	2020	climate change responses have been mainstreamed into the process of updating, adjusting and developing sectoral strategies and planning	x	x	x	х	
Viet Nam NDC 2022 Update	2022	goal of reducing GHG emissions has been integrated in the process of updating, adjusting and developing sector strategies and planning; the Action Program on Green Energy Transition and Reduction of Carbon and Methane Emissions of the Transportation Sector has been implemented,	x	х	x	х	
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Improve the quality of formulation and implementation of master plan for transport infrastructure development	Х	х	Х	х	
Fossil fuel subsidy elimination							
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	implement the roadmap to phase out subsidies for fossil fuels	x	х	x	х	
Freight transport shifting to rail or inland waterways (IWT)							
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	Restructure freight towards a reduction in the share of road transport in exchange for an increase in the share of transportation via rail and inland waterways;	x	х	х		
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	promote the transition of freight transport from roads to railways, waterways and coastal transport	Х	Х	x		

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	promote the transformation of freight transport modes from road to railway, waterway, coastal transport	х	х	х		
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	Restructure transport market, including the transition from road transport to inland waterway and coastal transport; make the transition from road to railway	х	х	х		
Implementation of NDC for Transport in Viet Nam	2021	Shifting the transportation mode from roadway to inland waterway and coastal roadway (railway - conditional)	Х	х	Х		
General e-mobility							
Updated Nationally Determined Contribution - VNM	2020	Shifting from conventional fuels to biofuel, natural gas and electricity	х	х	х	х	
Viet Nam NDC 2022 Update	2022	use of CNG and biofuels; use of electric motorbikes, cars, and buses	x				
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Improve manufacture, assembly, import and transition to electricity-powered road vehicles Organize pilot researches on using railway vehicles with electricity and green energy on existing railway lines in Vietnam. Invest in construction of new railway lines towards a roadmap for electrification. Formulate policies on encouraging and supporting individuals and enterprises in transition from inland waterway vehicles running on fossil fuels to those using electricity and green energy.	х	Х			
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	converting all machinery and equipment for loading and unloading fossil fuels into electricity and green energy. To plan and build an infrastructure system to supply electricity and green energy for means of transport in urban areas.	х	х	х	х	х
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	gradually increase the percentage of electric and hydro-powered vehicles	х				
General freight and logistics improvements							
Updated Nationally Determined Contribution - VNM	2020	Changing freight transportation models	х	х	х	х	
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	reduce the proportion of empty runs of vehicles, reduce congestion of goods in transportation activities and logistics service supply chains; organize the effective management and operation of transport infrastructure and equipment.	х	х	х	х	

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	strengthen the connection of transport modes combined with high-quality logistics services reduce congestion of goods in transport activities and supply chains Services of Logistics; organize the management, operation and efficient exploitation of transport infrastructure facilities and equipment.	х	х	х	х	
Master Strategy for Vietnam's Service Sector Development in the 2021-2030 period, with a vision to the year 2050	2021	Effectively use and invest in the development of transport infrastructure and organize propaganda to encourage enterprises to improve the capacity and quality of logistics services.	х	Х	х	Х	
National Logistics Master Plan - VNM	2016	Develop national logistics performance index Promote awareness of Vietnam's international commitments related to logistics Promote e-commerce through logistics Promote a capable and reliable ground package delivery and reverse logistics industry Last mile delivery system Develop last-mile system for urban consumers Improve freight logistics efficiency Support users to outsource logistics services Develop assessment tools for outsourcing cost benefit analysis	Х	Х	х	х	х
General infrastructure improvements		·					
Updated Nationally Determined Contribution - VNM	2020	Applying energy efficiency measures in transport	х	х	х	х	
Viet Nam NDC 2022 Update	2022	efficient use of energy in transportation	х	х	х	х	
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Encourage the transition to green energy for new and existing bus stations and rest stops. Study and revise national sector strategies, specialized technical planning for transport and other relative planning and plans to ensure that the orientation of investment, construction, upgrading and operation of transport infrastructure in a manner that is appropriate for and synchronous with the investment in and operation of transport vehicles and equipment using electricity and green energy to reduce GHG emissions.	Х				
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	re-establish the road safety corridor and prevent re-encroachment on all national highways. Promptly eliminate black spots and potential traffic accident points on the road traffic system; Apply technology to supervise and handle the illegal use of the roadway or roadside for business, trading purposes or vehicle parking service, affecting road traffic order and safety.	х				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Develop a synchronous, modern system of transport infrastructures in order to create a complete, smooth and interconnected network between transport modes, between regions, between urban areas and rural areas throughout the country. Develop an urban transport infrastructure and public transport system fitted to the development level; sustain, consolidate, upgrade the existing transport network in order for it to meet the required technical requirements and standards. ; improve traffic quality and safety		х	х	Х	х
RESOLUTION ON FIVE-YEAR SOCIO-ECONOMIC DEVELOPMENT PLAN DURING THE 2021 – 2025 PERIOD	2021	develop transport infrastructure connecting the Mekong River Delta with the Southeast region and Ho Chi Minh City	х	х	х	х	
Road network planning for 2021-2030, vision to 2050	2021	Investors in economic zones, residential areas, urban areas and works with large traffic volumes must build a system of collection roads to connect with highways and national highways in these areas.	Х				х
Transport Strategy 2020	2013	Accelerate investment in renovating and upgrading traffic infrastructure system in a synchronous manner, ensuring safe corridors, dealing with black spots on the route in order to curb traffic accidents and strive to reduce the number of traffic accidents. people die from traffic accidents every year to the lowest level.	х				
General public transport							
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	Develop public passenger transport, especially fast modes of transit in large urban centres	х	x			x
Updated Nationally Determined Contribution - VNM	2020	Shifting from private to public means of transport	х	x			
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Formulate regulations on and criteria for green bus stations and green rest stops; develop policies to encourage the transition to green bus stations and rest stops. Develop and execute programs on the transition to green bus stations and rest stops Gradually increase the market share of public passenger transport in urban areas; promote the transition from private transport to public transport. Renovate and upgrade main lines to meet the 24-hour train service; strive for the total length of technical-uniform routes to reach about 5.000 kilometers		х			х
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Public passenger transportation is developed with connecting infrastructure and improved quality of passenger transport services. give priority to investment in the development of mass transit	х				
Decision 13/2015/QD-TTg on mechanisms and policies to encourage the development of public passenger transport by bus issued by the Prime Minister	2015	Priority is given to building a model of a bus service management center to monitor and manage the quality of bus services in localities.	х				х

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Encourage new and existing bus stations and rest stops to be converted to green criteria. To plan and build an infrastructure system to supply electricity and green energy for means of transport in urban areas. Gradually increase the market share of public passenger transport in urban areas; promote the conversion of using private means of transport to using public transport.	х	х			х
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	Make the transition from personal vehicles to public vehicles;	Х	X			
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Develop an urban transport infrastructure and public transport system fitted to the development level; sustain, consolidate, upgrade the existing transport network in order for it to meet the required technical requirements and standards. improve service conditions of public transport in keeping with the conditions of people with disabilities, elderly people, women and children Guide, inspect, oversee the implementation of codes, standards on transport access; ensure that all public transport works, projects comply with codes, standards on access for people with disabilities.	х	х			х
Road network planning for 2021-2030, vision to 2050	2021	Building a modern public transport system	Х				
Transport Strategy 2020	2013	To rationally develop the urban transport infrastructure system and public transport; ensure the land fund for urban traffic from 16-26% For big cities, strongly develop the bus system,	X	x			х
General transport finance							
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	Finance for climate change adaptation, mainly for maintenance of existing infrastructure and building important projects aimed at prevention of natural disasters, and socialeconomic development in the context of climate change.	х	x	х	х	
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Maximize all domestic, international, state-owned and private sources to fulfill tasks and solutions for GHG emissions reduction, transition to green energy in transportation to implement: - Tasks for formulating legislative documents, institutions, policies, etc. with implementation costs allocated mainly from state budgets and other lawful funding sources Projects for developing green transport infrastructures whose sources mobilized from state budgets, international aid, private investment and public-private partnership, etc Investment in purchase and conversion to transport vehicles and equipment using electricity and green energy with sources mobilized from international aid, climate finance funds and funding sources from the private sector, enterprises and individuals.	x	х	х	х	

Transport and Climate Profile

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Mobilize investment resources	Х				
National Logistics Master Plan - VNM	2016	Improve transport efficiency across modes through investment allocation aligned with economic prioritization Need to deploy public and private investment across modes based on a verifiable and consistent economic prioritization and investment decision making process Provide more holistic and coherent policies for investment in each transport mode and logistics facilities by: - Performing a diagnostic, understanding of the impediments to PublicPrivate Partnerships (PPP) - Establishing the institutional set up and revising the legal framework to enable PPP - Preparing guidelines on PPP project selection, and prioritization, before consultation with line ministries on development of potential projects Encourage large firms to invest in logistics infrastructure projects Develop promotion policy for logistics infrastructure investment Attract private sector investment in logistics infrastructure projects (Class I)	Х	х	х	х	
Railway network planning for 2021-2030, vision to 2050	2021	Promote socialization in railway business and transport support services; attracting all economic sectors, including foreign investors, to invest in means of transport, supporting works for transport activities (platforms, warehouses, yards, loading and unloading vehicles, etc.)). Studying mechanisms and policies to create favorable conditions for attracting investment capital and transferring technology to develop the railway industry to gradually build new types of wagons on their own		х			

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Road network planning for 2021-2030, vision to 2050	2021	evaluate and replicate successful models of investment attraction in the form of public-private partnerships at central and local levels Amending and supplementing regulations on financial support mechanisms and policies, taxes, prices, charges and fees in line with the market mechanism to increase the commerciality of road infrastructure projects. Encourage and create all conditions for enterprises to expand joint ventures, domestic and foreign links to mobilize capital, transfer technology, exchange management and operating experience Thoroughly propagate the views and guidelines of the Party, policies and laws of the State on attracting resources and developing the road traffic infrastructure system. Focus on calling all resources to invest in transport infrastructure annually reaching 3.5-4.5% of GDP. Prioritize state budget capital to support investment projects in the form of public-private partnership as a primer, invest in projects that cannot attract non-budget capital, projects in regions hard. Continue to attract and effectively use ODA and concessional loans from international donors Priority is given to enterprises investing in road infrastructure to invest in and exploit services related to the project scope and to get loans from long-term credit sources with preferential interest rates To step up investment promotion activities in the form of public-private partnership; provide complete, timely and public information on the list of public-private partnership projects on the National Procurement Network; simplify the project investment procedure under the mode of public-private partnership Efficiently exploiting resources from infrastructural assets invested with state budget capital through the form of exploitation concession; localities to study and implement a mechanism to collect revenue from land fund exploitation on both sides of the roadway to invest in the development of road infrastructure Mobilizing and allocating investment capital with a focus, focus on dynamic, pervasive a	x				
Hydrogen							
Viet Nam NDC 2022 Update	2022	develop the production of green hydrogen in transportation	х	х	х	х	
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	Develop industries using clean energy, produce and regulate vehicles running on electricity and hydrogen	х	х	х	х	
LPG/ CNG/ LNG							
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	Encourage buses and taxis to use compressed natural gas and liquefied petroleum gas (LPG);	x				
Updated Nationally Determined Contribution - VNM	2020	Shifting from conventional fuels to biofuel, natural gas and electricity	х	х	X	х	

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					Dome stic Navigation	estic ion	an sport
Document	Year published	Measure	Road	Rail	Dome stic Navigatio	Dome sti Aviation	Urban Transp
Viet Nam NDC 2022 Update	2022	use of CNG and biofuels; use of electric motorbikes, cars, and buses	х		<u> </u>		7-
Implementation of NDC for Transport in Viet Nam	2021	Scenario by 2030 Using CNG for 623 urban buses	Х				Х
Measures to increase car occupancy							
Viet Nam NDC 2022 Update	2022	increase of the load factor of cars	Х				
Renewable energy							
Updated Nationally Determined Contribution - VNM	2020	use of renewable energy in public lighting and traffic light systems has also increased	х	х	х	х	
Viet Nam NDC 2022 Update	2022	and the use of renewable energy in public lighting and traffic signals has been increased	x				
Transport Strategy 2020	2013	Application of clean fuel, renewable energy and other forms of alternative energy in transportation activities.	Х	Х	Х	Х	
Road infrastructure expansion							
Viet Nam NDC 2022 Update	2022	developing and completing the expressway network and the inter-regional transport system	x				
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Take priority over completing 5.000 km of highways, conveniently connect national highways to international seaports and airports, large inland waterway ports, focal railway stations	х				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Prioritize completion of 5,000 km of expressways; basically complete the inter-regional high-speed lines, connecting international gateway seaports and international airports; convenient connection of national highways to seaports, international airports, large inland waterway ports, and major railway stations.	Х				
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	increase transport efficiency via building and expanding road network and North-South railway network.	Х				
Road network planning for 2021-2030, vision to 2050	2021	complete inter-regional highways, connecting international gateway seaports, international airports, major international border gates with large import and export demand for goods, high-class urban areas. in particular, class I; convenient connection of national highways to seaports of class II, international airports, large inland waterway ports, major railway stations, and urban traffic hubs of class II and below. Strive to build and complete about 5,000 km of expressways.	х				х

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Transport Strategy 2020	2013	Prioritize investment, complete upgrading and expanding National Highway 1 with a scale of 4 lanes. New construction of sections of the North-South expressway, expressways of two corridors and a Vietnam-China economic belt, radial routes and rings in the Hanoi capital region. Focus on investing in upgrading, expanding and building new main roads in and out of the city, radial traffic axes, stereoscopic intersections at major intersections, urban bypass routes, ring roads. urban belt. Vietnam's road and railway system is synchronous in terms of technical standards, conveniently connected to the ASEAN road system, the Greater Mekong Sub-region and the Trans-Asian railway.	Х				х
Target - Economy-wide emissions							
Updated Nationally Determined Contribution - VNM	2020	With domestic resources, by 2025 Viet Nam 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 Viet Nam will have reduced total GHG emissions by about 9% compared to the BAU scenario (equivalent to 83.9 million tonnes of CO2eq). The above-mentioned 9% contribution can be increased to 27% by 2030 (equivalent to 250.8 million tonnes of CO2eq) with international support received through bilateral, multilateral cooperation as well as through the implementation of market and non-market mechanisms under Article 6 of the Paris Agreement, in line with the socio-economic conditions and international conventions to which Viet Nam is signatory.		х	х	х	
Viet Nam NDC 2022 Update	2022	With the state budget, loans, investment from domestic and foreign enterprises, contributions and investments of the citizen, Viet Nam aims to reduce 15.8% of total GHG emissions by 2030 compared to BAU, equivalent to 146.3 Mt CO2eq With the above resources and additional international financing in adequate and appropriate manner through grants, concessional loans, financial resources, technology and capacity building under bilateral and multilateral international cooperation mechanisms, especially under UNFCCC and Paris Agreement, Viet Nam aims to reduce 43.5% of total GHG emissions by 2030 compared to BAU, equivalent to 403.7 Mt CO2eq.	x	х	х	х	
Transport services adaptation							
Viet Nam NDC 2022 Update	2022	Upgrading transport facilities in areas with high disaster risk and vulnerability to climate change	Х	X	х	Х	
Vehicle air pollution emission standards							
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	implement management solutions for fuel quality, emissions standards, and vehicle maintenance	х				
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Control the emissions of motorcycles and motorbikes with gasoline engines in traffic	х				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Circular 31/2009/TT-BGTVT stipulating national technical regulations on emission of new manufactured, assembled and imported automobiles issued by the Ministry of Transport	2009	Table 1. Emission limit values for vehicles fitted with spark ignition engines – EURO 2 Table 2. Exhaust limit values of diesel vehicles – EURO 2 Table 3. Exhaust limit values of vehicle engines – EURO 2 Table 4. Limit value of light absorption coefficient – test at steady speed on full load characteristic of motor Table 6 – Attenuation coefficient	х				
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	Use energy effectively in transport by applying standards regarding fuel consumption and emission norms	х				
National standard TCVN 6438:2018 on Road vehicles - Maximum allowable limit of emissions	2018	Road vehicles - Maximum allowable limit of emissions	Х				
Transport Strategy 2020	2013	To step by step control, prevent and limit the increase in environmental pollution caused by transportation activities	х				
Vehicle efficiency standards							
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	implement management solutions for fuel quality, emissions standards, and vehicle maintenance	х				
Updated Nationally Determined Contribution - VNM	2020	Improving the energy efficiency of transport vehicles	х				
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	prescribe energy efficiency for rolling stocks, inland waterway vehicles and ships and aircrafts operating domestically. Apply fuel consumption limits to road motor vehicles according to a given roadmap, aiming to minimize fuel consumption and GHG emissions	х				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Applying fuel consumption limits to road motor vehicles according to the schedule, aiming to minimize fuel consumption and greenhouse gas emissions; regulations on energy efficiency for locomotives, wagons, inland waterway and marine vessels and aircraft operating on domestic routes. reduce the idle coefficient of vehicles	х				
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	Use energy effectively in transport by applying standards regarding fuel consumption and emission norms. Develop and implement roadmap for making the transition to clean energy in traffic vehicles	Х				
Implementation of NDC for Transport in Viet Nam	2021	Limiting fuel consumption for new manufactured, assembled and imported motor vehicles	Х				
National technical regulation QCVN 109:2021/BGTVT on Level 5 Emissions for newly manufactured, assembled and imported cars	2021	Table 2. Exhaust limit values of vehicles fitted with compression-ignition engines - Level 5	х				
Vehicle inspection and maintenance							

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Document	Year published	Measure	Road	Rail	Do me stic Navigation	Dome stic Aviation	Urban Transport
Intended Nationally Determined Contribution of Viet Nam (2015)	2015	implement management solutions for fuel quality, emissions standards, and vehicle maintenance	х				
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	apply modern technology in the management and supervision of vehicle inspection. Build modern motor vehicle safety testing centers; test the safety of all kinds of vehicles	Х				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Circular 05/2020/TT-BGTVT amending Circular 03/2018/TT-BGTVT stipulating quality inspection of technical safety and environmental protection for imported cars (and motorcycles) subject to Decree 116/2017/ND-CP issued by the Minister of Transport	2020	2. Imported unused cars must be inspected by the quality inspection agency as follows: a) Methods of inspection and testing of model cars is applicable to the type of car imported for the first time into Vietnam, the next cycle of inspection and testing of model cars is applicable to cars imported from the country applying the certification system according to the regulations. type specified in Form No. 06 of the Appendix issued together with this Circular and the cycle for cars imported from the country applying the self-certification system is 36 months. Specific inspection and testing contents are as follows: - Check the uniformity of the content of the factory quality inspection slips, of the actual cars of the same type in the imported batch of cars; check the status of chassis number and engine number of each vehicle in the imported vehicle batch according to the inspection registration dossier; randomly take a representative car sample for each type of car in the imported batch to compare the technical parameters of the actual vehicle with the content of the inspection registration dossier; - The inspection agency randomly selects 01 sample vehicle or 02 sample cars (in case the enterprise requests to use 01 sample for safety testing and use 01 sample for emission testing) representing each type of automobile. In the batch of imported cars that have been inspected so that the importing enterprises can bring the vehicles to the testing facilities themselves. The sampling must be recorded in writing according to the provisions of Form No. 04 of the Appendix issued together with this Circular for the importing enterprise to present when working with the testing facility. according to the provisions of the national technical regulation on emission level 4 for newly manufactured, assembled and imported cars" (except for the evaporation test). The testing of technical safety and quality is carried out in accordance with the provisions of the National Technical Regulation QCVN 09:2015/BGTVT "National technical	X				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Circular 31/2009/TT-BGTVT stipulating national technical regulations on emission of new manufactured, assembled and imported automobiles issued by the Ministry of Transport	2009	Table 5. Regulations on the application of tests according to the respective standards for vehicles	х				
Circular 48/2022/TT-BGTVT guiding the energy labeling for electric and hybrid electric cars, motorcycles and motorcycles issued by the Minister of Transport	2022	The quality management agency organizes inspection and supervision related to the implementation of energy labeling as follows: 1. Annually, plan and carry out inspection of compliance with information disclosure on energy consumption, labeling of manufacturers, importers and traders of vehicles according to the guidance in Chapter III of this Circular 2. Unscheduled inspection in case of receiving well-founded reflections and complaints about signs of violations related to the implementation of energy labeling of SXLR, NK establishments . In case of detecting obvious signs of violation of the declared energy consumption, the quality management agency has the right to request the producer and importer to retest the energy consumption and re-disclose the information. on energy consumption.	x				
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Periodic inspection is in effect	Х				
Transport Strategy 2020	2013	Strengthening the management and periodic inspection of vehicle quality and transport service quality, especially for passenger transport. Improve quality of motor vehicle inspection;	х				
Adaptation transport laws, regulations and programmes							
Railway network planning for 2021-2030, vision to 2050	2021	Restricting railway lines passing through environmentally sensitive areas; In cases where it is necessary to have an appropriate ecosystem compensation plan.		х			
Air traffic management							
Transport Strategy 2020	2013	Implement the new air traffic information, navigation, monitoring and management system in line with the transformation plan and roadmap in the Asia-Pacific region with a straightforward approach to high technology. using satellite and digital				Х	
Automated enforcement of speed limits							
Global Status Report on Road Safety 2018	2018	Yes	Х				
Budget/ identification of public transport projects							

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Decision 13/2015/QD-TTg on mechanisms and policies to encourage the development of public passenger transport by bus issued by the Prime Minister	2015	Prioritize allocating sufficient funds from the State budget for the formulation, adjustment and implementation of the master plan for public passenger transport by bus with the targets in the planning including: public passenger transport, land fund, solutions to connect with other modes of transport, percentage of vehicles using clean energy, percentage of vehicles meeting technical regulations on accessible traffic.	x				
Bunkering infrastructure for alternative fuels							
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Applying fuel consumption limits to road motor vehicles according to the schedule, aiming to minimize fuel consumption and greenhouse gas emissions; regulations on energy efficiency for locomotives, wagons, inland waterway and marine vessels and aircraft operating on domestic routes.			х		
Climate-resilient design standards							
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Revise, amend and improve technical standards/ codes for designing transport works, infrastructures based on future climate change scenarios	Х				
National plan to adapt to climate change for the period of 2021-2030, with a vision to 2050	2020	Review, formulate and complete standards, technical regulations and technical instructions for construction of road, railway and waterway transport infrastructure adaptable to climate change	Х	X	х		
Road network planning for 2021-2030, vision to 2050	2021	Means of transport must have technical and quality standards with environmental protection requirements.	Х				
Convention on Road Traffic 1949							
59 UN Transport Agreements/ and Conventions Serviced by ECE	2021	Ratification, accession, or definite signature by country	х				
Convention on Road Traffic 1968							
59 UN Transport Agreements/ and Conventions Serviced by ECE	2021	Ratification, accession, or definite signature by country	Х				
Coordinate planning across government agencies							
Railway network planning for 2021-2030, vision to 2050	2021	The arrangement of railway stations should respect and protect landscapes, historical sites and cultural heritages		X			

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Road network planning for 2021-2030, vision to 2050	2021	Implement effectively cooperation programs with localities in the management of road traffic safety corridors, investment implementation Coordinate closely and synchronously in the process of implementing the planning between the central and local governments, ensuring that the local plannings must comply with the orientations of the road network planning; coordinate among ministries and branches to handle inter-sectoral issues, ensuring the consistency, synchronization and efficiency of the road network planning.	х				
Define roles and accountabilities across agencies							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	1. The Ministry of Transport shall assume the responsibility for developing and completing institutions and policies related to the improvement of energy efficiency, transition to electricity and green energy for green transport vehicles, equipment and infrastructures; invest in developing the transport infrastructure system according to the planning; develop human resources ready to receive the transfer, manage and operate new technologies in terms of green vehicles, equipment and infrastructure; mobilize domestic and international resources, develop and implement communication plans and other tasks to execute the Action Program for Transition to Green Energy; organize the evaluation of performance results in the transport sector and report to the Prime Minister of Vietnam. 2. The Ministry of Planning and Investment shall preside over the development of mechanisms and policies to encourage investment and support related to transition to green energy, reduction of GHG emissions by road, railway, inland waterway, marine and air transport vehicles; complete investment policies, attract investment in the development of electric charging systems and green energy suppliers for vehicles using electricity and green energy. 3. The Ministry of Industry and Trade shall take charge of developing manufacture industry of transport vehicles and equipment running on electricity and green energy; manufacture and supply electricity and green energy to alter fossil fuels meeting domestic demands; increase blending and supply of bio-fuels; develop electricity- and green energy-based charging system for vehicles. 4. The Ministry of Finance shall assume the responsibility for formulating, reviewing and completing preferential policies to support transport businesses to invest in and transition to vehicles using electricity, green energy and green transport infrastructure. 5. The Ministry of Construction shall take charge of completing preferential policies to outport infrastructures; review and promulgate regulations on and sta		x	х	X	x

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	2. The Ministry of Transport a) Assume the prime responsibility for and coordinate with ministries and branches in regularly reviewing, amending and supplementing legal documents to promptly apply and develop the achievements of the Fourth Industrial Revolution in the field of ensuring road traffic order and safety. b) Assume the prime responsibility for and coordinate with ministries, branches and People's Committees of centrally-run cities and provinces in formulating and perfecting mechanisms and policies to restructure transport markets, increasing market share of high volume transport modes, reducing dependence on road transport; encourage the development of public passenger transportation on main transport corridors and in urban centers; formulating and promulgating mechanisms, policies and roadmaps to limit the use of personal motor vehicles, especially in big cities; study, promulgate and apply a set of criteria for determining traffic congestion on roads. c) Research and promulgate policies to encourage private sector participation in traffic safety; especially science and technology individuals, organizations, universities to research new solutions and technologies to be applied in the field of ensuring traffic safety. d) Assume the prime responsibility for and coordinate with relevant units to invest in the upgrading of the traffic safety database analysis center; upgrade the database system of cruise surveillance equipment and surveillance cameras on commercial transport automobiles, ensure connectivity and common use for functional agencies responsible for inspection, patrol, control and handling violations. d) Study, consider and updatetraffic accident data on the basis of traffic digital maps to serve the management, timely detection and handling of black spots and potential road traffic accident points; increase investment in building automatic traffic safety monitoring system at road intersections with railroads. Carry out traffic safety verification and assessment according to regulations appl	X				x

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Domestic Aviation	U rban Transport
Circular 48/2022/TT-BGTVT guiding the energy labeling for electric and hybrid electric cars, motorcycles and motorcycles issued by the Minister of Transport	2022	Article 12. Responsibilities of quality management agencies 1. Receive and publicize information related to the vehicle's energy consumption according to the guidance in this Circular on the website of the quality management agency. 2. Coordinate with functional agencies to settle complaints, disputes, handle violations related to the publicity of vehicle energy consumption and energy labeling. 3. In the course of inspection and supervision, when detecting administrative violations, a written notification shall be sent to the competent authority for handling according to the provisions of Decree No. 134/2013/ND-CP dated October 17, 2013 of the Government on sanctioning of administrative violations in the field of electricity, safety of hydropower dams, economical and efficient use of energy and Decree No. 17/2022/ND-CP dated January 31, 2022 of the Government amending and supplementing a number of articles of the Decrees on sanctioning of administrative violations in the field of industrial chemicals and explosives; electricity, safety of hydroelectric dams, economical and efficient use of energy; commercial activities, production and sale of counterfeit and banned goods and protection of consumers' interests; oil and gas activities, petroleum and gas trading. 4. Summarize results of vehicle energy labeling inspection and report to the Ministry of Transport upon request. Article 13. Responsibilities of testing facilities To take responsibility for the accuracy and validity of the vehicle's energy consumption test results conducted by the testing facility according to the guidance in this Circular. Article 14. Responsibilities of vehicle manufacturers, importers and traders 1. Publicize information on energy consumption and label energy for vehicles according to the guidance in this Circular before being put on the market. 2. Take responsibility before law for the accuracy and truthfulness of the test report and the publicity of energy consumption content. 3. SXLR and NK establishments shall store documents rela	x				

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Document	Year published	Measure	Road	Rail	Do me stic Navigation	Dome stic Aviation	Urban Transport
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	1. Ministry of Industry and Trade - To assume the prime responsibility for, and coordinate with the Ministry of Finance and relevant ministries and branches in, drafting the Prime Minister's Decision on policies to implement the Strategy for Development of Vietnam's automobile industry and industry Formulate the development planning of Vietnam's automobile industry for the period up to 2030, and submit it to the Prime Minister for approval Presiding over the announcement and organizing the implementation of this Strategy Clearly identify strategic partners in industry development, auto industry and supporting industries to participate in the value chain to serve domestic and export demand. 2. Ministry of Planning and Investment To assume the prime responsibility for, and coordinate with the Ministry of Industry and Trade and related ministries and branches in, formulating a system of policies to enhance the ability to attract foreign investment capital for the development of the automobile industry. 3. Ministry of Finance Coordinate with the Ministry of Industry and Trade and relevant ministries and branches to review and propose appropriate preferential credit, tax and fee policies to encourage the development of the automobile industry to meet the set targets of the Strategy 4. Ministry of Science and Technology To assume the prime responsibility for, and coordinate with concerned ministries and branches in, promulgating standards and technical regulations for domestically produced automobiles, in line with global standards; building technical barriers for imported cars. Article 3. Ministries, branches and People's Committees of provinces and centrally-run cities, in the process of directing and implementing this Strategy, according to their functions and tasks, need to ensure consistency and synchronization. between the automobile industry development strategy and the strategies, master plans and socio-economic tasks of each ministry, branch and locality. When promulgating new policies, the prin	X				

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Domestic Aviation	Urban Transport
Decision 13/2015/QD-TTg on mechanisms and policies to encourage the development of public passenger transport by bus issued by the Prime Minister	2015	1. Ministry of Transport a) Assume the prime responsibility for summarizing, inspecting and reviewing the implementation of the national public passenger transport development planning, and at the same time coordinate and guide the provinces and centrally-run cities in formulating the development planning for public passenger transport, develop a public passenger transport network; b) Assume the prime responsibility for, and coordinate with the Ministry of Science and Technology in, developing criteria for determining the types of vehicles participating in public passenger transport by bus using clean energy as a basis for fee exemption in advance. contacts; research and application of modern technologies in management and operation of the bus public transport system; c) Coordinating with the Ministry of Planning and Investment and the Ministry of Industry and Trade in promulgating a list of spare parts and components for manufacturing and assembling domestic bus passenger transport vehicles that can be manufactured as a basis. to identify spare parts, components, machinery and equipment that cannot be produced domestically for import tax exemption; d) Coordinate with the Ministry of Information and Communications, the Ministry of Education and Training, the Ministry of Labor - Invalids and Social Affairs, and the National Traffic Safety Committee in information and communication work to encourage people to use public bus transport services; dd) Coordinating with the Ministry of Planning and Investment and the People's Committees of the provinces and centrally-run cities in reviewing the annual budget balance for the development of public passenger transport by bus; e) Cooperate with the Ministry of Natural Resources and Environment in inspecting and inspecting the implementation of the provisions of the law on land and environmental protection in the field of public passenger transport by bus. 2. Ministry of Finance a) To assume the prime responsibility for, and coordinate with the State Bank of Vietnam in, gu	X				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	1. The Ministry of Transport shall assume the prime responsibility for formulating and perfecting institutions and policies related to improving the efficiency of energy use, converting to use electricity and green energy for vehicles, equipment, green transport infrastructure in transportation; invest in the development of the transport infrastructure system according to the planning; develop human resources ready to receive, transfer, manage, exploit and operate new technologies in terms of vehicles, equipment and green infrastructure; mobilize domestic and international resources, develop and implement communication plans and other tasksc to implement the Green Energy Transformation Action Program; organize the evaluation of performance results in the transport sector, and report to the Prime Minister. 2. The Ministry of Planning and Investment: Presides over the development of mechanisms and policies to encourage investment, support related to green energy conversion, reduce greenhouse gas emissions for road and road vehicles. railway, inland waterway, maritime, aviation; perfect investment policies, attract investment in development of electric charging systems, green energy supply infrastructure for vehicles using electricity and green energy. 3. The Ministry of Industry and Trade: To assume the prime responsibility for developing the industry of manufacturing vehicles and transportation equipment using electricity and green energy; production, electricity supply, green energy to replace fossil fuels to meet domestic demand; expanding the mixing and supply of biofuels; develop electric charging system, green energy for vehicles. 4. The Ministry of Finance: Presides over the formulation, review and completion of preferential policies to support the production, assembly and import of used transport means and equipment. use electricity, and green energy; Preferential policies to support transport businesses to invest, convert vehicles using electricity, green energy, green transport infrastructure. 5. The Mi	X	X	х	X	X
Master Strategy for Vietnam's Service Sector Development in the 2021-2030 period, with a vision to the year 2050	2021	Strengthening the role of State management in the direction of actively removing difficulties and barriers, creating a healthy competitive environment as a driving force to encourage all economic sectors to participate in the transport market.	X	Х	х	х	

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Document p	ed Measure	Road	Rail	Do me stic Navigation	Do me stic Aviation	Urban Transport
National Logistics Master Plan - VNM	Establish National Steering Committee on Logistics: Support should define the following: - Terms of reference and powers of set of the Committee - Who would chair the Committee, e.g. Do Committee and the level of representation, e.g. Ministers - Im Action Plan and subsequent detailed action plans, e.g. the conflict resolution should there be differing views between veconsultation - Call to formulate more detailed actions plans, Action Plan in the context of the ASEAN Master Plan on Connalternative source of knowledge/funding . Establish logistics in development of logistics industry	f the National Steering Committee - Institutional/legal eputy Prime Minister - Who will be the members of the plementation arrangements of the National Logistics emposition of an implementing secretariat - Mode of priority interventions - Methods of private sector for priority interventions - Review National Logistics ectivity 2025, to ensure regional alignment and as an	х	x	х	

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Railway network planning for 2021-2030, vision to 2050	2021	1. Ministry of Transport - To assume the prime responsibility for, and coordinate with ministries, branches and People's Committees of provinces and cities in managing and organizing the implementation of the railway network planning. Periodically evaluate the implementation of the planning, review and adjust the planning according to regulations. Announce the planning as prescribed Provide the national database on planning, provide information on planning into the information system, the national database on planning according to regulations Develop plans, propose necessary solutions to implement the planning synchronously and effectively Organize the elaboration and submission to competent authorities for approval of railway planning of technical and specialized nature for the period up to 2030 Coordinate with the Ministry of Finance, the Ministry of Planning and Investment to arrange the medium-term budget and annual implementation of the railway development planning. 2. Ministries, branches According to their functions, tasks and powers, they are responsible for coordinating with the Ministry of Transport and the People's Committees of the provinces and centrally-run cities in allocating resources and proposing mechanisms and policies to implement effectively implement the objectives of the planning, ensure consistency and synchronization with the implementation of the 10-year socio-economic development strategy 2021-2030, socio-economic development plans of each sector. and local. 3. People's Committees of relevant provinces and cities - People's Committees at all levels shall, within the ambit of their tasks and powers, organize the state management of railway traffic in accordance with relevant laws within their respective localities; strictly manage the land fund in service of planning implementation; strengthen the protection of railway traffic safety corridors Review, adjust and develop plannings and projects in the locality to ensure consistency and synchronism with this planning. Upda		x			X

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Road network planning for 2021-2030, vision to 2050	2021	Strengthen the inspection and supervision of the management and implementation of the planning to ensure that the planning is implemented in accordance with regulations; promote the role of people, businesses and sociopolitical organizations in monitoring the implementation of the planning. Strictly handle cases of violations of the law on planning. 1. Ministry of Transport - Assume the prime responsibility for, and coordinate with ministries, branches and People's Committees of provinces and centrally run cities in, managing and organizing the implementation of road network planning. Periodically evaluate the implementation of the planning, review and adjust the planning according to regulations. Announce the planning as prescribed Provide relevant data to update the information system and national database on planning Deploy the planning, advise and propose necessary solutions to implement the planning synchronously and effectively Organize the elaboration and approval of planning of technical and specialized nature for roads in the period up to 2030 Coordinate with the Ministry of Finance, the Ministry of Planning and Investment to arrange annual budget for implementation of the road development planning. To assume the prime responsibility for and coordinate with the Ministry of Finance in handing over sections of national highways to localities for management. 2. Ministries and branches shall, according to their functions, tasks and powers, coordinate with the Ministry of Transport and People's Committees of provinces and cities in allocating resources and proposing mechanisms and policies. in order to effectively implement the objectives of the master plan, ensure the consistency and synchronization with the implementation of the 10-year socio-economic development strategy for 2021-2030, the socio-economic development plans of the each sector and locality. 3. People's Committees of provinces and centrally run cities - People's Committees at all levels shall, within the ambit of their tasks and	x				x

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Transport Strategy 2020	2013	On the basis of the approved strategy adjustment: Ministries, branches, People's Committees of provinces and centrally run cities shall coordinate with the Ministry of Transport - Implement the new air traffic information, navigation, monitoring and management system in line with the transformation plan and roadmap in the Asia-Pacific region with a straightforward approach to high technology. using satellite and digital. carry out the tasks and objectives of the Transport Development Strategy; adjust the transport development planning according to the specialties, regions and territories, as well as the transport development plan in the coming years Capacity building of research institutes, testing and testing centers in the transport industry Conduct research, develop and implement projects and projects to concretize the contents and policy solutions in the Strategy.	x	х	х	х	
Design standards for sidewalks and bicycle paths							
Global Status Report on Road Safety 2018	2018	Partial	Х				
Development of automotive plan/ policy							
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Develop a master plan for the development of the automobile industry, specifying a number of contents of this Strategy. Develop a Program/ Plan of Action within the framework of Vietnam's strategic partnership with countries with a developed auto industry. Select a number of important parts in the value chain constituting automobiles for inclusion in the list of key mechanical products.	х				
Development of aviation plan/policy							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Formulate regulations on and criteria for green airports; develop and execute programs on transition to green airports.				х	
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop policies to encourage and support enterprises to convert aircraft using fossil energy to using green energy and sustainable fuel .				х	
Development of climate change/ low carbon plan/policy							

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop and promulgate mechanisms and policies to encourage, support and create favorable conditions for enterprises to improve their financial and technical capacity to invest in infrastructure, means and equipment in the direction of converting electricity use, green energy, reducing greenhouse gas emissions and participating in carbon credit exchange and offset. Researching, adjusting and supplementing national strategies and plannings, specialized technical plans for transportation and other relevant plannings and plans to ensure the first orientation invest, build, upgrade, operate and exploit traffic infrastructure in accordance with and synchronously with investment and exploitation of transport vehicles and equipment using electricity, green energy, reducing greenhouse gas emissions glasses.	х	х	х	х	
Development of e-mobility transport plan/policy							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Formulate plans and invest according to a roadmap to replace old railway vehicles with vehicles that may use electricity and green energy Develop programs on transition to electricity and green energy for road motor vehicles. Formulate policies on encouraging and supporting individuals and enterprises in transition from road motor vehicles running on fossil fuels to those using electricity and green energy.	х	х			
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop a program for conversion of electricity use and green energy for road motor vehicles. Develop policies to encourage and support people and businesses to convert road motor vehicles using fossil energy to using electricity and green energy. Develop and implement a program to convert all bus stations and rest stops according to green criteria.	х				
Vietnam National Energy Development Strategy to 2020 with an Outlook to 2050	2020	promote the development of electric vehicles in line with the general trend in the world.	х				
Development of logistics plan/policy							
National Logistics Master Plan - VNM	2016	Implement ASEAN & GMS Framework Agreements	Х	Х	Х	Х	
Development of rail plan/ policy							

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Document	Year published	Measure	Road	Rail	Domestic Navigatior	Dome stic Aviation	Urban Transport
Railway network planning for 2021-2030, vision to 2050	2021	Carry out environmental impact assessment of projects during the implementation of the planning; integrate and integrate factors of climate change, sea level rise, efficient use of resources in the implementation of projects; Continue to improve mechanisms and policies to attract investment capital from all economic sectors; improve the mechanism of assignment and lease of the right to operate, transfer for a definite time the right to trade in railway infrastructure assets. Actively develop roadmaps and plans for cooperation with countries with developed railways; cooperate in training human resources to meet the development needs of existing railways and new construction railways. Develop a plan to organize production and transport business in accordance with the organizational model to ensure efficiency; to create a healthy and equal business environment among participants in the transportation business.		х			
Development of road plan/ policy							
Road network planning for 2021-2030, vision to 2050	2021	Carry out environmental impact assessment of projects during the implementation of the planning supervise the implementation of regulations on environmental protection for traffic construction and exploitation projects,	X				
Development of shipping/ maritime/ inland water transport (IWT) plan/ policy							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Develop programs on transition to electricity and green energy for inland waterway vehicles. Develop programs on transition to electricity and green energy or equivalent measures for transition for ships. Develop policies to encourage and support inland waterway port enterprises in transition to green energy.			х		
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop policies to encourage and support people and businesses to convert inland waterway transport using fossil energy to using electricity and green energy. Develop a program to change the use of electricity, green energy or equivalent measures for ships. + Develop policies to encourage and support enterprises to convert ships from using fossil energy to using electricity and green energy. Develop policies to encourage and support inland port enterprises to convert to green energy. Develop and promulgate mechanisms and policies to encourage and support investment, development and transformation of green ports.			х		
Development of transport adaptation/ emergency/ disaster plan/ policy							

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
National plan to adapt to climate change for the period of 2021-2030, with a vision to 2050	2020	Review, formulate and complete strategies, planning, mechanisms and policies in transport sector for promoting the integration of climate change adaptation contents Review, formulate and complete standards, technical regulations and technical instructions for construction of road, railway and waterway transport infrastructure adaptable to climate change	х	х	х	х	
EV charging infrastructure							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Develop charging infrastructures meeting demand of individuals and enterprises. Do planning and construct the system of charging stations, green energy suppliers on the main national highway network, expanding to the nationwide road network; infrastructure of charging stations, green energy suppliers for road motor vehicles at seaports, inland waterway ports, airports, bus stations and railway stations. Do planning and construct the system of electricity- and green energy-based charging infrastructures for vehicles in urban areas	х				х
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop charging infrastructure to meet the needs of people and businesses. Planning and construction: a system of electric charging stations and green energy supply stations on the main national highway network, expanding to the national road network; infrastructure of electric charging stations, green energy supply stations for road motor vehicles at seaports, inland waterways, airports, bus stations and train stations.	x				
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	manufacture next-generation batteries and energy efficient semiconductors	X	х	х	х	
EV manufacturing							
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Promote the production, assembly, import and use of electric motorized road vehicles; expanding the mix, using $100\% \times E5$ for road motor vehicles.	х				
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	Develop industries using clean energy, produce and regulate vehicles running on electricity and hydrogen; manufacture next-generation batteries and energy efficient semiconductors	Х				
Financial instruments to support decarbonisation							
Decision 13/2015/QD-TTg on mechanisms and policies to encourage the development of public passenger transport by bus issued by the Prime Minister	2015	Exemption of registration fee for public passenger transport by bus using clean energy.	х				
Freight rail infrastructure improvement							

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Do me stic Aviation	Urban Transport
National Logistics Master Plan - VNM	2016	Increase rail capacity, time, reliability and service capability Improve cost recovery of freight rail services		Х			7 -
Fuel quality							
Road network planning for 2021-2030, vision to 2050	2021	efficient use of fuel in traffic activities, especially urban traffic, to reduce pollution	х				х
General active mobility							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Develop non-motorized transport infrastructures and vehicle parking points in a manner of reasonable connection with other modes of public passenger transport.	х				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop non -motorized transport infrastructure, vehicle parking points to reasonably connect with other modes of public passenger transport.	х				
General adaptation measures							
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Fundamentally overcome traffic jams and flooding in major urban centres	х	Х	х	х	. x
Road network planning for 2021-2030, vision to 2050	2021	integrate factors of climate change, sea level rise, efficient use of resources in the implementation of projects;	х				
General alternative fuels							
Transport Strategy 2020	2013	Application of clean fuel, renewable energy and other forms of alternative energy in transportation activities.	Х				
General aviation improvements							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Develop the airport system in an appropriate manner, towards uniformity, modernization with priority given to investment in some large airports such as Noi Bai, Tan Son Nhat and Long Thanh airports; gradually upgrade and effectively operate 22 existing airports and invest in 06 new airports. Do planning and construct the system of electricity- and green energy-based charging infrastructures for aircrafts, ground support equipment (GSE) and other equipment in airports.				Х	
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	From 2040, use electricity and green energy for all vehicles operating in airfields (excluding special vehicles to which electricity have not yet used).				Х	

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Do me stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Simultaneously implement all potential measures of the aviation industry to reduce CO2 emissions. Develop a program to convert to using green energy and sustainable fuel for ships. Develop a reasonable airport system in a synchronous and modern direction, with priority given to investing in a number of large airports such as Noi Bai, Tan Son Nhat and Long Thanh airports.; step by step upgrade and effectively exploit 22 existing airports, invest in 06 new airports. To plan and build the infrastructure system to supply electricity and green energy for aircraft, ground vehicles and equipment at the airport.				Х	
National Logistics Master Plan - VNM	2016	Improve airfreight handling facilities at major and second-tier airports Develop air cargo complexes - Modern cargo terminal				х	
Transport Strategy 2020	2013	Focus on and prioritize investment in upgrading, synchronously and modernly Noi Bai and Cat Bi international airports, in which Noi Bai international airport becomes the international gateway port of the North. Ensuring traffic safety and effectively exploiting Dien Bien airport; restore the operation of Gia Lam, Na San and Tho Xuan airports to meet the requirements of socio-economic development. Study on construction of Quang Ninh airport and Lao Cai airport. Focus on investing in synchronous and modern upgrading and efficient exploitation of international airports of Da Nang and Cam Ranh. Continue to upgrade Chu Lai airport into an international cargo transshipment airport of the region. To upgrade Vinh, Phu Bai, Phu Cat, Tuy Hoa, Pleiku, Buon Ma Thuot airports to meet the needs of each period. Research and develop Lien Khuong airport into an international airport. Focus on investing in synchronous and modern upgrading of Tan Son Nhat international airport. Continue to upgrade Ca Mau, Rach Gia and Con Dao airports; ensure the efficient exploitation of Can Tho and Phu Quoc international airports. Research on construction of Vung Tau airport. To encourage public-private partnership to accelerate investment in the construction of a new Long Thanh international airport transshipment port. Aviation industry: strengthen the capacity to repair and maintain aircraft, aircraft engines and specialized equipment, ensuring autonomy in providing aircraft maintenance and repair services for airlines. row domestic airlines, to expand services to foreign airlines;				х	
General capacity building							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Strengthen international cooperation, science and technology, develop human resources and communication Have training, re-training and advanced training in improving existing human resources of the transportation sector who are available for receiving the transfer, managing and operating transport vehicles and infrastructures with new technologies without GHG emissions. + Develop training programs and open new academic majors at universities, colleges and vocational secondary schools in green vehicle technology, energy and infrastructure.	х	х	х	х	

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	capacity and effectiveness of state management and law enforcement on ensuring traffic order and safety are equivalent to that of developed countries. a) Study and develop mechanisms and policies to enhance training of high-quality human resources for the work of ensuring road traffic order and safety; attach importance to training at undergraduate and postgraduate level, including overseas training. b) Strengthen the education, training, retraining works to improve the knowledge, skills and qualifications of human resources from central to local levels; ensure the accessibility and successful application of the achievements of the Fourth Industrial Revolution in the field of traffic safety	х				
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Research to establish necessary business conditions for imported cars	х				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop human resources to meet innovation in the direction of converting electricity use, green energy, reducing greenhouse gas emissions and participating in carbon credit exchange and offset Research, develop, apply and transfer technology for vehicles and equipment using electricity, green energy, green infrastructure, reducing greenhouse gas emissions, providing energy g green quantity; paying special attention to technology and supporting industries for the development of vehicles and transportation equipment using electricity and green energy. Training, retraining and improving the existing human resources of the transport industry ready to receive, transfer, manage, exploit and operate vehicles and transport infrastructure through new technologies that do not emit greenhouse gases. + Develop training programs, open new training courses at universities, colleges and vocational schools in vehicle technology, energy, and green infrastructure.	х	х	х	х	
Master Strategy for Vietnam's Service Sector Development in the 2021-2030 period, with a vision to the year 2050	2021	Focus on developing high-quality human resources for transportation and logistics services to meet domestic and international demands.	х	Х	Х	Х	

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
National Logistics Master Plan - VNM	2016	Support capability for local LSPs Local LSPs promotion policy by service type -SME promotion -Access to fund -Technology adoption Local LSPs internationalization promotion policy Assess research state of logistics industry Develop national logistics training program: Professionalized logistics staff -Skilled labor Good training system- To understand the current skills required by the industry through market surveys, etc To project the skill requirements of the industry in the medium and long term - To formulate the required curriculum in partnership with international logistics training institutions - To enable partnerships between international and local logistics training institutions, to provide the training - To ensure that the training is industry-relevant, with regular consultations, and apprenticeship programs with the private sector Develop skilled logistics workforce Establish standardized logistics skills levels Develop logistics knowledge in the context of Vietnam	X	x	х	х	
Railway network planning for 2021-2030, vision to 2050	2021	Promote research and training of high-quality human resources in railway management, construction and operation through the establishment of specialized training, research and experimental institutions in the railway sector. Cooperation in training, attracting experts in high-speed railway, urban railway, step by step mastering core technologies Priority is given to overseas training in railway majors. Expand international cooperation, especially with countries with developed railways to absorb science, technology and development experience to meet domestic needs, towards expanding markets to other countries in the region. and in the world Strengthen international cooperation to apply science and technology, especially in applying the results of the industrial revolution 4.0 to management of construction investment and operation of the railway transport system.		х			х
Road network planning for 2021-2030, vision to 2050	2021	Developing high-quality human resources; closely associate human resource development with the development and application of science and technology.	Х				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Transport Strategy 2020	2013	Research and restructure the transport industry in order to develop harmoniously and rationally the modes of transport, ensuring socio-economic efficiency, traffic safety and environmental protection, and sustainable development. Expand training and retraining forms; socializing training to improve qualifications and capacity for managers, civil servants, public employees and employees; apply the public recruitment regime through recruitment examination and probationary period Focused investment on improving the capacity and equipment for training institutions, especially in training pilots, officers and crew members to improve the level of human resources. Strengthen coordination and connection between companies using human resources and training and training institutions to ensure that they meet actual needs and effectively use trained human resources Develop and complete standards, regulations, processes, rules, economic and technical norms in the fields of survey, design, construction, acceptance, maintenance in the field of transportation. Encourage the application of new technologies and materials 3.9. Solutions and policies for applying new science and technology - To have a salary policy and preferential regimes for employees in the specific working conditions of the transport industry, especially the maintenance of traffic infrastructure in remote and isolated areas. hard work, dangerous	X	х	х	х	
General data repositories and data collection							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	By 2030, complete the database system of energy use and fuel consumption of aviation enterprises.				X	
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	By 2030, complete the database system on energy use and fuel consumption of aviation enterprises.				х	
National Logistics Master Plan - VNM	2016	Development of Vietnam National Logistics Statistical System (VNLSS)	Х	Х	Х	Х	
Road network planning for 2021-2030, vision to 2050	2021	Complete the database system on the road infrastructure system; research, construction, use of software to support planning investment, maintenance of road traffic works.	Х				
General education and behavior change							

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Formulate policies on encouraging and supporting individuals and enterprises in transition from road motor vehicles running on fossil fuels to those using electricity and green energy. Formulate policies on encouraging and supporting individuals and enterprises in transition from inland waterway vehicles running on fossil fuels to those using electricity and green energy.	x				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Strengthen cooperation with international governments, organizations and businesses to actively participate in the development of common international regulations and standards, receive advanced technology transfer and learn from experience in construction. mechanisms, policies, application of scientific and technical advances, technology and human resource training related to green energy conversion, reduction of greenhouse gas emissions in transportation; research and apply carbon offsetting mechanisms.	х	х	х	х	
Transport Strategy 2020	2013	Improve the effectiveness of propaganda, dissemination and education in combination	Х	Х	х	Х	
General inland waterways (IWT) improvement							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Encourage the investment in building and importing inland waterway vehicles using electricity and green energy and transition to electricity and green energy for inland waterway vehicles using fossil fuels. Continue to encourage the investment in building and importing inland waterway vehicles using electricity and green energy and converting to use electricity and green energy for inland waterway vehicles using fossil fuels. Encourage the investment in new inland waterway ports towards green development. develop the system of inland waterway ports, gradually modernize the main ports and specialized ports.		х	х		
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	to encourage investment in building, importing, and converting inland watercraft using fossil fuels to using electricity and green energy. Study and develop criteria for green ports and green transport routes as a basis for formulating mechanisms and policies to encourage new investment in green inland waterway ports. Pilot application at some inland waterway ports; research and turn some waterways into green transport routes. To develop a program to convert the use of electricity and green energy for inland waterway vessels. Renovating and upgrading main lines to meet train operation 24/24; Strive for the total length of synchronous exploitation routes according to technical levels to reach about 5,000 km; develop the system of inland ports and wharves, step by step modernize the main ports and specialized ports.			х		
National Logistics Master Plan - VNM	2016	Expand inland waterway navigability and cargo carrying capacity at bottleneck sections of both Red River and Mekong River deltas while protecting rivers and estuaries			X		

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Transport Strategy 2020	2013	To correct and upgrade some important river sections; focus on increasing the length of the river sections to be managed and exploited. Completing and putting into technical level, ensuring 24 hour train operation of major waterway routes from Ho Chi Minh City to the southwestern provinces, the Tien and Hau river routes. Construction and upgrading of cargo and passenger inland waterway ports. For the Mekong Delta region, attach importance to the development of waterway transport			Х		
General innovations and digitalization							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Study the application of digital technology, digital transformation, artificial intelligence, intelligent traffic in management and administration of fields in the transportation sector.	Х				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Research and apply digital technology , digital transformation , artificial intelligence, intelligent traffic in management and administration of fields in the transportation industry.	x	х	х	х	
Road network planning for 2021-2030, vision to 2050	2021	Implement human resource training programs in the field of digital transformation , application and development of new technologies, prioritizing digital technology in management, investment in road transport infrastructure and management	х				
General land use							
National Logistics Master Plan - VNM	2016	Establish logistics parks typology Establish land bank for logistics related infrastructure Reserve land for future logistics infrastructure development	х	х	х	х	
General parking measures							
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop non -motorized transport infrastructure, vehicle parking points to reasonably connect with other modes of public passenger transport.	x				x
General rail improvement							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	upgrade 7 existing railway lines		Х			

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	upgrade 7 existing railway lines To renovate and upgrade the infrastructure of existing railway lines and stations, basically meeting the conversion of railway vehicles using electricity and green energy.		х			
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	increase railway goods transport percentage;		х			
Railway network planning for 2021-2030, vision to 2050	2021	To renovate and upgrade to effectively exploit the existing railway lines, smoothly connecting the international intermodal railway; to upgrade and renovate to ensure safe train operation of 07 existing railway lines		Х			
Transport Strategy 2020	2013	Focus on and prioritize upgrading and modernizing the existing North-South railway - To develop the route network mainly according to the model of "axis-nan" with high operating frequency, good transit service at two hubs, Hanoi and Ho Chi Minh City. Completing the upgrading and modernization of the railway section of the existing North-South railway in the region, bringing the existing railway lines into class. Focusing and prioritizing investment in synchronous and modern construction of Lach Huyen international gateway port to receive ships weighing up to 100,000 DWT (8,000 TEU) ensuring 24/24h train operation of important inland waterways To upgrade and modernize in order to improve the efficiency of exploitation of railway sections of the existing North-South railway line. Study and build a number of new railway sections such as Vung Ang - Cha Lo railway (Mu Gia), railway connecting Central Highlands provinces, railways serving mining and aluminum-aluminum production in Central Highlands provinces and connecting the Central Highlands with the seaport To upgrade and modernize in order to improve the efficiency of exploitation of railway sections of the existing North-South railway line Railway industry: focusing on products such as building new passenger cars and modern goods, which are comfortable and diverse in types for domestic use and export. Manufacturing a number of spare parts, components and assembling modern locomotives`		х			
General shipping improvement							
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Encourage the conversion of vehicles and equipment using electricity and green energy or take equivalent measures at new and additional investment ports and existing ports. To change the means and equipment at existing ports, to use marine signaling devices using electricity, green energy or take equivalent measures. To develop a synchronous and modern seaport system with high quality services, giving priority to the development of Lach Huyen and Cai Mep international gateway ports; implementing green port development project.			х		

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Transport Strategy 2020	2013	Shipbuilding industry: focus on products with consumption markets, competitive advantages to meet domestic demand and export products. New shipbuilding focuses on the group of ships with a tonnage of 100,000 DWT or less; ship repair focuses on the group of ships with a tonnage of 150,000 DWT or less.			x		
General transport asset management							
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Concentrate investment in the construction, upgrade and renovation of expresssways, national highways and key local roads according to the approved planning, ensuring high safety conditions for all traffic participants; give priority to the construction of regional links, urban bypass routes, transport connection points; promote the construction of intersections of different levels and toroidal intersections.	х				х
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Develop an urban transport infrastructure and public transport system fitted to the development level; sustain, consolidate, upgrade the existing transport network in order for it to meet the required technical requirements and standards. Give due importance to maintenance work, apply advanced technologies, ensure the effectiveness and sustainability in the exploitation of the existing transport infrastructures.	х				х
Railway network planning for 2021-2030, vision to 2050	2021	Basic maintenance of existing railway lines; to step by step invest, upgrade and modernize to meet the needs of local freight and passenger transportation		х			
Road network planning for 2021-2030, vision to 2050	2021	renovating and upgrading weak bridges on national highways and upgrading a number of key national highways connecting to the main highways.	х				
Transport Strategy 2020	2013	Prioritize investment, complete upgrading and expanding National Highway Completing the upgrading and putting into technical level the remaining national highways, connecting and upgrading the national highways of the Northern ring system.	х				
General transport demand management							
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	to ensure that large construction works that are directly connected to urban roads, national highways and provincial highways are built without causing increased traffic congestion or accidents. Reduce traffic congestion on major highways, major traffic hubs, in the capital of Hanoi, Ho Chi Minh City and big cities, prevent prolonged traffic congestion of over 30 minutes. Develop and complete mechanisms and policies to restructure transport market, increase the market share of large-volume transport modes, reduce dependence on road transport; encourage the development of public passenger transportation on main transport corridors and in urban centers; formulating and promulgating mechanisms, policies and roadmaps to limit the use of personal motor vehicles, especially in big cities; issue and apply a set of criteria for determining traffic congestion on roads	х				х

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Mobilize resources for transport infrastructure development and utilize advanced technologies for controlling and managing the road system Fundamentally overcome traffic jams and flooding in major urban centres. As far as possibleD evelop feeder transport services in areas which are inaccessible to buses	х				Х
Transport Strategy 2020	2013	Organize urban traffic management in a scientific way, using technology and modern equipment such as signals, control stations, camera systems, intelligent transportation system (ITS). To upgrade two traffic control centers in Hanoi and Ho Chi Minh City and invest in similar centers in other urban areas when needed.	х				X
General transport institutional reform							
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	The state management system of traffic safety is improved and operates effectively, stably and sustainably from the central to local levels;	х				
National Logistics Master Plan - VNM	2016	Establish stronger links with other related international and regional professional associations Institutionalized the Vietnam Logistics Forum (VLF)	Х	Х	х	х	
Railway network planning for 2021-2030, vision to 2050	2021	The sections Ngoc Hoi - Yen Vien and Gia Lam - Lac Dao will be converted into urban railways after the eastern ring line is put into operation. Assign the Hanoi People's Committee to assume the prime responsibility for researching and investing in urban railway No. 1 from Yen Vien to Ngoc Hoi.		Х			Х
Transport Strategy 2020	2013	Encourage all economic sectors to participate in transport business and transport support services. To form a number of transport enterprises with State capital to serve routes with great transport demand such as North-South route, passenger transport, etc. urban public guests, transportation serving deep-lying, remote and island areas and other unexpected tasks when necessary. Support for public passenger transport enterprises and transport serving deep-lying, remote and extremely difficult areas with appropriate forms.	х	Х	х	х	х
General vehicle improvements							
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Encourage the production of environmentally friendly vehicles (fuel-saving cars, hybrid cars, vehicles using biofuels, electric vehicles), meeting the requirements of emission standards according to the approved roadmap. approved by the Prime Minister.	х				
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	Enhance implementation of solutions for using energy efficiently, effectively, and promote the transition to clean energy usage in transport	х	Х	х	х	
Transport Strategy 2020	2013	To rationally use traditional means of transport, develop small motorized vehicles suitable to the conditions of rural transport infrastructure and to the living standards of the majority of people.	Х				

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
High-speed rail (HSR)							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	completing high-speed railway lines connecting interregionally, connecting international seaports, and international airports. Construct the North-South high-speed railway line		х			
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	to build a North - South high-speed railway line		х			
Transport Strategy 2020	2013	Continue to study feasible options to have a suitable investment plan for the construction of high-speed railway. To study and build new high-speed railway lines belonging to two corridors and one economic belt between Vietnam and China, routes connecting to seaports and major economic zones.		х			
Intelligent transport systems (ITS)							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Study the application of digital technology, digital transformation, artificial intelligence, intelligent traffic in management and administration of fields in the transportation sector.	х	х	х	х	
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Research and apply digital technology, digital transformation, artificial intelligence, intelligent traffic in management and administration of fields in the transportation industry.	x	х	х	х	
Transport Strategy 2020	2013	Organize urban traffic management in a scientific way, using technology and modern equipment such as signals, control stations, camera systems, intelligent transportation system (ITS).	X				Х
Intermodality measures							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	strengthen the integration of intermodal transport with high-quality logistics	Х	х	х	х	
Master Strategy for Vietnam's Service Sector Development in the 2021-2030 period, with a vision to the year 2050	2021	Proactively exploiting opportunities and limiting undesirable impacts brought about by the Industrial Revolution 4.0, developing transportation services, multimodal transport to meet the requirements of the economy and the needs of the people.	X	х	х	х	
Investment required for specific projects							

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Identify and establish strategic partners, encourage investment in projects large enough to create a market for supporting industries	Х				
Transport Strategy 2020	2013	Focus on investing in the construction in advance of a number of expressway sections on the North-South route with an appropriate time, taking into account the overall efficiency of the exploitation of parallel National Highway 1 sections. Invest in connecting the Ho Chi Minh road and upgrading the section through the Central Highlands. Selecting investment sections in need on coastal roads associated with sea dykes. Investing with focus, focus, avoid spreading; creating a clear change in the allocation of investment capital among sectors so that by 2030, the ratio of reasonable transportation between modes of transport and efficient exploitation of the infrastructure system will be increased. traffic.	х	х	х	х	
Investment volume for transport							
Road network planning for 2021-2030, vision to 2050	2021	To strive for the average rate of land fund for urban road and traffic infrastructure to reach an average of $16-26\%$ compared to the land fund for urban construction .	х				х
Transport Strategy 2020	2013	Increase investment in transport infrastructure with the state budget and government bonds annually to $3.5 \div 4.5\%$ of GDP, in which priority is given to key projects. Issuing construction bonds to invest in the construction of a number of urgent works, solving the overload situation.		х	х	Х	
Involvement of subnational government for transport activities							

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	15. People's Committees of centrally-run provinces and cities a) Chairmen of the People's Committees of provinces and centrally run cities are responsible for implementing the tasks assigned in the Strategy. b) Take the lead in developing action plans to implement the Strategy in accordance with local conditions. c) Invest in building accessible traffic systems for people with disabilities, the elderly in urban areas, and works to ensure traffic safety for vulnerable traffic participants. d) Deploy the re-order of the road safety corridor and prevent re-encroachment; for roads running parallel to the railway through residential areas, it is necessary to build a system of collection roads, restrict connections and promote the elimination of illegal crossroads. d) Build smart traffic control centers in centrally-run provinces and cities, ensuring the ability to collect, process and share data on traffic activity in real time, providing travel guides for traffic participants via online portal. e) Accelerate the development of public passenger transport system, give priority to investment in the development of mass transit, and gradually limit the use of personal motor vehicles; strengthen the inspection of public transport to meet the needs of traffic access for the disabled and the elderly. a) Resolutely eliminate motor vehicles whose validity date has expired, homemade three or four-wheeled vehicles are not allowed to join traffic; attach the responsibility of the head of local government to the implementation. h) Apply technology to supervise and handle the illegal use of the roadway or roadside for business, trading purposes or vehicle parking service, affecting road traffic order and safety. i) Strengthen the management of transportation for students and workers by bus, contract cars. k) Take charge of improving the safety of traffic infrastructure around school areas on the roads from home to school and from school to home for students. l) According to local management responsibilities, direct departments, a	x				X
Decision 13/2015/QD-TTg on mechanisms and policies to encourage the development of public passenger transport by bus issued by the Prime Minister	2015	The People's Committees of the provinces and centrally-run cities, based on their local resources, will support loan interest rates at credit institutions for investment projects on construction of transport infrastructure. public passenger by bus. The People's Committees of the provinces and centrally-run cities, based on local resources, will support interest rates on loans at credit institutions for investment projects in public passenger transport vehicles. bus. The People's Committees of the provinces and centrally-run cities shall, based on their local resources, subsidize prices or support expenses for public passenger transport by bus.	x				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	The People's Committees of the provinces and centrally-run cities: To assume the prime responsibility for developing a public transport system using electricity, green energy, and developing air transport . locally.	Х	Х			

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Do me stic Aviation	Urban Transport
National Logistics Master Plan - VNM	2016	Establish implementation plans of NAP at local level - Eliminate fragmented provincial logistics development policy	х	Х	х	Х	
Railway network planning for 2021-2030, vision to 2050	2021	Coordinate closely and synchronously in the process of implementing the planning between the central and local governments, ensuring that the local plannings must comply with the orientations of the railway network master plan in approving the use plans. land and land fund management for railway infrastructure development; coordinate among ministries and branches to handle inter-sectoral issues, ensure consistency and synchronism (especially urban and industrial planning, etc.) to promote the efficiency of the railway network.		х			х
Road network planning for 2021-2030, vision to 2050	2021	The planning of local roads and traffic shall comply with the plan on development of the transport network in the provincial planning. The urban road system shall be developed in accordance with the urban architecture and spatial development planning, ensuring the consistency, synchronism, and connection with the regional and national transport networks. Develop a mechanism to strengthen decentralization in investment and management of the transport infrastructure system in the direction of assigning localities to be the competent agencies and decide on infrastructure investment.	х				х
Transport Strategy 2020	2013	Completing the legal system, consolidating the traffic safety management organization from the central to local levels towards ensuring traffic order and safety in a sustainable manner - Develop a mechanism for assignment and decentralization between the central and local levels, and between relevant ministries and branches in order to create a close, unified and synchronous coordination from the planning stage to organizing the implementation of regulations. planning, planning management, investment implementation to management and exploitation of the transportation system.	х	Х	х	х	
Jet fuel policies							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Develop programs on transition to green energy and sustainable fuels for aircrafts. Formulate policies on encouraging and supporting enterprises in converting from aircrafts running on fossil fuels to those using green energy and sustainable fuels. prescribe energy efficiency for rolling stocks, inland waterway vehicles and ships and aircrafts operating domestically.				Х	
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	From 2027 research to use alternative fuels to supplement part of aviation fuel.				х	
Local production, services, contracting etc.							

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Transport Strategy 2020	2013	Encourage the use of locally assembled vehicles for public passenger transport	X		<u> </u>		
Logistics hub							
Master Strategy for Vietnam's Service Sector Development in the 2021-2030 period, with a vision to the year 2050	2021	Establishing a network of multi-level distribution centers (inland ports, warehouses, cargo yards) and freight collection and collection routes in major cities and key economic regions.	Х	X	х	Х	х
National Logistics Master Plan - VNM	2016	. Logistics Hub development policy Attract direct and transit freight from neighboring countries	Х	Х	Х	Х	
Railway network planning for 2021-2030, vision to 2050	2021	build a cargo terminal in Kim Lien area to connect with Lien Chieu port. Khanh Hoa area: maintain Nha Trang passenger station, build a new cargo station in Vinh Trung commune, Nha Trang city to replace the current cargo station (Nha Trang station).		х			х
Transport Strategy 2020	2013	Strongly develop multimodal transport and logistics services in freight transport.	Х	Х	Х	Х	
National speed law							
Global Status Report on Road Safety 2018	2018	Yes	Х				
Number of vehicle registration limit							
Transport Strategy 2020	2013	Control the development of motorbikes and personal cars, especially in Hanoi and Ho Chi Minh City.	Х				X
Port electrification							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Research and develop criteria for green ports and green transport routes as a basis for formulating mechanisms and policies to encourage investment in new and green inland waterway ports. Make pilot application in some inland waterway ports; research and convert some waterway transport routes to green transport routes. Encourage transition to vehicles and equipment using electricity and green energy or have equivalent measures for transition in existing ports, new and additionally invested ports. Do planning and construct the system of electricity- and green energy-based charging infrastructures for vehicles and equipment in inland waterway ports. Develop and issue mechanisms and policies to encourage and support in development investment and transition to green ports.			х		

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Encourage the conversion of vehicles and equipment using electricity and green energy or take equivalent measures at new and additional investment ports and existing ports. Invest in means and equipment using electricity and green energy or take equivalent measures in new and additional investment ports. Develop and promulgate regulations and criteria for green inland waterway ports; deploy and apply the green port model. + To plan and build an infrastructure system to supply electricity and green energy for vehicles and equipment at inland waterway ports. Formulate and promulgate regulations and criteria for green ports; deploying the application of green port criteria at Vietnam's seaports.			х		
Port infrastructure improvements							
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Encourage the conversion of vehicles and equipment using electricity and green energy or take equivalent measures at new and additional investment ports and existing ports			х		
National Logistics Master Plan - VNM	2016	Address supply-demand mismatches in maritime port terminal handling capacity Increase port capacity & capability at Hai Phong; improve capacity utilization at HCMC/Cai Mep-Thi Va Increase river port capacity & capability Support local barges operators Better balance supply and demand of port handling and related services across the Cai Mep-Thi Vai and greater HCMC region			х		
Transport Strategy 2020	2013	Upgrading and building a number of key ports and cargo terminals such as Ninh Phuc, Da Phuc, Viet Tri, Hoa Binh, and Phu Dong container port. To upgrade and build a number of key ports and passenger terminals in Hanoi, Hai Phong and Quang Ninh. Focus on and prioritize investment in synchronous and modern construction of Cai Mep-Thi Vai international gateway port to receive ships with a tonnage of over 100,000 DWT (8,000TEU). Building a new channel to the Hau River through Quan Chanh Bo canal for ships of 10,000 DWT with full load (ships of 20,000 DWT with reduced load) in association with the expansion and upgrading of Can Tho - Cai Cui port cluster into a focal port cluster in the region. Southwest region.			х		
Transport Strategy 2020	2013	continue to develop seaports, container terminals and specialized ports; to build passenger ports in Hai Phong and Quang Ninh areas. Continue to build, upgrade and expand ports: Nghi Son, Cua Lo, Vung Ang, Da Nang, Dung Quat, Quy Nhon to meet the demand from time to time. To build specialized ports for thermal power plants and alumina export. Selection and construction of international passenger terminals in Hue, Da Nang and Nha Trang areas. Continue to invest in developing the remaining ports and wharves in 3 port clusters: Vung Tau, Dong Nai and Ho Chi Minh City.			х		

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Public transit integration							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Develop non-motorized transport infrastructures and vehicle parking points in a manner of reasonable connection with other modes of public passenger transport.	х				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop non -motorized transport infrastructure, vehicle parking points to reasonably connect with other modes of public passenger transport.	х	х			
Rail infrastructure expansion							
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Invest in building new railway lines in the direction of electrification. give priority to construction of a number of railway lines connecting international gateway seaports, especially Hai Phong and Ba Ria - Vung Tau areas; connecting Ho Chi Minh City with Can Tho;' Accelerate the investment and put into operation urban railway lines according to the approved planning.		х			х
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	continue to invest in completing new railway lines in Hanoi focal area , Ho Chi Minh City focal area , railway connecting seaports, industrial parks, economic zones, connecting provinces Highlands.		х			х
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	increase transport efficiency via building and expanding road network and North-South railway network.		Х			
National Logistics Master Plan - VNM	2016	expand rail capacity		Х			
Railway network planning for 2021-2030, vision to 2050	2021	complete the investment preparation, arrange resources to start a number of new railway lines, in which priority is given to the North-South high-speed railway, routes connecting international gateway seaports, international airports, and international airports. economic, railway hub in big cities, study to deploy Ho Chi Minh City - Can Tho railway line, To step by step build regional and inter-regional railway lines suitable to the needs of each period		х			х
Transport Strategy 2020	2013	Research and invest in a new railway line of 1,435m gauge connecting Ho Chi Minh City with Vung Tau and Ho Chi Minh City with Can Tho; study and build Di An Loc Ninh railway to connect with Trans-Asian railway Speeding up the implementation of a number of urban railway projects and suburban railway projects in Hanoi and Ho Chi Minh City		х			х

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Document Railway electrification	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Bit by bit, make investment in new railway vehicles using electricity and green energy and transition from railway vehicles using fossil fuels to vehicles using electricity and green energy. Improve and upgrade existing railway infrastructures to meet the complete transition to equipment using electricity and green energy. Continue to invest in constructing new railway lines towards electrification and using green energy. Railway vehicles: execute programs on transitioning rolling stocks which have engines running on fossil fuels to those powered by electricity and green energy. Renovate and upgrade existing railway line and station infrastructure, basically meeting the transition to railway vehicles running on electricity and green energy. arry out pilot construction of some new railway sections meeting the transition to railway vehicles using electricity and green energy coming to investment in construction and development of all new railway lines towards electrification, fully meeting the use of electricity and green energy for the railway vehicles.		х			
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Pilot study on the use of electric and green energy railway vehicles on existing railway lines. Develop a plan and invest in a roadmap to replace old road vehicles with expired ones with vehicles that can be converted to electricity and green energy. Encourage the conversion of loading and unloading equipment at stations to equipment using electricity and green energy. To renovate and upgrade the infrastructure of existing railway lines to fully meet the conversion to electric vehicles and green energy. Continue to invest in building new railway lines in the direction of electrification, using green energy. Railway means of transport: Implement the program to convert locomotives and motor wagons using fossil energy to using electricity and green energy. Piloting the construction of a number of new railway sections to meet the conversion of railway vehicles using electricity and green energy, towards investment in the construction and development of all new railways according to regulations. the direction of electrification to meet the needs of vehicles using electricity and green energy. + Develop regulations and criteria for green stations and implement the program to convert the entire station according to green criteria		х			
Reference to finance mechanisms within country							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Formulate and promulgate mechanisms and policies to encourage, support and enable enterprises to improve their financial and technical capacity for investment in infrastructure, vehicles, equipment and human resource development to meet the innovation towards transition to electricity and green energy, GHG emissions reduction and participation in carbon credit exchanging and offsetting mechanisms.	Х	х	х	х	

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Domestic Aviation	Urban Transport
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Review and adjust the policy of long-term lending capital for development investment credit of the State with appropriate interest rates from time to time for projects producing auto components and spare parts. Completing synchronously related mechanisms and policies to achieve the development goals of the automobile industry, especially for investment projects on production of environmentally friendly vehicles.	х				
National Logistics Master Plan - VNM	2016	Review logistics related activities charges: Align with MoF 2011 tax improvement strategy	Х	Х	Х	Х	
Railway network planning for 2021-2030, vision to 2050	2021	During the implementation process, depending on transport needs, investment resource capacity and connectivity, the investment policy decision-making authority decides the investment divergence to ensure project efficiency. Formulate and publicize the rental price bracket for transportation management on the national railway Building a system of freight rates, charges and fees as a macro-regulatory tool, orienting for the rational development of railway transport.		х			
Transport Strategy 2020	2013	Amending and supplementing regulations on financial support policies, taxes, prices, fees, charges, and franchising to increase the commerciality of traffic projects and the responsibility of users to contribute, to ensure profits. satisfactory interests of investors. Quickly deploy the Road Maintenance Fund. To study the formation of an investment fund for the development of transport infrastructure. Develop a system of rates, charges and fees for the State to act as a regulatory tool 3.5. Solutions and policies on ensuring traffic safety - Quickly implementing the National Strategy to ensure order road traffic safety to 2020, vision to 2030. macro details, orientation for the rational development of modes of transport.	Х	х	х	х	
Reporting, transparency, feedback mechanism							
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Develop a system of reporting and analyzing traffic order and safety at the national and provincial levels During the implementation of the Strategy, the National Traffic Safety Committee and related ministries and agencies regularly review and update arising contents to organize the effective implementation of this Strategy; promptly propose amendments and supplements to suit practical requirements.	х				
Request for financial support to develop transport							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Mobilize various financial support sources from environmental funds across the world, ODA and concessional loans from foreign donors, foreign aids from non-governmental organizations (NGOs), international commercial banks, foreign direct investment (FDI), etc. according to the provisions of law, ensuring the nation's public debt and foreign debt at a safe level.	х	х	х	х	

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Reviewing and amending regulations to create favorable conditions to attract investment capital from all economic sectors in various forms of domestic and foreign investment, ensuring sufficient funding for security, traffic order and safety work to realize the objectives of this Strategy.	Х				
Decision 13/2015/QD-TTg on mechanisms and policies to encourage the development of public passenger transport by bus issued by the Prime Minister	2015	Prioritize access to concessional loans: official development aid (ODA) loans, concessional credit capital for investment in infrastructure for public passenger bus transport.	х				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Mobilize diverse financial support sources from environmental funds around the world, ODA and foreign concessional loans, foreign non-governmental aid, international commercial banks economy and foreign direct investment in accordance with the law, ensuring the safety of the nation's public debt and foreign debt.	x	х	Х	х	
One Strategic Plan 2017-2021	2017	The participating UN system agencies will provide support to the development and implementation of activities within the One Strategic Plan 2017-2021. These activities may include technical support, cash assistance, supplies, commodities and equipment, procurement services, transport, and funds for advocacy, research and studies, consultancies, programme development, monitoring and evaluation, training activities and staff support	х	х	х	х	
Railway network planning for 2021-2030, vision to 2050	2021	Continue to attract and effectively use ODA and concessional loans from international donors; using investment capital with focus, focus on railway projects with pervasive nature.		Х			
Transport Strategy 2020	2013	To encourage foreign investors to invest in the development of Van Phong international transshipment port Maximize all resources, continue to improve mechanisms and policies to attract investment capital from all economic sectors, including foreign investors participating in investment and development of transport infrastructure. communication in many forms such as BOT, BT, BTO, PPP To strongly attract and effectively use ODA capital. Promote mobilization of donors to continue providing ODA for the development of transport infrastructure, especially large, pervasive projects, creating great breakthroughs. It is necessary to carefully calculate and take appropriate steps to effectively promote the PPP model between foreign-invested enterprises and ODA funding from countries and international organizations.	х	х	х	x	
Resilient transport technologies							
Railway network planning for 2021-2030, vision to 2050	2021	supervise the implementation of regulations on environmental protection for traffic construction and exploitation projects, giving priority to the application of new environmentally friendly technologies to minimize negative impacts on the environment	х				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Road charging and tolls							
Road network planning for 2021-2030, vision to 2050	2021	Strengthen the application of information technology to the management, operation, exploitation and collection of electronic tolls nationwide.	х				
Road-side checks on overloading							
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Improve transport capacities and ensure smooth, safe communications	х				
Ship efficiency improvements							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	prescribe energy efficiency for rolling stocks, inland waterway vehicles and ships and aircrafts operating domestically.			х		
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	2022-2030: Encourage Vietnamese ships operating inland to fully comply with the provisions of Annex VI of the MARPOL Convention on energy efficiency and the Strategy to reduce greenhouse gas emissions from ships of the International Maritime Organization. economy (IMO) from 2025. 2031-2050: Vietnamese ships operating inland fully comply with the provisions of Annex VI of the MARPOL Convention on energy efficiency and IMO's strategy to reduce greenhouse gas emissions from ships.			х		
Speed limit on motorways <= 90 kph							
Global Status Report on Road Safety 2018	2018	120 km/h	Х				
Speed limit on rural roads <= 70 kph							
Global Status Report on Road Safety 2018	2018	90 km/h	Х				
Speed limits on urban roads <= 30 kph							
Global Status Report on Road Safety 2018	2018	60 km/h	Х				Х
Stakeholder Involvement							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Develop communication plans and communicate with individuals and enterprises about roadmap, policies and benefits of transition to transport vehicles and equipment powered by electricity and green energy	Х				

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Develop a communication plan and organize communication to people and businesses about the roadmap, policies , and benefits of converting vehicles and transportation equipment using electricity and energy. green quantity.	х				
Railway network planning for 2021-2030, vision to 2050	2021	Organize public announcement of railway network planning to create consensus, high consensus among political organizations, businesses, investors and people when implementing Promote the role of people, businesses, sociopolitical organizations and communities in monitoring the implementation of the plan.		Х			
Road network planning for 2021-2030, vision to 2050	2021	Organize the public announcement of road network planning in various forms, creating high consensus among political organizations, businesses, investors and people when implementing	х				
Technical standards for general transport infrastructure							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Encourage Vietnamese ships which are operating inland to fully comply with the regulations of Annex VI of the MARPOL Convention aimed at effectively using energy and the Strategy to mitigate GHG emissions from ships of IMO. Study, develop, revise and complete the technical regulation system, guidelines, norms, etc. related to manufacture, construction, transition, conversion, import, management, operation, etc. of transport vehicles and equipment having high energy efficiency and using electricity and green energy. Formulate regulations on and criteria for green stations and organize execution of the programs on transition to green bus stations. Formulate and promulgate regulations on and criteria for green inland waterway ports; apply green port model. Develop the system of seaports in a manner of uniformity, modernization, high-quality services and priority over development of Lach Huyen and Cai Mep international terminals; implement projects for green development. Formulate and promulgate regulations on and criteria for green ports; apply criteria for green port in seaports of Vietnam.	х		x		

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XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Researching, building, amending and perfecting the system of standards, technical guidelines, norms related to production, renewal, conversion, conversion, importation, management management, operation and exploitation of transport means and equipment with high energy efficiency, using electricity and green energy. Develop regulations and criteria for green bus stations and green rest stops; develop policies to encourage the conversion of bus stations and rest stops according to green criteria. Develop regulations and criteria for green stations and implement the program to convert the entire station according to green criteria Develop regulations and criteria for airports and green aerodromes; develop and implement a program to transform airports and green airports Strengthen cooperation with international governments, organizations and businesses to actively participate in the development of common international regulations and standards, receive advanced technology transfer and learn from experience in construction. mechanisms, policies, application of scientific and technical advances, technology and human resource training related to green energy conversion, reduction of greenhouse gas emissions in transportation; research and apply carbon offsetting mechanisms.	х	x	х	х	
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Develop an urban transport infrastructure and public transport system fitted to the development level; sustain, consolidate, upgrade the existing transport network in order for it to meet the required technical requirements and standards. Guide, inspect, oversee the implementation of codes, standards on transport access; ensure that all public transport works, projects comply with codes, standards on access for people with disabilities.	х	х			х
National standard TCVN 9054:2011 (ISO 8715:2001) on Electric road vehicles - Road performance characteristics	2011	National standard on Electric road vehicles - Road performance characteristics	х				
Technical standards for rail infrastructure							
Railway network planning for 2021-2030, vision to 2050	2021	Railway means of transport must have technical and quality standards associated with requirements for environmental protection. standardize industrial products according to Vietnamese standards and international railway organizations. Reducing railway traffic activities that pollute the environment.		Х			
Technical standards for road infrastructure							
Road network planning for 2021-2030, vision to 2050	2021	Develop and complete standards, regulations, unit prices and norms in the fields of survey, design, construction, acceptance, maintenance, materials in accordance with international standards and practical conditions. specific to Vietnam.	х				

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Transport Strategy 2020	2013	Maintain, strengthen and upgrade the existing traffic network in accordance with technical standards of rural roads, meeting the requirements of industrialization and modernization of agriculture and rural areas. The rate of hard pavement, asphalt or cement concrete is 100% for district roads, 70% for commune roads and 50% for village and hamlet roads. Complete and pave new roads to the centers of communes, commune clusters without roads, agricultural, forestry farms and industrial sites. Gradually build a system of underpasses and overpasses at intersections between highways, national highways and local roads, ensuring traffic safety. Research on the use of site materials, select pavement structures suitable to the conditions and climates of each region, focusing on the use of cement in the construction and upgrading of rural roads. Vietnam's road and railway system is synchronous in terms of technical standards, conveniently connected to the ASEAN road system, the Greater Mekong Sub-region and the Trans-Asian railway.	х				
Technologies on transport asset management							
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Give due importance to maintenance work, apply advanced technologies, ensure the effectiveness and sustainability in the exploitation of the existing transport infrastructures.	х	Х	х	х	
Railway network planning for 2021-2030, vision to 2050	2021	Basic maintenance of existing railway lines; to step by step invest, upgrade and modernize to meet the needs of local freight and passenger transportation		х			
Road network planning for 2021-2030, vision to 2050	2021	giving priority to the application of new environmentally friendly technologies to minimize negative impacts on the environment.	Х				
Technology and knowledge transfer							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Strengthen international cooperation, science and technology, develop human resources and communication Strengthen the cooperation with international governments, organizations and enterprises in proactively participating in formulating overall international regulations and standards, receiving the transfer of advanced technology and studying experience in developing mechanisms and policies, applying scientific and technical advances, using technology and training human resources related to transition to green energy, GHG emissions reduction in transportation; research and apply carbon offsetting mechanisms. Study, develop, apply and transfer technology for vehicles and equipment running on electricity and green energy, green infrastructures, GHG emissions reduction and green energy supply; especially focus on technology and industry supporting the development of transport vehicles and equipment using electricity and green energy.	х	х	x	x	

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Basically complete the implementation and application of the achievements of the Fourth Industrial Revolution in the field of traffic safety, especially in public service management, transport operations, self-driving vehicles, smart traffic, violation monitoring and handling; apply artificial intelligence and big data in traffic organization and administration to reduce traffic congestion in urban areas. The road system from central to local level is built in a modern and synchronous fashion, and fully installed with traffic safety facilities and equipment, meeting the criteria of friendly routes for every traffic participant; All potential traffic accident points on the road system are promptly cleared. Work stations serving emergency rescue, accident rescue and medical emergency in traffic accidents are modernised and use less time to access victims Apply new scientific and technological achievements to build, connect and perfect the national database system on traffic safety; invest in upgrading the traffic safety data analysis center Apply modern technology in traffic accident statistics, building road traffic accident database on the basis of integrating traffic accident reporting data at the scene, accident, injury data of emergency facilities and treatment of traffic accident victims; complete the road traffic accident database system at the central, provincial and district levels nationwide Upgrade the database of cruise surveillance equipment and surveillance cameras on commercial transport cars, ensuring connectivity and common use for authorities in inspection and patrol, control and violation handling increase investment in building automatic traffic monitoring systems at road intersections with railways a) Application of modern technology in inspection, check, patrol, control and handling violation; in which, focus on investment in building camera systems applying automatic technology to identify and detect violations on the expressway system, in urban areas and along key highways. b) Enhanc	X				x
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Focus on investing in improvement and upgrading of technology to improve product quality to ensure conformity with international standards.	Х				

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XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Strengthen cooperation with international governments, organizations and businesses to actively participate in the development of common international regulations and standards, receive advanced technology transfer and learn from experience in construction. mechanisms, policies, application of scientific and technical advances, technology and human resource training related to green energy conversion, reduction of greenhouse gas emissions in transportation; research and apply carbon offsetting mechanisms . Research and apply digital technology , digital transformation , artificial intelligence, intelligent traffic in management and administration of fields in the transportation industry. Training , retraining and improving the existing human resources of the transport industry ready to receive , transfer, manage, exploit and operate vehicles and transport infrastructure through new technologies that do not emit greenhouse gases. + Develop training programs, open new training courses at universities, colleges and vocational schools in vehicle technology , energy, and green infrastructure. Strengthen cooperation with international governments, organizations and businesses to actively participate in the development of common international regulations and standards, receive advanced technology transfer and learn from experience in construction. mechanisms, policies, application of scientific and technical advances, technology and human resource training related to green energy conversion, reduction of greenhouse gas emissions in transportation; research and apply carbon offsetting mechanisms .	х	X	Х	X	
Master Strategy for Vietnam's Service Sector Development in the 2021-2030 period, with a vision to the year 2050	2021	Promote the restructuring of service industries based on modern technology, applying the achievements of the Industrial Revolution 4.0, especially in service areas such as transportation upgrading and modernization of important infrastructures such as traffic, airports, seaports and telecommunications.	х	Х	х	Х	
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Mobilize resources for transport infrastructure development and utilize advanced technologies for controlling and managing the road system	х	Х	х	х	
National Logistics Master Plan - VNM	2016	Improve service quality of local LSPs Increase competitiveness of local LSPs by service type through: - Devising guidelines to facilitate technology and knowledge transfer to local logistics firms Raise knowledge level of logistics	Х	х	х	х	
Railway network planning for 2021-2030, vision to 2050	2021	Promote technology application, efficient use of energy, use of clean fuels, electric energy, renewable energy and other forms of alternative energy in railway transport activities. Researching policies to encourage the application of new scientific and technological achievements, new and modern materials in research, training, construction investment, exploitation and maintenance of infrastructure, industry and services. railway service.		х			

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Road network planning for 2021-2030, vision to 2050	2021	To complete the road network throughout the country in a synchronous and modern manner, Research and apply advanced science, technology, and new materials in the management, construction and maintenance of works and in the field of transportation in accordance with natural geo-conditions, responding to changes in climate negative about the environment according to the characteristics of each region in the country. Strengthen linkages and cooperation with countries in the region and countries with developed roads to transfer construction management and investment technologies. Expand training links with organizations and countries with developed road systems; domestic and foreign training in new technologies and materials; combine on-the-job training and training at schools and institutes; combine training of enterprises and educational institutions. Increase in new logistics technology adoption	х				
Transport Strategy 2020	2013	Strengthen the application of technologies and means of efficient energy use Modernize means of transport, loading and unloading equipment; applying advanced transport technologies, especially multimodal transport and logistics services. Applying information technology to the management, operation and exploitation of the transportation system Implement the new air traffic information, navigation, monitoring and management system in line with the transformation plan and roadmap in the Asia-Pacific region with a straightforward approach to high technology, using satellite and digital	х	х	х	х	
Traffic management							
Transport Strategy 2020	2013	Organize urban traffic management in a scientific way,	Х				X
Training of enforcement authorities							
Transport Strategy 2020	2013	strengthening the enforcement of the law on traffic order and safety;	X				
Transit-oriented development (TOD)							
Railway network planning for 2021-2030, vision to 2050	2021	planning the appropriate land fund in the station area for the development of urban centers and functional areas (model of traffic-oriented urban development - TOD)		x			x
Transport asset condition assessment							
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	Give due importance to maintenance work, apply advanced technologies, ensure the effectiveness and sustainability in the exploitation of the existing transport infrastructures.	Х	Х	х	х	
Transport infrastructure resilience							
National plan to adapt to climate change for the period of 2021-2030, with a vision to 2050	2020	Upgrade, improve and construct road and waterway transport infrastructure in areas that are threatened by flood, inundation, sea level rise, especially Mekong Delta Page 78	Х		х		

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Railway network planning for 2021-2030, vision to 2050	2021	Carry out environmental impact assessment of projects during the implementation of the planning; integrate and integrate factors of climate change, sea level rise, efficient use of resources in the implementation of projects;		х			
Transport law							
Approving the Action Program for Transition to Green Energy and Mitigation of Carbon Dioxide and Methane Emissions from Transportation	2022	Study and amend the legislative document system, starting with specialized laws including contents, regulations and international commitments related to the transition to green energy and GHG emissions reduction; amend and complete regulations on conditions for participating in traffic, requirements for business, service life and registration to gradually reduce the quantity and progress towards complete elimination of transport vehicles and equipment using fossil fuels.	х	Х	Х	х	
Approving the National Strategy for ensuring road traffic order and safety for the period 2021-2030 and a vision to 2045	2020	Regularly review, amend and supplement legal provisions to promptly apply and develop the achievements of the Fourth Industrial Revolution in the field of ensuring road traffic order and safety; focus on the following areas: self-driving vehicles; internet of things in transportation and transport services; digitizing management work; new smart transportation system uses artificial intelligence; apply big database in traffic organization. Study and complete legal provisions on motor vehicle owners' civil liability insurance in accordance with international practice. Adjust the classification of driving licenses for road motor vehicles in accordance with the 1968 Vienna Convention on road traffic and vehicle characteristics in Vietnam; train and grant driving licenses to motorbikes with a cylinder capacity of less than 50cm3 or electric motorbikes with an engine capacity of less than 4kW. harmonize the process, method and content of training, testing, and granting motor vehicle driving licenses equivalent to those of developed countries in the world. Strengthen inspection and handling of violations regarding planning and construction on road traffic safety corridors	х				
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Improve the legal system complete and supplement minimum technical standards for domestically produced cars to protect consumers' interests, in accordance with the law. with international practices.	x				
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Research, amend and supplement the system of legal documents, first of all, specialized laws, which integrate contents, regulations and international commitments related to energy conversion, green, reduce greenhouse gas emissions; supplement, amend and complete regulations on traffic conditions, business conditions, shelf life, registration, and registration to gradually reduce the quantity and move towards elimination completely vehicles, transportation equipment using fossil fuels.	х	Х	Х	Х	

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Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
NATIONAL ACTION PLAN FOR THE IMPLEMENTATION OF THE 2030 SUSTAINABLE DEVELOPMENT AGENDA	2017	implement policies on the exemption, reduction of public transport fares and service fees for people with disabilities and children as provided for by law	х	Х			
National Logistics Master Plan - VNM	2016	Develop enabling legal environment for logistics Replace Decree No. 140/2007/ND-CP: Need to have new Law related to logistics services Need to update 2005 Commercial Law to reflect updated logistics practices Review policies and all legal documents related to logistics in other legislation - Formulating standard Service Level Agreement templates, between manufacturers and logistics companies, that could be used as a starting point by manufacturers to customize further - Reviewing minimum entry requirements for logistics companies and the regulatory/incentive environment Establish national standard for logistics service quality (LSQ)	х	Х	х	х	
Railway network planning for 2021-2030, vision to 2050	2021	Review, amend and supplement legal documents, systems of standards, technical regulations, normative processes, norms to create a favorable legal framework for investment activities., management, exploitation and maintenance of railway infrastructure, in which priority is given to perfecting policies and laws related to investment, operation and exploitation of high-speed railways and urban railways. Strengthen the inspection and supervision of the management and implementation of the planning to ensure that the planning is implemented in accordance with regulations. Strictly handle cases of violations of the law on planning.		х			х
Transport Strategy 2020	2013	Completing the legal system, consolidating the traffic safety management organization from the central to local levels towards ensuring traffic order and safety in a sustainable manner	Х				
Urban passenger rail infrastructure improvement							
Decision 876/QD-TTg in 2022 approving the Action Program on green energy transformation, reducing carbon and methane emissions of the transport sector issued by the Prime Minister	2022	Accelerate the investment and put into operation urban railway lines according to the approved planning; to expand and develop infrastructure in service of public transport.		х			х
Decision 896 QD TTg 2022 Approving the National Strategy-for Climate Change until 2050	2022	implement the metro system in major urban areas.		Х			х
Railway network planning for 2021-2030, vision to 2050	2021	The sections Ngoc Hoi - Yen Vien and Gia Lam - Lac Dao will be converted into urban railways after the eastern ring line is put into operation		Х			х
Transport Strategy 2020	2013	For big cities, strongly develop the bus system, quickly invest in the construction of mass transit routes such as elevated railways and subways to achieve the rate of public passenger transport . plus $25 \div 30\%$.		Х			х
Vehicle import inspections							

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Circular 29/2011/TT-BGTVT amending the Regulations on inspection of quality, technical safety and environmental protection for imported motorcycles and mopeds and imported engines used for the production and assembly of motorcycles and mopeds, enclosed wi	2011	"first. For car a. The registration for quality inspection of imported vehicles (hereinafter referred to as the inspection registration form) made according to the form in Appendix IV to this Regulation; b. A photocopy of the import declaration, certified by the importing establishment; a copy of the commercial invoice or equivalent documents related to the value of the goods, certified by the importing establishment; c. The document introduces the manufacturer's technical features for imported vehicles, which show the following main parameters: Dimensions, weight, number of people allowed to carry, maximum speed, transmission type, tire designation and basic engine specifications: Maximum torque, maximum power corresponding to engine rotation speed, cylinder diameter, piston stroke, cylinder capacity, type of fuel used, type of clutch; Documents related to emissions according to current regulations; d. Declaration of specifications and technical features of the vehicle (applicable only in case the document introducing technical features does not contain the contents specified at point c of this clause) according to the form in Appendix V attached to this Regulation."	х				
Road Safety Opportunities and Challenges: Low- and Middle-Income Country Profiles	2020	Yes	х				
Vehicle labelling							

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Document	Year published	Measure	Road	Rail	Domestic Navigation	Dome stic Aviation	Urban Transport
Circular 48/2022/TT-BGTVT guiding the energy labeling for electric and hybrid electric cars, motorcycles and motorcycles issued by the Minister of Transport	2022	1. The main information and specifications of the vehicle provided by SXLR, NK establishments are as follows: a) For pure electric passenger cars: according to Appendix IV issued together with this Circular; b) For plug-in hybrid electric cars: according to Appendix C TCVN 7792:2015. 2. Test method a) For pure electric cars The measurement of power consumption is carried out according to the method and test cycle according to the instructions in Appendix E TCVN 7792:2015. b) For plug-in hybrid electric cars The measurement of fuel consumption and power consumption is carried out according to the method and test cycle specified in Appendix F TCVN 7792:2015. The results of fuel consumption of OVC - HEV vehicles are calculated according to Appendix I issued together with this Circular. The value of the distance using electricity used in calculating the results of fuel consumption, power consumption is taken according to the documents provided by the manufacturer or measured according to the process specified in Appendix G TCVN 7792:2015. The measurement of the vehicle's energy consumption is carried out independently or in conjunction with the emissions test. In case it can be combined with the emission beat, the value of fuel consumption is calculated according to point D.1.4.3 Appendix D TCVN 7792:2015 by carbon balance method using CO2 emission results . measured and other related carbon emissions (CO and HC). c) Manufacturers, importers are allowed to apply test methods according to the European Commission (EC)/United Nations Economic Commission for Europe (ECE) or the United States Environmental Protection Agency (EPA) instead of test method mentioned in TCVN 7792:2015 to measure energy consumption for the above vehicles. 3. Unit of measure and rounding of energy consumption measurement results a) The unit of measurement of fuel consumption is: liters (I)/100 kilometers (km) for gasoline, LPG, ethanol (E85) and diesel; cubic meter (m 3) /100 kilometers (km) for natural gas fuels NG/biomethane and H 2 NG; kilo	x				

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Vehicle manufacturing							
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Forming a number of centralized automobile industry centers/clusters on the basis of organizing and rearranging production. Promoting cooperation - linking between automobile manufacturing and assembling enterprises, supporting industry enterprises, research and development institutions and training institutions of all economic sectors to improve investment efficiency and enhance the ability to specialize . a) For trucks and passenger cars with 10 seats or more Focus on developing multi-purpose mini-trucks for agricultural and rural production and mediumand short-range passenger cars running inter-provinces, districts, inner cities, etc., suitable to terrain and lowland conditions. domestic traffic floor with reasonable price, safe and convenient. b) For passenger vehicles with up to 9 seats Focusing on personal cars of small size, low energy consumption, suitable for traffic infrastructure and people's income. c) For specialized vehicles Selection of production and assembly of several types of vehicles with great demand (beton trucks, xitec trucks, security and defense vehicles); encourage the production of multifunctional small agricultural vehicles (combining freight transport with one or more features such as tillage, water pumping, power generation, pesticide spraying) to meet the needs of local people in the region. rural and mountainous areas, d) For supporting industries Approach and apply technology to manufacture important details and components such as transmission, gearbox, engine, bodywork, etc. for a few types of vehicles; strengthen cooperation with major automobile manufacturers to select the types of spare parts and components that Vietnam can produce to take on the role of a link in the global production - supply chain, on that basis to invest Advanced technology, production for export.	x				
Implementation of NDC for Transport in Viet Nam	2021	Limiting fuel consumption for new manufactured, assembled and imported motor vehicles	х				
Transport Strategy 2020	2013	Construction auto and motorcycle industry: focusing on assembling and manufacturing passenger cars, buses, heavy trucks, agricultural utility trucks and some types of construction motorcycles to meet domestic demand and have export products.	х				
Vehicle restrictions (import, age, access, sale, taxation)							

XIV. Transport and Climate Policy Measures

Document	Year published	Measure	Road	Rail	Dome stic Navigation	Dome stic Aviation	Urban Transport
Circular 05/2020/TT-BGTVT amending Circular 03/2018/TT-BGTVT stipulating quality inspection of technical safety and environmental protection for imported cars (and motorcycles) subject to Decree 116/2017/ND-CP issued by the Minister of Transport	2020	During the inspection and certification process, if it is detected that imported cars are on the list of goods banned from import as prescribed in Decree No. import ban for that vehicle, and at the same time issue a notice of motor vehicle on the list of prohibited imports according to the provisions of Form No. 03 of the Appendix issued together with this Circular. The inspection, classification and representative sampling of the vehicle lot for other vehicles will continue to be carried out according to regulations.	х				
Vehicle taxes							
Decision 1168/QD-TTg in 2014 approving the development strategy of Vietnam's automobile industry to 2025, with a vision to 2035 issued by the Prime Minister	2014	Research, review and reform tax and fee policies (import tax on complete vehicles and parts and accessories; excise tax, etc.) to ensure feasibility and stability of the castle, in accordance with international commitments in the integration process.					
Decision 13/2015/QD-TTg on mechanisms and policies to encourage the development of public passenger transport by bus issued by the Prime Minister	2015	Exemption from import tax on spare parts and components that cannot be produced domestically for the purpose of manufacturing and assembling public passenger transport vehicles by bus.	x				

References:

- 1) UN Population Database (2022), https://population.un.org/wpp/
- 2) World Bank (2022), https://data.worldbank.org/
- 3) Global Materials Flow Database (UNEP, 2023), https://www.resourcepanel.org/global-material-flows-database
- 4) Emissions Database for Global Atmospheric Research (EC, 2023), https://edgar.jrc.ec.europa.eu/
- 5) International Council on Clean Transportation (2023)
- 6) UN Energy Statistics (2021)
- 7) Fossil Fuels Consumption Subsidies 2022 (IEA, 2022), https://www.iea.org/reports/fossil-fuels-consumption-subsidies-2022
- 8) Climate Change Dashboard (IMF, 2024), https://climatedata.imf.org/pages/access-data
- 9) Ember (2023), https://ember-climate.org/data-catalogue/yearly-electricity-data/" ______
- 10) Coalition for Disaster Resilient Infrastructure (CDRI, 2023), https://giri.unepgrid.ch/facts-figures/building-infrastructures
- 11) Koks, et al. (2023), https://iopscience.iop.org/article/10.1088/2634-4505/acd1aa
- 12) Environmental Vulnerability Indicators (UN, 2018), https://www.un.org/development/desa/dpad/least-developed-country-category/evi-indicators-ldc.html
- 13)) Global Status Report on Road Safety 2023 (WHO, 2023), https://www.who.int/teams/social-determinants-of-health/safety-and-mobility/globalstatus-report-on-road-safety-2023
- 14) Socioeconomic Data and Applications Center (CIESIN, 2023), https://sedac.ciesin.columbia.edu/data/set/sdgi-9-1-1-rai-2023
- 15) Country Official Statistics
- 16) Trademap (ITC, 2024), https://www.trademap.org/
- 17) International Organization of Motor Vehicle Manufacturers (OICA, 2023), https://www.oica.net/production-statistics/
- 18) ATO analysis of UNEP Index using latest data
- 19) Rapid Transit Database (ITDP, 2022), https://www.itdp.org/rapid-transit-database/
- Socioeconomic Data and Applications Center (CIESIN, 2023) https://sedac.ciesin.columbia.edu/data/set/sdgi-11-2-1-urban-accesspublictransport-2023
- 21) PPI Database (World Bank, 2023), https://ppi.worldbank.org/en/ppi
- 22) Organisation for Economic Co-operation and Development (OECD) (2022), https://stats.oecd.org/Index.aspx?DataSetCode=CRS1#
- (*) National transport policies





