

Important Roles of Urban Planning and Public Transportation Regarding Climate Changes in ASEAN

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Abstract

In today's day and age, environmental challenges are increasing, with some reaching global levels. One of them is climate change due to global warming accelerated by human daily activities such as industrial waste, deforestation, and the most commonly found activity is the usage of personal motor-powered vehicles. Therefore, government around the world including government in ASEAN countries implement environmentally friendly policy, regulation, and infrastructure. Despite a lot of research surrounding climate changes and global warming, the author found zero studies that discuss the important roles of urban planning and public transportation policies and regulation as a way to deal with climate changes in ASEAN. This research utilizes a qualitative descriptive method to gather information related to the topic and analyze action taken by some ASEAN government. This resulted in the author disagrees with the approach taken by some ASEAN governments. Thus, the objective of this research is to provide knowledge to readers and suggest a different approach that ASEAN government should consider. As a result, the author suggests that every city in their country should become a place that is not too spread out for daily activities, prioritize walking and cycling, and supports public transportation more than personal vehicles.

Keywords: ASEAN, Climate Change, Policy, Urban Planning, Public Transportation

I. Introduction

Social, economic, and environmental issues have been showing up a lot in this era due to various causes which almost all of us are involved in this. These issues are mainly driven or speed up by human daily activities around the world. One of those issues that are affecting people social, economy, and environment life is Regulatory Failure. Regulatory Failure is the root cause of global warming, unhealthy social lifestyle, and high economic gap. Because of this, governments around the world including ASEAN governments have been developing regulation and infrastructure that are going to be able to help the nature as well as their people. But what we ought to know is with the current or planned regulation it only responds to single issue which is global warming. The author has found difficulty looking for a research addressing urban planning and public transportation roles from neither ASEAN country nor around the world. Thus, searching for important roles of urban planning and public commute in ASEAN is the objective of this paper. With the identified challenges and objective of this research, it is necessary for ourselves to pay attention to the impact of regulatory failure regarding urban design on our social, economic, and environmental lives. To ensure a sustainable life in favor of everyone and nature, it is crucial for individuals to address this issue to their government.

In order to understand this research, detailed information of previous research in urban planning will be necessary. This review will explore two main research regarding good urban planning increase health and pursuing sustainability through urban planning. To explain two different focus of main article, the author will be using basic common

structure method. This two main previous research will give the reader general information as to why urban planning is important in every place.

In the book called “Toward The Healthy City People, Places, and the Politics of Urban Planning” conducted by Jason Corburn focuses on the relationship between urban design and health. Corburn emphasizes that health inequalities in urban areas are not only the result of someone’s behavior inherited tendencies but are deeply connected in the social environments where they live. For example, neighborhoods that has high levels of poverty, limited to healthy nutrition food, and exposure to environmental dangers tend to have poorer health. To respond to these challenges, Corburn suggest for a “healthy city planning” approach, which he describes as a combined system that supports health in urban design. This approach requires a change from traditional to a more overall understanding of how urban design impact health.

Corburn argues that moving toward healthier urban design requires changing the definition of urban governance. In practice, city planning must address the root causes of health inequalities, such as poor housing, limited transportation, and lack social services access. In conclusion, Jason Corburn’s book gives an argument to put health considerations into city planning. Healthy city planning is not just about physical design but also involves social, economic, and political process that shape urban design.¹

The second literature is called “Spatial Planning and Sustainable Development: Approaches for Achieving Sustainable Urban Form in Asian Cities”,² conducted by various researcher shows that the compact city, one of the concepts of sustainable urban design with high density, has renewed and organized city zones, and multiple land use has been widely recognized in Europe, America, and Asia. Overall, this book topic provides vision on developing sustainable urban design by targeting on planning trainings at the city level and certain areas in different Asian countries. The authors of this book argue that public planning policies are important in order to achieve sustainable urban design and oversight cities expansion in both developing and developed countries. The case studies emphasize the importance of collaborative systems and solid urban design regulations to promote sustainable city in Asian countries.

While indeed people around the world has increased awareness of urban planning through content from the internet and urbanist move especially in the western part of the world, this increase doesn’t seem much in ASEAN country. Urban planning has always been under the radar for most people in ASEAN even with the existence of technology causing most ASEAN citizen unaware that it is critical to build a city that sustainable and well As a result, through this research the author hoped to spread awareness regarding the importance of excellent urban design in ASEAN.

II. Method

This research will be using the qualitative method. Where the author will gather data and analyze existing data to describe the phenomenon being discussed. The data that has

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¹ Corburn, J. (n.d.). *Toward the Healthy City People, Places, and the Politics of Urban Planning*.

² Kawakami, M., Shen, Z.-J., Pai, J.-T., Gao, X.-L., & Zhang, M. (n.d.). *Strategies for Sustainability Spatial Planning and Sustainable Development Approaches for Achieving Sustainable Urban Form in Asian Cities*.

been collected by the author will be presented in sequential way to provide understanding. This method is used so that readers are able to participate in the discussion with an open mind and provides their own opinion regarding the topic being discussed. Thus, this paper becomes another opinion to provide mutual perspectives on the same topic.

III. Results

Nowadays, social and environmental challenges are increasing even some of them have reached global level including South East Asia (SEA) countries. Each country has its own challenges, one of the challenges in one SEA country which is Indonesia is the amount of people using private motorized vehicles that do not follow the rules causing harm to others and causing jammed on the road. This issue is similar to neighboring country like Malaysia and Philippines. Other than regional issue there is also a popular global challenge which is global warming that are accelerated by human activities such as the use of private motorized vehicles. From two challenges that have been mention before there is one thing in common, namely the use of private motorized vehicles. This resulted in government institution to form policies and infrastructure that are more environmentally friendly together with the support of their community. However, the author feels that the approach taken by SEA governments in various countries is not effective. Therefore, we will go through sequence as to what is the approach, why is it not effective, and what is the solution.

A. *South East Asia Governments Approach to Climate Changes*

1. *Indonesia*

The first South East Asia country we will be going through is Indonesia, which throughout the years have tried developing regulations and infrastructures towards electric powered transportation such as electric powered cars and motorcycle. Indonesia government itself has developed a regulation regarding electric powered vehicles. The first regulation is starting from 20 March 2023 the Indonesia government will provide subsidy of 7 million IDR per unit for 200 units of electric powered motorcycles as well as incentive to shift of oil fuel to electricity of 7 million IDR for 50,000 units.³ In addition, manufacturers are also required to not increase the selling price of electric powered motorcycles during the period. Furthermore, electric powered cars are also given support by the Indonesia government. Indonesia's 2019—2024 President, Joko Widodo provides incentive regarding electric cars that are imported from outside duties will be covered by the Indonesia government. In addition, the government will also cover sales tax on luxury goods for domestically produced electric vehicles including raw materials such as

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³ Indonesia Baik (2023). *Beli Kendaraan Listrik Bisa Dapat Subsidi dan Insentif*. Available online from: <https://indonesiabaik.id/infografis/beli-kendaraan-listrik-bisa-dapet-subsidi-dan-insentif>. [Accessed June 5, 2024]

components, machinery, and other goods related to domestic electric vehicles production.⁴

Indonesia's executive branch of government, President Joko Widodo and Vice President Ma'ruf Amin strongly supports the use of electric vehicles in social sector due to the worsening health issues of nature and the people themselves. The government also encourage online transportation applicators such as Grab, GoJek, Maxim, and other applicator to immediately increase the use of electric vehicles. In addition, in accordance with Presidential Regulation number 55 of 2019, the Coordinating Ministry for Maritime Affairs and Investment of Republic of Indonesia has assigned Indonesia's massive electric corporation called Perusahaan Listrik Negara (PLN) to build charging stations around Indonesia so that charging stations availability increased in the community.⁵

Through all these regulations, the Indonesian government successfully increase the amount of electric powered vehicles in the community. Both the government and the community believe that this is the path to battles against climate changes that are happening. Indonesia's government are also pushing public awareness about environmental sustainability to the people through various efforts. As a result, Indonesia is positioning itself as one of ASEAN country that supports and enforce global sustainable move.

2. Malaysia

According to Malaysian Ministry of Finance's national budget speech 2024,⁶ The Malaysian Government will maintain the expanding local electric vehicles industry and promote electric vehicles to the community. The Malaysian Government has been working together with other companies such as Tenaga Nasional Berhad (TNB) and Tesla Malaysia to establish charging stations in the local community. In addition, the government propose to increase individual income tax relief up to RM2,500 on charges for electric vehicles charging facilities for 4 years and to extend tax deduction for electric powered vehicles rental costs. Other than that, Prasarana Malaysia Berhad has accepted to get 150 electric buses and construct 3 bus depots.

The Malaysian Government also encourage the implementation of solar panels will also be intensified such as extending the offer period for the Net Energy Metering (NEM) program until 31 December 2024 to spread solar panels in residential. In addition to that, the government will also establish a roof solar buyback program with minimal cost. Together with Malaysian Government encouraging companies to promote a "Zero Capital Cost" model offered by Gentari for the residential housing. This regulation already has a model which is Putrajaya, a city in Malaysia. Putrajaya will be built as Malaysia's low carbon city by installing solar panels on government buildings. In line with Malaysian Ministry of Finance's national budget speech 2022,⁷ The Malaysian

⁴ CNBC Indonesia (2023). *Jokowi Bebaskan Pajak Impor Mobil Listrik, Ini Alasannya*. Available online from: <https://www.cnbcindonesia.com/news/20231215134401-4-497679/jokowi-bebaskan-pajak-impor-mobil-listrik-ini-alasannya>. [Accessed June 5, 2024]

⁵ Peraturan BPK (2023). *PERPRES No. 79 Tahun 2023*. Available online from: <https://peraturan.bpk.go.id/Details/273447/perpres-no-79-tahun-2023>. [Accessed June 5, 2024]

⁶ Malaysian Ministry of Finance. (2024). *Belanjawan 2024 Speech*. Available online from: <https://belanjawan.mof.gov.my/pdf/belanjawan2024/ucapan/ub24-BI.pdf>. [Accessed June 6, 2024]

government stated that to support the environment by minimizing vehicles pollution it is crucial to increase the usage of electric vehicles in the community. The Malaysian Government suggests to develop import duty, excise duty, and sales tax exemptions on electric vehicles.

3. Philippines

According to the Philippines's Department of Energy,⁸ every Philippines Government law related to electric vehicles ought to be implemented to facilitate the development of a sustainable environment for ambitious and unbiased participation with long-term goal of saving energy. This resulted in Philippines's government agencies to enforce regulations that has been provided. For example, the government agencies together with other department are tasked to promote the use of electric vehicles to spread the importance to the community. Besides that, the Philippine Government also organized to have parking slots dedicated to electric vehicles.

The Philippine Government also prepared incentives to increase the usage of electric vehicles such as cutting electric vehicles cost as much as possible to narrow the cost difference between electric and traditional vehicles, provide support to attract electric vehicles and its parts manufacturing companies, and import equipment and component used to create electric vehicles. Moreover, the government allows foreign experts to be employed under local companies related to the production of electric vehicles. Additionally, the government together with other institutions provides financial support for people who are engaged in the electric vehicles industry. As well as taking care certification from the producer and consumer of electric vehicles.

4. Vietnam

Prof. Dr. Wilmar Matinez from United Nations Development Program (UNDP) stated that the number of electric vehicle usage is low due to the lack of charging stations in Vietnam. Nam Toan, head of the Department of Environmental Science, Technology, and International Cooperation branch of Department for Roads of Vietnam, noted that the Ministry of Transport is developing the design of a new highway to have rest areas and charging stations for electric vehicles. The Vietnam Government believes that the increasing amount of charging stations will impact the amount of people who are planning to own electric vehicles. Vietnam's government are also planning to gives incentives that may include tax exemption for five years after the charging stations are built and a 50 percent tax reduction for the next five years. Nguyen The Vinh, an expert from Electricity Vietnam, mentioned that charging stations was not the only challenges, the amount of people using the charging stations need to be calculated to prevent too much pressure on the electrical system. Nguyen Bao Huy, from the Hanoi University of

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⁷ Malaysian Ministry of Finance. (2022). *Budget 2022 Speech*. Available online from: <https://belanjawan.mof.gov.my/pdf/2022/ucapan/bs22.pdf>. [Accessed June 6, 2024]

⁸ Department of Energy Philippines (2022). *Implementing Rules and Regulations of Republic Act No. 11697 of The Electric Vehicle Industry Development Act*. Available online from: <https://doe.gov.ph/sites/default/files/pdf/announcements/DOE%20DOTR%20IRR%20EVIDA%2008212022.pdf?withshield=1>. [Accessed June 6, 2024]

Science and Technology, commented that the country could install a smart charging system. Which usage as monitoring to manage the vehicle's charging time and method at each station and provides data on nearby charging stations.⁹ Through this process, the Vietnam Government hoped to increase the amount of people that drives electric vehicles to battles against environmental challenges.

B. Why These Focuses are Not Effective

After discussing how some South East Asia countries deal with recent environmental challenges, there is one single thing in common which is increasing the usage of electric vehicles. While this electric vehicles programs and regulation may reduce the amount of carbon emission, it will only resolve air pollution problem and ignores other issues. It has been mentioned before that the author has different opinion regarding the action taken by SEA governments. Therefore, it is crucial to explore as to why programs that are offered by SEA governments is not effective. First, it ignores the traffic jam issue. SEA countries like Indonesia, Malaysia, Thailand, and Philippines are known to have a large population of individuals that utilizes vehicles as their commute. Thus, the time it takes to go from one place to another won't be affected in daily activities which can be depicted as a waste of money for people in those country to purchase a new vehicle without any considerable difference. This relate to the next problem which is the cost for maintaining electric vehicles. Although SEA government has offered incentives and subsidy to electric vehicles consumer. In a developing country, it is considered costly to maintain electric vehicles for years to come especially with an average income in those countries. The third problem is it doesn't support every economic class of people, it only provides option for middle and high-class economy individuals. Most SEA countries are developing country that still have a lot of problem to be taken care of, some of them are economic gap and poverty. On one side there are people who could have any vehicles they want and on the other side there are people who are desperately trying to provide meal for their family. The fourth problem is that it doesn't reduce the amount of accident happens on the road. Whether electric or traditional vehicles that the people use, if the individual are irresponsible and ignorant it would make no difference at all.

C. Shifting Urban Design to Supportive Daily Commute is the Solution

Following the discussion about challenges that have been mentioned, the solution that should be considered is shifting the design of every cities in each country. Urban design has always been under the radar as the solution for most people including those in government agencies. This largely due to the local community rarely consider that urban planning as a choice and could be changed. Furthermore, in most SEA countries it is not easy to find trainings and seminars that promotes shifting current urban design to a better design. For this reason, it is necessary for organizations and individuals act to promote an act to develop well-design cities.

Through this approach, it will not only battles against the main issues but also resolves the challenges that have been discussed before. This is due to great urban design in South East Asia countries will eliminate the need of personal vehicles whether it's electric or

⁹ Vietnam Law Magazine (2024). *Vietnam targets all transport means run on green energy by 2050*. Available online from: <https://vietnamlawmagazine.vn/vietnam-targets-all-transport-means-run-on-green-energy-by-2050-71566.html>. [Accessed June 6, 2024]

fossil fuel vehicles. Thus, making each individual ignore the need to own vehicles and focuses more on other primary needs such as house, daily needs, and saving for marriage lives. Which lead to reducing the gap between the high, the middle, and the lower economic class individuals since instead on purchasing vehicles they could spend it in other means that are able to lift their lives financially. Additionally, each local government in SEA countries must develop urban design that support walking, bicycles, and public transportation as daily commute that are not monopolized to keep the cost low for the local community.

D. *Challenges in Creating Great Urban Design*

In previous subject, the solution has been offered. But, by shifting the existing urban design there could also be critics from either the local government or the local community. Hence in this subject, the focus is to identify challenges that may appear during the planning of shifting urban design. The first issue is it too late, the reason why urban design has always been under the radar in the local community have been used to live in their local city as it is. Thus, creating an argument such as wasting resources just to make a new design. The second challenge is it useless to complain, the urban design in SEA country will always be the same due to the government choice to not care about the design too much leaving opinions unheard since individuals that critics existing urban design are small and doesn't have any titles.

While indeed there could be more issue than mentioned by planning to redesign cities in SEA country, it is also important to calculate the cost to the benefit for the community. By having a great urban design that enforces individuals to walk, cycle, or utilize inexpensive public transport it will greatly reduce the economic gap between social-economic classes. In addition, by creating a socially active cities that doesn't rely on personal closed vehicles it could impact the mental health of every individuals which could affect the rate of suicide and criminal activities. Thus, the author suggests each SEA government to calculate the cost and long-term benefits for not only the environment but also their people.

IV. Conclusion

In this era, environmental challenges appear more than ever due to human daily activities with some reached global issue. One of the issues that has been widely known around the world and has been discussed a lot is global warming. This issue caused governments from many countries and international organizations to act against the rising threat, resulted in regulation, policies, and infrastructures to become environmentally friendly. Unfortunately, the solution that are offered by most governments are ineffective due to various reasons including for most developing country specifically most South East Asia countries. Thus, the author argues that by implementing dense and active urban design is the solution to the problem. Undoubtedly, the solution by the author has flaws but that doesn't mean it should stop. Suggesting the government and the local community should consider this meaning as a possible long-term solution with many benefits. Therefore, it is necessary for every government agencies, organizations, and related experts to study and calculate the consideration to this solution in favor of their own country future.

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