

Actual situation of urbanization in Vietnam

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Abstract: Vietnam has the sixth largest urban population in East Asia. In the period 2000 to 2010, the urban population increased by 7.5 million. During this period, Vietnam's urban population changed from 19% to 26%. Vietnam does not have huge cities with 10 million or more but Ho Chi Minh City (7.8 million) and Hanoi (5.6 million) are among the largest cities in the area. These two cities dominate the urban landscape of the whole country. As of December 2016, Vietnam had 795 cities with an urbanization rate of 35.2%, including 02 special cities such as Hanoi and Ho Chi Minh City. There are 17 of grade I-urban that consist of 03 grade I-urban such as HaiPhong, Da Nang and Can Tho belongs to the Center, 25 grade II, 41 grade III, 84 grade IV and 626 grade V-urban. Central regional cities include Can Tho, Bien Hoa, Vung Tau, Buon Ma Thuot, NhaTrang, Nam Dinh, Thai Nguyen, Viet Tri, Ha Long, and HoaBinh. The provincial urban centers consist of cities and towns, which serve as administrative-political, economic, cultural, tourist-service centers and traffic hubs; and central district towns; urban centers of clusters of rural population quarters and new urban centers. The quantity of urban in Vietnam is shown in Figure 1. Urban development and growth in Vietnam is generally slower than that of other countries in the region. The urban development is uneven between regions, the difference between regions varies in geographic features, the delta and coastal areas develop faster than mountainous and highland areas. In addition, the management of technical infrastructure between ministries is inconsistent and uniform, leading to significant impacts on the environment, especially in big cities. The current situation shows that the cities are overloaded, increasing pressure on all technical and social infrastructure.

Keywords: Urbanization, sustainability, urban development

Introduction

The whole country has 819 urban centers (an increase of 6 urban areas compared to 2017). The coverage of urban construction general planning reaches 100%, subdivision planning is about 78% (up 1% compared to 2016), detailed planning reaches about 39% (up 2% compared to 2017). , rural construction planning reaches 100% (an increase of 0.6% compared to 2017). The increase in urbanization in 2018 has helped the real estate market and construction materials achieve positive growth. The average area of housing nationwide is about 24 m² floor / person, an increase of 0.6 m² floor / person compared to 2017; total cement consumption consumed about 95 million tons, up 17% compared to 2017, reaching 113% of the year plan.

In 2019, the construction industry will focus on perfecting the legal system of construction investment, ensuring consistency, synchronization, reforming administrative procedures, simplifying conditions for business investment, and dismantling timely difficulties and obstacles in construction investment activities, perfecting and submitting for promulgation the Urban Development Management Law, the Law Amending and Supplementing a Number of Articles of the Construction Law and the Housing Law. According to many experts, the urbanization rate is happening strongly, but it is concentrated in some centers which are big cities such as Hanoi, Ho Chi Minh City, Da Nang ... in the areas. Other areas are still low, while the overall urbanization rate of Vietnam has reached less than 40%. Meanwhile, China's urbanization rate is 60%, South Korea is 82% ... Vietnam has a long history of urban development. Since 1990, Vietnamese cities have started to develop. At that time, there were about 500 urban centers (17-18%), to 649 in 2000 and 656 in 2003. According to the World Bank, Vietnam is rapidly urbanizing, the space and population in urban areas have increased rapidly. Many cities are expanding, becoming more crowded. Urban landscapes in Hanoi and Ho Chi Minh City are developing much faster than in all other cities. These two cities are expanded a lot but still very cramped. In the 2000-2010 decade, Vietnam was the seventh largest urban area in 2000 (2.200 km²) to the fifth position in 2010 (2.900 km²) in the hierarchy, it has overtaken both Thailand and Korea. In terms of space, Vietnam's urban areas grow by 2.8% every year, among the fastest growing in the region.

Population by Age Group and Geographical Distribution

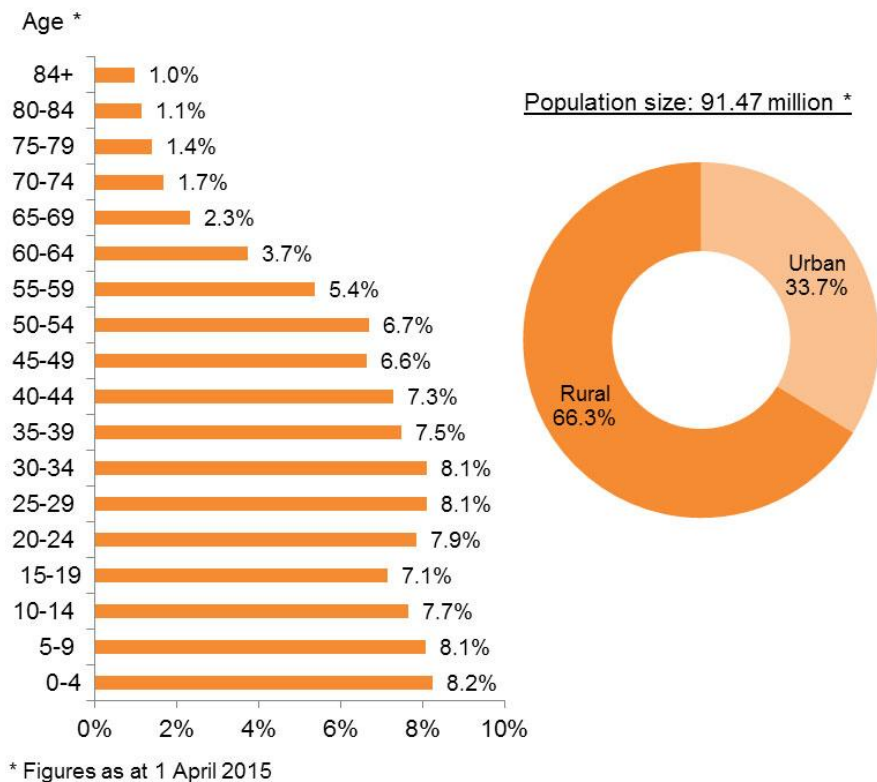


Fig. 1: Population in Vietnam

At present, Vietnam's urban network is formed and developed based on the central cities. It includes national, regional, and international central cities. Urban systems in Vietnam are rapidly growing in quantity but the urban quality is low. The urban transport infrastructure system has improved in recent years, many roads and bridges have been built; the quality of urban roads has been gradually improved. In grade III-urban, most of the roads are asphalted and built synchronously, however the technical infrastructure and social infrastructure is not synchronized [2]. The level and capacity of urban management and development is low compared to the requirements. Poor and overloaded infrastructure does not facilitate the development of urban socio-economy, but creates a lot of pressure on the environment. In fact, urbanization in Vietnam is subjective. To rapidly increase the urban population to upgrade urban areas (such as upgrading grade V to grade IV, grade IV to grade III ...), thus expanding urban areas by joining 100% agriculture into the city to form new wards. This has created a situation where many agricultural villages exist in the urban long-term and inconvenient issues for the construction and development of urban environmental protection technology. Some scholars at home and abroad consider that the development model of Vietnam is the copy of the former Soviet Union, the latter of China. For China, urbanization is considered the flywheel to change the direction of the economy, forcing it to turn toward sustainable development of human potential, rather than just the growth of productive forces and increase exports of goods. In the Soviet Union in 1956, the rural population was 70%, but in 1961, it was only 50/50 compared to the urban population. The speedy demographic shift, of course, had serious consequences for Soviet agriculture, resulting in a sudden shortfall in the city's housing fund, rising crime rates, and labor productivity. Ask for urban services "type one"). The difficulties of urbanization of the Soviet Union are tempered by the matters such as urban youth seriously obey the organization, even volunteered to go to remote areas, the attention for development equally between rural and urban is carried out, the trend of spontaneous migration from rural to urban is controlled [3]. In Vietnam, population density is about 6-7 times higher than standard density. In the world, only four countries (India, Japan, Bangladesh, Philippines) have higher population density than Vietnam. Vietnam is a country with a very large population and that scale is still growing. In the last five years, the population of Vietnam has increased by 1.1 million. Along with the general development trend of the world, the process of urbanization in Vietnam has been taking place more and more strongly. Given the current pace of urban development and population, Vietnam will face many complex problems arising from urbanization. The downside of urbanization is too rapid in many areas. The process of

industrialization and migration will be accompanied by spontaneous urbanization, the urbanization will expand, and the convergence of population in urban areas will increase. Rapid urbanization resulted in large numbers of rural residents losing agricultural land, lack of jobs, incomes, and urban poverty. This has led to an increase in the incidence of urban poverty. The fact that poor people are slowly being pushed out of urban areas or lurking in small alleys, areas with low living conditions, and poor access to unsustainable urban services social, or pay higher service costs. Urban habitats in many areas are severely polluted. The amount of waste is more and more, the condition of waste treatment is degraded or not invested in synchronous. Inundation, urban traffic congestion is widespread. Land for crops, community activities are increasingly narrow.

Vietnamese urbanizing strategy must aim at ensuring the balance between modernity and the sustainability of nature – human – social through the selection of advanced settlements. These are suitable for the Vietnamese people in urban areas, rural areas, mountainous areas, border areas, and islands to ensure the harmony between the immediate interests and the long-term interests of the nation, based on seeking the ways to develop urban land saving, greenly and ecologically in place of urban that still exist many inadequacies.

Actual Situation

In urban areas, there is a widespread shortage of land for traffic, the proportion of land for transportation is not satisfactory. According to statistics, in urban areas, transportation infrastructure indicators only meet 35-40% of the demand, such as in Hanoi, the area of land traffic is about 9.05%, road density reached 3.89km/ km²; in Ho Chi Minh City, the area of land traffic is about 7.5%, the road density is 3.88 km/km². Static traffic is always a problem for big cities. According to experts, land use planning for roads should include land for parking lots (at least 1% of urban land, 10% of central land); Meanwhile, the land for static traffic has not reached 1% (the world standard, countries generally have to be from 3 to 3.5%). Even in small towns, the percentage of land allocated to static traffic is much smaller than required. This is partly due to the compensation costs are so high that the land area for parking lots is less and less interested. Some investors use the land for parking to switch to commercial services. Parking spaces in urban areas are still mostly utilizing sidewalks and roadbeds while private parking facilities are still limited and have small capacity. In fact, the current parking only meets the demand for motor parking. Trends in the use of cars in urban areas are increasing, so parking demand needs to increase accordingly. In Hanoi, the percentage of land allocated for transportation is still too low, only less than 10% of urban construction land, while the requirement rate is 20-26%. Area for static traffic is low, less than 1% of urban construction land, but according to regulations, it must reach 3-5% of urban construction land. Meanwhile, the expansion of transport routes in the inner city is very difficult, plus the cost of compensation work to widen the roads is very high, putting pressure on the city budget. The land for traffic infrastructure and population density in Hanoi and Ho Chi Minh city in comparison with other cities is shown in Figure 3.

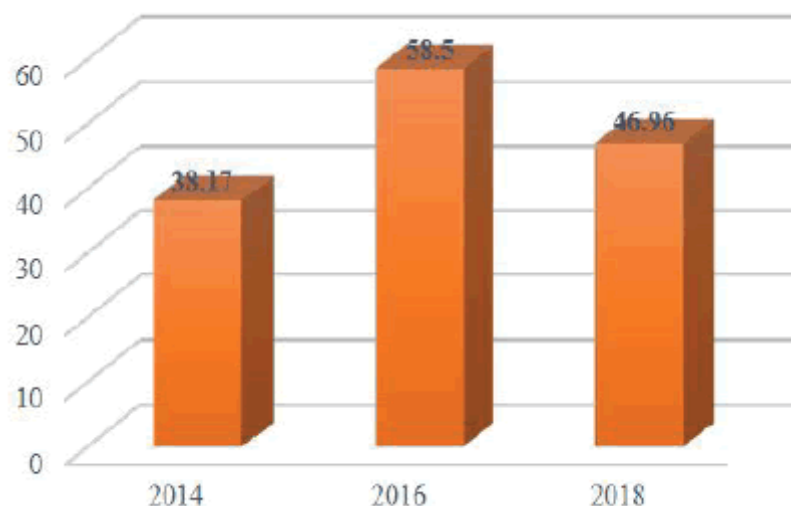


Fig. 2: EPI score

Urban greenery plays a very important role in bringing about benefits to people, society and the environment in urban areas. Urban greenhouses absorb the heat of the sun, reducing “heat island”, and absorbing CO₂ and other harmful gases in the environment, creating green spaces to maintain the green landscape of the city. Green spaces contribute positively to creating material, spiritual and environmental values

not only for individuals but also for urban communities. Green trees and water in urban areas can reduce the air temperature from 3.3°C to 3.9°C when green land area reaches 20% to 50% of urban land area. The combined effect of shade and evaporation can reduce the energy required for air conditioning systems by as much as 17% to 57% as a 25% increase in vegetation cover. Urban greenhouses can absorb from 40% to 50% of the solar radiation intensity. Trees along the street can reduce the amount of dust in the air to the upper floors of tall buildings from 30 to 60%. An average of 1 hectare of forest or dense garden can absorb 1.000 kg of CO₂ and produce 730 kg of O₂ per day. Thus, each urban citizen needs an area of about 10m² of green trees or 25m² of grass to ensure fresh air for life. However, at present, the green system, urban park has not been paid proper attention; the proportion of green land and parks is very low compared to the prescribed standards; area, water surface is reduced significantly. Urban green trees have not met the standards of forest cover as well as ecological balance. The new tree system is formed and concentrated in large and medium urban areas, while in small urban areas, green trees occupy a negligible area. Compared to the standards and norms, the proportion of land devoted to trees is very low. In two major cities such as Hanoi and Ho Chi Minh City, this parameter is about 2m² per person, not standardized and only 1/10 of green trees of advanced cities in the world. According to the park green plan, by 2020, with a vision to 2025, the urban area is 2.4m² per person, the inner city area is 7.1m² per person, and the suburban area is 12m² per people [6]. However, the density of public trees in the area is less than 2m² per person, lower than the standard. The records show that many districts in the center of the city have high population density but lack of green parks such as districts 4, 8, BinhThanh, and BinhTan. In Binh Tan district, the planning about a park with a total area of 47 ha hasnot been built yet. In Go Vap district, the 37 ha of Go Vap Cultural Park was planned in 2001 but still remains on paper. Even Cu Chi district, there has a large land fund but Sai Gon Safari Park project has not been implemented in more than ten years.

According to experts, the process of urbanization in Vietnam is taking place quickly and directly related to the development of industrialization and modernization of the country. Currently, the urban population of Vietnam is about 35.7% and it is estimated that by 2020, 40% of Vietnam's population lives in urban areas. As a result, the metropolitan spaces are expanding exponentially throughout the country. In recent years, the average annual economic growth rate in urban areas has always been 12% to 15%, 1.5 times to 2 times the national average growth rate. Especially high growth rates in the two largest urban centers are Hanoi and Ho Chi Minh City. This process is expected to continue to grow and create a growing demand for urban development management. Along with the presence of urban areas throughout the country, the size of the urban population in our country is constantly increasing, especially after 2000. As of 2016, the urban population in Vietnam is over 32 million people, accounting for 35.2% of the population in the country. In the process of industrialization and urbanization, strong migration to urban areas is continuing. The main reason is that most domestic and foreign investment sources in our country are concentrated in urban centers or large industrial zones, which have increased the attractiveness of rural labor to cities. Rural-to-urban migration increases the pressure on all sides of cities. With rapid population growth, urban areas consume a large amount of natural resources such as water, energy and other materials to meet their production and consumption needs. The development of production and development of industrial centers has caused pollution of water, air and soil; Traffic system does not meet the demand of people. In addition, the urban population increased rapidly resulting in the lack of housing, lack of water, lack of sanitation and medical conditions. This is one of the dangers to the lives of urban residents. The process of urbanization in our country is uneven. The number of urban centers in the Midlands and Northern Mountains is the highest, but the urban population is most concentrated in the Southeast. The development and distribution of the urban are influenced by the socio-economic development and the current industrialization process. In addition, five cities as Hanoi, HaiPhong, Da Nang, Ho Chi Minh City and Can Tho have a very important role in distributing the population structure of each geographic-economic region. In general, the urban population in these five cities in 2015 accounted for 41.29% of the total urban population of the country.

Urbanization promotes economic development, plays a central role in economic growth and poverty reduction in our country. Cities have become a powerful economic hub. In recent years, the average annual economic growth rate in urban areas has always been 1.5-2 times the national average. The industrial, commercial, service and tourism sectors in big cities account for a relatively high proportion of the national GDP, affirming Vietnam's leading role in the economy. The proportion of gross output in the five central cities accounts for over 50% of the country's GDP (while the urban population accounts for only 40% of the national population). Total revenues of urban areas account for over 70% of total national budget revenue. Vietnam's economy is highly open with total trade turnover in 2016 reaching 360 billion USD, 1.7 times higher than GDP and signed 12 free trade agreements with many countries and regions. The economy maintains its momentum with a recovery rate of over 6.5%: GDP is bottoming at an average of 5.88% in 2011-2015, rebounding from 2005 and maintaining a 6.2% rise in 2016. 2016 - 2020 is expected to grow from 6.5% to 7%. Average income per person in 2015 is 2.228 USD and is expected to increase to 3.200 – 3.500 USD by 2020. Increased incomes

help the domestic market to become one of the key growth factor. The economic growth of Vietnam and five major cities is presented in Figure 5.

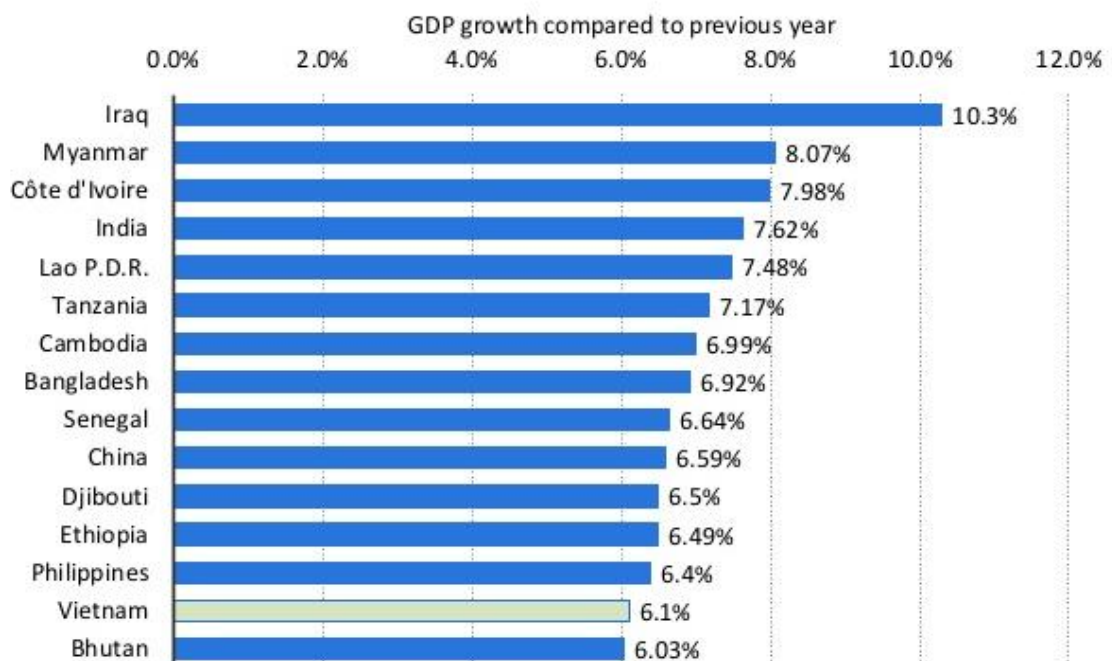


Fig. 3: The economic growth of Vietnam

In 2015, according to the World Economic Forum, the global competitiveness index (GCI) of Vietnam on general infrastructure quality increased 24 levels, from 123/139 in 2010 to 99/140 in 2015. In particular, the index of transportation infrastructure increased 36 levels, from 103/139 in 2010 to 67/140 in 2015. This is a relatively high level of promotion of our country in recent times. The speed of development of urban transport infrastructure is generally lower than that of urbanization and the development speed of motorized transport. According to the road transport development, and plan of Vietnam until 2020 and orientation to 2030, motorcycles will be controlled at 36 million units by 2020. However, the forecast to 2020, the use of vehicles still accounts for 30% in Hanoi and 35% in Ho Chi Minh City. This is one of the reasons leading to traffic jams and great impact on the urban air environment [8].

Presently, motorcycles and automobiles are the major means of transport in Vietnam in terms of both quantity and volume of cargo transportation nationwide, especially in urban areas and developing economy areas. By 2015, Hanoi has more than 5 million motorbikes, the number of cars increased by 17.23% per year, the number of motorbikes increased by 11.02% per year on average; in Ho Chi Minh City, there were about 8 million motorbikes, the number of carriages increases 14.88% per year, the number of motorcycles increased by 9.79% per year on average. This rate is 1 to 1.5 times higher than the GDP growth rates, and the rapid increase in population is putting great pressure on the infrastructure. According to statistics of the Ministry of Transport in 2015, each new motorcycle registration is about 700,000. It is projected that by 2020, the number of motorbikes will increase by 13 million units, and that of motor vehicles will reach 300,000.

Solutions for Sustainable Development

In order to develop urban areas greenly and sustainably, urban development planning should pay attention to develop ecological urban in adaptation to climate change. In addition, green cities cannot survive without the support of society and government. In response to climate change, it is necessary to reduce greenhouse gas emissions through urban design and planning, taking into account factors of energy efficiency and utilization of renewable energy. The current trend is urban development and sustainability. Vietnam is facing many challenges due to urban explosion and rapid urbanization in the country. The urbanization rate of Vietnam is high in the region. At present, Vietnam has more than 800 urban areas with an urbanization rate of 36-37% and is projected to reach 50% by 2025. The migration from the rural to the urban is widespread and results in highly pressing on the technical infrastructure, social infrastructure and many consequences such as traffic congestion and environmental pollution. Vietnam's cities have to deal with very basic issues such as

waste, wastewater, and public transport. In this context, smart city development, bypassing the mediation step, will be the "key" to help Vietnam to solve the fundamental problem of these challenges. Vietnam's cities should pay particular attention to issues such as ensuring harmonization and sustainability between modern and traditional issues, as well as local characteristics, cultural identity and heritage. Harmonization of the issue of economic development, urban development with environmental protection, raising social, public, and green spaces is also considered. To attach the sustainable development of the urban center with green building activities, to strongly exploit the underground space and raise the sustainability and foresight in urban planning and architecture. Thus, green and sustainable urban development is a strategic direction that requires attention to the synchrony of all levels of government, socio-political organizations, and the whole community. In order to successfully contribute to the cause of industrialization and modernization of the country, the development and management of urban development have been paid special attention in order to build and distribute rational urban centers and create sustainable development and healthy living environment for people, to ensure socio-economic development and national security. Sustainable urban development has become an indispensable strategic requirement in the development orientation of the national urban system. The attention should address the following issues to achieve the objective of fast and sustainable urban development in Vietnam as following:

Sustainable urban development, employment for urban people, especially for people low income and urban poor;

Ensuring the material and spiritual life of the people, preserving the traditional cultural identity of the nation, ensuring social justice;

To build, preserve and protect the green, clean and beautiful urban environment with full significance of urban objects and intangible

First, Urban development must first come from the planning and planning. Urban planning must ensure quality, vision and sustainable urban approaches such as green cities, urban ecology. Urban spatial planning must ensure economic harmony - ecological, friendly environment, favorable for development of public transport. Urban planning needs to be ahead in the principle of ensuring the sustainable development of ecosystems in urban areas, creating greener spaces, and ensuring functional areas meet the criteria, the quality of the environment.

Secondly, Green development and criteria should be included in planning, design, and construction of urban infrastructure such as water supply, sewerage, wastewater treatment, energysupply, and telecommunications, development of education, health, culture, sporting and urban green spaces.

Third, Prioritization the development of green urban infrastructure with green transport, energy saving, emission reduction is carried out; Use renewable energy, renew and use technologies, techniques, and clean materials.

Fourthly, Wide application and assessment of scientific and technological advances to the development of green buildings and green ones. *Fifth*, Propagation and mobilization of the social community to participate in green urban development, urban civilization and environmental protection; To adopt policies to attract donors, development organizations and investors to participate in the building and development of green buildings and urban centers; It is a priority for urban development in Vietnam.

Conclusions

Vietnam's urban system has experienced rapid growth in quantity and quality, the urbanization rate has increased from 19.6% to 629 urban areas (in 2009) to about 36.6% with 802 urban areas (2016). The urban area accounts for 70% of the total GDP, bringing many industrial production values, import and export values, scientific and technological advances and spillover effects to promote economic development. social economy in regions and throughout the country. However, like many other developing countries, Vietnam's urbanization process faces many difficulties and challenges. The rapid growth of the urban area has surpassed the administration capacity of local governments, asynchronous development between technical and social infrastructure, uncontrolled migration, disparities between rich and poor, and linking urban-rural areas, saving natural resources. In addition, Vietnam also faces new emerging global issues such as integration, urban competition, climate change, and rising sea levels. In the same period, since its establishment in 1989, APEC with 21 member economies has an urban population of about 1.8 billion, accounting for 42% of the bloc's population. APEC member economies also recognize that managing urban transition is an extremely important and difficult task for countries in the region, especially in the context of globalization. and under the impact of climate change.

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