

The matter of sustainable development in transportation in Vietnam

Van Huong Dong, Van Vang Le

*Ho Chi Minh University of Transport
No.2, D3 Road, Binh Thanh District, Ho Chi Minh city, Vietnam*

Abstract: According to urban planning experts, urban transport is one of the areas that contribute significantly to the economic development of each city. In fact, the expansion and construction of new transport infrastructure will not be able to satisfy the growing demand for urban transport and the basic, long-term solution is to develop public transport and replace the personal means of transport. It is also a trend and strategy for the development of green cities, sustainable green and eco-friendly transport, creating greater competitiveness among urban areas.

Keywords: sustainable development, urban transport, economic development

1. Introduction

Sustainable development is an urgent and indispensable need in the process of development of human society and has therefore been agreed upon by nations around the world to form an Agenda for each development period. Of history. At the 1992 Earth Summit on Environment and Development in Rio de Janeiro (Brazil), 179 countries participating in the Conference adopted the Rio de Janeiro Declaration on Environment and Development consisting of 27 Basic Agenda 21 and Agenda 21 on global sustainable development solutions for the 21st century. The recommendations of each country are based on specific conditions and specifications for construction. Agenda 21 at the national, sectoral and local levels. Ten years later, at the 2002 World Summit on Sustainable Development in Johannesburg (South Africa), the 166 countries that adopted the Johannesburg Declaration and the Implementation Plan Sustainable development. The conference reaffirmed the principles set out previously and continues to commit to full implementation of Agenda 21 on sustainable development.

The essence of green transport is to build and maintain a sustainable urban transport system that meets the transportation needs of everyone. The transportation system must have the following basic characteristics: - To have the strategy of sustainable transport development, highest traffic efficiency with the lowest social cost, harmonious with urban environment, suitable with tissue. Image of urban land use, there are more modes of transportation complement each other. In particular, the concept of green transport in Vietnam is receiving a lot of attention from the community in order to create a healthy and sustainable living environment.

According to the World Bank, Vietnam is one of the 5 countries most influenced by sea level rise and the second country in the world has been strongly influenced by climate change. Cities in Vietnam are facing many difficulties and challenges in the process of developing green, sustainable cities, especially green transport.

Specifically: Vietnam's urban planning is mostly done in the traditional way. Planning products lack flexibility, lack of multi-disciplinary coordination in the planning process, lack of plan implementation planning and resources to build in accordance with planning.

In particular, in the past time, the planning of transport development is not synchronized and the resources to implement the speed of development of road network is slow compared with travel needs; The development of environmentally-friendly modes of transport such as walking, non-motorized traffic, and public transportation are not considered.

At the same time, transportation infrastructure has been paid attention but still not enough to meet the demand for land; Lack of parking stops, parking lots; Especially in large cities, the urbanization process is going at a faster pace than the actual situation of investment in improving and developing the transport infrastructure system; Motor vehicle emission control is complex and there is a lack of consistency among related industries.

Along with that, personal vehicles increase rapidly and uncontrollably (an average annual increase of more than 10%) is one of the main factors causing environmental pollution.

According to PGS. Dr. Nguyen Hong Tien, Director General of the Department of Infrastructure (MOC), transport plays an important role in urban development and has special significance in urban construction in a green and sustainable way. GTCC is an integral part of the urban transportation system. Vietnam's Transport Development Strategy to 2020 with a vision to 2030 also sets the basic requirements for the development of public utilities. The goal is to rapidly develop fast, high volume mode for large cities; Ensure the rate of public passenger transport from 25% to 30% by 2020; To develop the transport in urban centers along

the direction of using public transport as the main one, ensuring modern - safe and convenient; At the same time control the increase of personal means ...

In order to achieve the target, first of all, the development of the transport network must be developed in accordance with the approved planning. To step up the application of scientific and technical advances and new technologies to the design, construction, exploitation and maintenance of transport infrastructures in the direction of being environmentally friendly; Development of public passenger transport network; Control of emissions from vehicles; Strengthen management capacity and raise awareness about transportation environment protection for managers .



Figure 1. BRT bus in Hanoi

In addition, the construction of pedestrian streets, encouraging communities to participate in traffic by non-motorized vehicles such as bicycles, trams and walking. At the same time, encourage the investment of large public transport vehicles using clean energy, less polluting environment such as metro, overhead and bus rapid .

Green urban development, green transport is a strategic direction, there needs to be an interest in the synchronization of all levels of government, socio-political organizations from the central to local and the whole community. Dong. With the right mindset, the right roadmap and creative solutions, green urban development, green transport will contribute an important part to the successful implementation of the National Green Growth Strategy

2. Solution

According to experts of the National Institute of Urban and Rural Planning, in the process of developing urban areas in Vietnam, especially in big cities, there are many problems. The urban space is expanding, new fast-growing urban areas leading to uneven distribution, creating out-of-balance outages, distances and long-running costs. During the morning rush hour, most people from the suburbs poured into the city to work while learning the opposite traffic numbers negligible. At break time, the congestion again but in the opposite direction. In addition, investment in development of public passenger transportation system is too slow, resulting in sudden increase in means of transport, especially motorcycles and personal cars ...

At the online seminar on "Sustainable Urban Transport - Solutions for Vietnam" organized by the World Bank on May 26, Dr. Jung Eun Oh - Traffic Team Leader The WB in Vietnam emphasizes that the transportation system of big cities in Vietnam is experiencing many shortcomings, which is a problem that inhibits the development. From the experience of the world, there is no "shortcut" to effectively solve the problem of traffic congestion.

Therefore, it is necessary to concentrate on investing in infrastructure construction, law dissemination and education and violation sanctioning, but the important solution is to build a public transport system. It is suitable for a wide variety of vehicles, and the backbone of this system is the high volume, high-speed public transport (urban rail, BRT bus) along urban corridors. And complement it with other modes of transport that offer lower flexibility and power to connect to high volume systems. In addition, there must be better infrastructure for non-motorized vehicles (pedestrians, cyclists). All must be connected in a harmonious way in a common system.

Replace the motor

In recent years, Hanoi and Ho Chi Minh City are exploring ways to move towards the 2025-2030 period, which will limit motorbikes to operate in some areas and see them as one of the solutions to build. Building sustainable urban transport.

As one of the active advocates of this policy, Dr. Khuat Viet Hung, vice chair of the National Traffic Safety Committee, admits that limiting motorcycles in big cities is difficult. , By the urban of Vietnam is the urban motorcycles. Hanoi, Ho Chi Minh City is urbanizing on a motorcycle platform. Personal research shows that even in the planning and construction process, people do not escape their dependence on motorcycles. But, motorcycles have big disadvantages (just compared to buses) that are affected by the weather and the risk of major traffic accidents.

Currently, 70% of traffic accidents are caused by motorbikes and 90% by motorbike victims. It is easy to see in Hanoi and Ho Chi Minh City that the rain is always congested roads when people find ways to go by car (taxi or bus). Therefore, do not try to replace the entire trip with a motorcycle, but first think of gradually replacing the long trips by motorbike. Do not think only bus development in urban core, but must extend to 50km radius. In urban Hanoi, Ho Chi Minh City needs the main bus routes with the frequency of 3-5 minutes per trip so people do not have to wait long.

According to Dr Jung Eun Oh, to call on people to leave the motorbike, the authorities need to create a seamless public transport system for people to get more. choice. Given Vietnam's specific conditions, there are many challenges, many things to do but still possible with appropriate solutions and determination throughout.

Another point is the need to improve the infrastructure of pedestrians. At present, most of the sidewalks are occupied for business purposes, as parking spaces, the rest for walking is very narrow, even many streets do not have sidewalks, so need to change to improve the situation. On the big traffic corridors, parking is gradually controlled, replaced by planned parking lots so people no longer have to park their cars on the sidewalk. Another fact that needs to change is that when going to the street, the greater the priority, the greater the pedestrians, the most vulnerable are being overlooked. Reversing the priority order, first of all for pedestrians, bicyclists and finally, personal transport must be the least privileged in the urban transport system.

The development of sustainable urban transport in Vietnam should be based on the principle of harmonizing three economic, social and environmental goals. In it, economically, a good transport system should be established to support the economic development of the city and the cost of transport. On the social side, the transport system must ensure the right to travel for all people in society at a reasonable cost. As for the environmental aspect, development does not pollute.

Regarding the principle of ensuring the above three objectives, he also proposed a system of indicators and criteria for sustainable transport planning in urban areas in Vietnam: Economic criteria reflect the expenditure effect Charges in traffic, specifically: economic costs per unit of travel, including costs for residents, business people and authorities. Social criteria reflect relative mobility and transportation costs for groups of people with comparable income. Environmental criteria reflect emissions from traffic and land requirements. These impacts are separated by traffic control (motor, public transport, walking), geographic location (central, mid and suburban) and household size.

It can be seen that now in Vietnam, this is the first indicator and development criteria for urban sustainable transport planning. In fact, the planning of sustainable transport development for urban areas is a relatively new problem and is facing many difficulties and challenges such as the land fund for traffic and density road density Increasing traffic, congestion and traffic accidents are increasing ... while funding for investment in the construction and maintenance of transport systems is still low. From the situation that adversely affect the economic development and public health. Therefore, the system of indicators and criteria are converted in accordance with the practical situation in Vietnam. This will be the basis for the ministries and agencies to adjust the standards and standards related to the planning, development and management of urban transport, contributing to the adjustment and improvement of urban transport. Vietnam market towards sustainable means.

In general, land funds for urban traffic in major cities in Vietnam are too low. The ratio of road traffic to total land area of urban districts in Hanoi is 3.51% (2008), while this number must reach 20-25%. Similarly, the density of roads in these cities is also lower than the level of 5-6km / km² of other cities in the region and in the world. Hanoi road density reached 2.38km / km² (2008); This figure in Ho Chi Minh City, Da Nang, Hai Phong is 1.44km / km², 0.4km / km² and 2.01km / km² (2006).

Regarding the means of transport, the rate of using cars in Hanoi reached 43xe / 1000 people, which is lower than that of other countries in Asia (90-100 car / 1000 people). However, data from the past 10 years show that motor vehicles are growing at a rapid rate of 13% for motorcycles and 10% for cars.

Financing for transport, investment in the construction of urban transport infrastructure does not keep pace with the urbanization and the increase of means of transport, especially in large cities. One of the most

important issues for the transport sector, meanwhile, is to ensure adequate and reliable financing of road network maintenance (in Hanoi, in the past, maintenance costs Roads still account for about 50% of the budget)

For traffic jams, in Hanoi and Ho Chi Minh City, the phenomenon of traffic jams is becoming more and more serious. The main reason is the large motorbike volume, the poor response rate of public transportation and the poor transport system. Traffic accidents are the most pressing phenomenon in Vietnam. It is recognized that Vietnam is one of the countries with the most dangerous road environment in Southeast Asia and in the world In addition, air pollution and noise pollution caused by traffic in Vietnam today Seriously worse, the main cause is in vehicles, in which motorbike emissions are a particularly harmful source of pollution that has been affecting people's health.

3. Urban Transport Sustainable Development Strategy to 2030

3.1. Development trend of urban transport

Sustainable development of urban transport

In general, sustainable development of urban transport is a synchronous development in the fields of transport infrastructure, transportation and urban transport in terms of economic and communal. Society, environment, serving the requirements of sustainable development of the country and of the urban transport system itself.

In light of the new conception, the sustainable development of urban transport includes the sustainable development of transport infrastructure, transport and the sustainable development of the urban transport sector in terms of economic, social and environmental aspects. School, financial and institutional (management).

In other words, the sustainable development of urban transport needs to be secured in terms of land and environment, culture and heritage, society and people, development and economy.

Affiliate Approach

Link strategies for development of transport infrastructure, transport with urban development strategies; Institutional linkage is the coordination between public transport agencies and enterprises, using the common ticketing system, public-private partnerships; Affiliate models are business exploitation, management, utility, rudimentary vehicles (non motorized) and walking.

Consolidate strategies for sustainable urban transportation including: promoting the development of compressed urban areas based on public transportation; Linking modes of transport in hierarchical hierarchical hierarchies and high synchronicity (mass transit + bus + pedal + bicycles or bulk transport + motor or car - send

Car and then go by public transport); Control and manage the use of motorcycles, individual cars; Enhanced traffic control and management; Enhancing the principle of toll road users (parking fees, jams or personal transportation charges, entrance fees in the central area during peak hours ...).

Choosing the right means of transport

In urban areas around the world, the construction of an urban transport strategy has the main objective of developing a reasonable network of public passenger transport with different modes of transport. Considering the impact of urban transport on at least economic, social and environmental aspects. When making the decision to choose the type of public passenger transport suitable for each type of urban area, meeting the objectives of the transportation development strategy, the strategists often rely on the population size of the city. To offer options for the type of vehicle suitable to the size of the city. However, that is only a matter of theory, actual implementation is different depending on specific conditions. In major urban areas in Vietnam, suitable for large urban areas are urban railway (heavy or light, underground, high or combined). + Buses of all kinds (large, medium and small + Sets (or go by bike, motorbike); other cities: bus + pedestrian or motorbike, personal car. Can be combined with tours by bus or waterway Inland like high-speed ships and conventional ships.

3.2. Urban transport development strategy

Development objectives: To develop urban transport in order to meet the needs of traveling and demand for transport in terms of quantity and quality.

Development perspective: must have long-term vision (strategy), breakthrough, go straight into modern; Enhance and improve the efficiency of resources, especially from non-state sources; To formulate criteria and criteria for determining priority project portfolios. The strategy for sustainable development of urban transport must be built in an open and dynamic direction in order to develop modern, synchronous and integrated modes; Moving the focus from forward to forward, from monotone to multimodal, from a single project to a supply chain orientation, and transparent competition to provide transport infrastructure.

Basic content of the development strategy:

To develop modern and synchronous transport infrastructures in order to meet the increased transport demands in line with the developed urban structure and the regional construction planning structure: To build the national transport network. Join the regional level connected with the urban; Upgrading urban and intercity public transportation networks; Renovate and upgrade main traffic axes in existing urban areas.

To set up the transport system to meet the needs of the development of public transport as the main step to solve the problems of congestion, traffic accidents and environmental pollution: To concentrate on renovating and building a complete traffic network. The current central city; Construction of public transport networks such as urban railways, fast and conventional buses; Improve the quality of bus services.

With other methods, urban transportation development strategy is to increase market share of urban public transport, limited use of personal motor vehicles, fossil fuel-free vehicles, and green transport: Control of urban traffic, especially in the central area; Meet step by step the demand for parking; Construction of necessary public transport infrastructure such as station and area around railway station, terminus, bus stop; Ensure traffic safety on truck routes; Create a safe and comfortable space for pedestrians. To develop transshipment hubs to link modes of transport to meet increasing demand for cargo and passenger transportation, thus meeting the transport demand: This type of vehicle is based on encouraging the construction of major transport axes; Sharing and combining with modes of inland waterways and railways; Controlling truck traffic to urban centers by building logistics centers (distribution of goods); To develop out-of-town transport to promote the industrialization and modernization of agriculture and rural areas; Reduce negative impact on the environment near the axis, large transport corridors.

3.3. Urban Transport Sustainable Development Policy

Building a policy of sustainable development of urban transport is the responsibility of urban governments. Develop funding framework for urban areas with different funding sources. Focus shifted from: sector-based priorities to transparent competition for funding; Focus on capacity to focus more on productivity and market orientation; Funding and considering unclear priorities for long-term strategic priorities and funding; Actively seek and mobilize new sources of finance; The service provider is the State to the public service provider (PPP) or private sector. Attracting investment: diversifying forms of investment through the introduction and promotion of projects; To adopt preferential mechanisms and policies for investment in urban transport infrastructures in various forms; Prioritize priority projects according to criteria, EIRR, financial feasibility (FIRR), ensure payback period, complete ... Bid for two land use rights By the road, the area around the traffic works to get the capital back into the same road or other works.

4. Conclusion

To achieve a sustainable transportation system, it is necessary to restrict the use of cars, develop short distance trips. Street designs should be directed towards slow-moving modes of biking and walking. Cities need to provide a full range of public transport systems with high transport capacity, reasonable prices and a sufficiently thick network to keep the distance between stations or stations less than 500 m. In order to achieve that, a combination of bus, fast bus and tram system is required.

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