The Implementation of Green Neighbourhood Initiatives in Urban Living: Methodology of Research

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Abstract. Green neighborhood is a neighborhood that practices a way of life to meet the needs of people's activities. Community practices in this green neighborhood also have the potential to regulate pollution, save energy, accessibility, safeguard the environment, increase employment opportunities and reduce crime rates. Green neighborhoods can form friendships, practice agricultural areas, use renewable energy methods, and support sensitive nature. This practice also makes easy access to home, workplace, infrastructure, public utilities, transit facilities and easily accessible from one neighborhood. Conflicts between rapid development and local communities required a new model to understand about the relationships between green neighbourhood initiatives from local communities. This paper discusses how to doing research method on the effectiveness for implementation of green neighborhood initiative in urban living and part on my ongoing PhD study. It starts by discussing how the theoretical background of green neighborhood initiatives in urban living, then how the initiatives contribute to sustainable environmental and quality of life in urban living. Subsequently, it discusses the method of the study to conduct research on green neighborhood practices with a special emphasis to seek a clear understanding of acceptance from society on new actions, problems arising, community perceptions and community proposals. It followed by data collection methods, how data analysis conducted and results. It ends with preparation of questionnaires to look more in detail on the perceptions of society in terms of economic, social and environment aspects. Results and proposals designed to help communities, local authorities and agencies to carry out five selected green neighborhood initiatives.

1. Introduction
In recent years, sustainability of urban development has characterized as a development that can cater to the needs of today's development without affecting the capabilities of development and future generations to meet their own needs. Since the United Nations Conference on the global agenda and the Human Environment in 1972, Malaysia has taken serious steps in addressing environmental issues and issues. In 1992, Malaysia also demonstrated its commitment to the Rio Summit afterwards the Malaysian Nature Environment. Sustainable and Environmental issues are undoubtedly the challenge of the 21st century. The current global climate change brings the need to serious in designing urban development. Cities now find themselves in the middle of the 'Green Revolution' as one of the most important development components to do sustainability. Some of the innovations and city initiatives meant to make city more sustainable, greener, healthier and environmentally friendly. One of the concepts that has introduced for sustainable city formation is the Green Neighbourhood Initiative. This initiative is the first attempt to join the principles of urban sustainability with the level of community development at a micro level. Green neighborhood designated using various indicators that go beyond traditional variables such as plant protection, convenience, energy conservation and park size. In the
Tenth Malaysia Plan, emphasis was on formation of a vibrant, compressible and vibrant city, green technology development and green building, which is part of the green neighbourhood.

1.1 Background
Green neighbourhood is a relationship that people have with nature resources. Green Neighbourhood is an application and a practice for sustainable in term of economic, social and physical. The challenge of neighbourhoods regards how involving sustainable practices attached with forms, technologies and process of 21st sustainable cities. This is not a cultural changes made necessary by the negative impacts of global warming. It is an opportunity to enhance the living environment. It is also one of afford to practice the green neighbourhood initiatives for environment. Green neighbourhoods and sustainable is an area with mixed-use with community had a good relationship with each other, livable communities for all ages and a place to live, work and play, facilities that can meet the needs of various populations in the present and the future. This problem is also due to global warming and global climate change has affected the lives of the world's people in various stages. [1] mentioned the global population has risen by about 80 million people each year. In 1990, only 10 percent of the world's population lived in the city and by 2008, urban population has risen to more than 50 percent. The increase expected to 60 percent by 2030. The city's estimated growth rate is four times in rural areas, and it expected that urban populations would increase to 5 billion by 2030.

Lack of awareness about the important of preserving environment from stakeholders and communities. [2] mentions around the world, waste generation rates are rising. In 2012, people in the world's cities produce 1.3 billion tons of solid waste annually with an estimated 1.2 kilograms per day. By 2025, with the growing population growth and rapid urbanization, municipal waste generation expected to increase to 2.2 billion tonnes. The waste managed will contribute as a breeding ground for disease vectors, contributing to global climate change through methane generation and promoting urban violence.

Lack of awareness and public participant of community in green neighbourhood initiatives program by local authority. According to [3] the level of understanding and awareness of community to participation in green neighbourhood initiatives program are very low. [4] mentioned local agenda in Malaysia has introduced since 1999 and today, in local authorities in Malaysia still in the process of implementation.

1.2 Aim and Objectives
The purpose of this paper is to carry out a research method on the effectiveness of implementing green neighbourhood initiatives in urban living. The aim is specifically to find the implementing research methods by discussing how the concept of green neighbourhood initiatives in urban living and how it can give to the environment and sustainable quality of life. This paper discusses the basics of method to conduct research on green neighbourhood practices, investigate the effectiveness of current practices, acceptance of new concepts and perceptions of society, local authorities and agencies. This paper will then take into account how the proposed data collection and analysis is to see more detail for the perceptions of the economic, social and environment aspects. It also discusses how other steps helped develop this questionnaire. From the survey, it can see results, potentials and suggestions.

2. Theoretical Background
Refer to [5], green neighbourhood guideline as guidance to developers and Local Authorities on the elements that should include in developing green neighbourhood initiatives. It is initiatives include walkability and connectivity, creating a transit facility in the near distance, green network, mixed-use development, high density, neighbourhoods safe environment, application of green technology in building construction and infrastructure facilities, selection and planning for neighbourhoods community network.

2.1 Differences between Common Neighbourhoods and Green Neighborhood Initiatives
Green Neighbourhood initiatives are gaining popularity in the develop area, the concept, initially derived out of concern for community urban living and environmental.
Table 1. The Differences between common neighbourhoods and green neighbourhoods in Malaysia

| Common Neighbourhood                                                                 | Green Neighbourhood                                                                 |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|
| Not apply environmental friendly in building, infrastructure and utilities construction | Apply green elements in construction for buildings, infrastructure, utility and built environment. |
| Depending on all natural resources and no energy savings.                            | Apply and always practice energy savings and good resource management.               |
| Communities use private vehicles, no efficient public transport facilities and no transportation facilities integration | Apply the concept of transit-oriented development, integration public transportation mode. More concept of connectivity, promotes walkability and narrower streets. |
| Uncontrolled development, no green element and encouraging sprawl.                   | Development practices conserve land and energy-saving and resources saving.           |

Source: PLANMalaysia (2012) [5]

Table 1 indicating the differences between common neighbourhoods and green neighbourhoods in Malaysia. Green neighbourhood apply the green approaches in buildings, infrastructures, practice efficient, transit-oriented development and to conserve land and energy resources.

2.2 Malaysian Green Neighbourhood Development Action Plan
According to [6], for the realization and success of this action plan must requires support from stakeholder, local authorities, developers, urban planners, engineers, landscapes, environmental officers, architects and related agencies in the public and private sectors. Base on [6], the guidance aimed at assisting local authorities and agencies to carry out five (5) selected green neighbourhood initiatives as pedestrian walkway, bicycle lane, rainwater harvesting system, waste composting and community farming. These five actions to prioritize because it can be implemented with a quick and easy time and a less expensive.

3. Conceptual Framework
This research is to study the implementation of green neighbourhood initiatives in urban living. Conceptual framework can adapted to explain the achievement from implementation of green neighbourhood initiatives to get aims of study from the social, economic and environmental aspect. A research hypothesis for this study come from the main research question. According to the PLANMalaysia 2019, there is still a state in Malaysia, which has not yet adopted these initiatives. While according to Town Planning Department, Subang Jaya Municipal Council (2019), the level of understanding and awareness of community to participation in green neighbourhood initiatives program are very low. There is a significant implementation of green neighbourhood effect to social, economic and environment in urban living.
3. Methodology
According to [7], the methodology is a theoretical and systematic analysis of the methods used to conduct a study. It includes theoretical analysis of the methods and principles related to the study. Methodology includes concepts such as paradigms, theoretical models, phases and techniques of obtaining data. [8] note that this methodology is a guideline for problem solving, with specific components such as methods and tools for planning, reviewing and conducting projects.

The case study area chooses located at Subang Jaya Municipal Council, located 25 km south of Kuala Lumpur. While Shah Alam is, the state capital of Selangor, Malaysia situated within the Petaling District.

Figure 1. Conceptual Framework

Figure 2. Methodological Framework

Figure 2 indicating the process of research method which include aim, objectives, data collection, analysis, finding and discussion on implementation of green neighbourhood in urban living.

3.1 Aim and Objectives
These research objectives are to investigate the current practices of green neighbourhood initiatives, to study the criteria of green Neighbourhood in urban living, to investigate the green neighbourhood initiatives that influence involvement and willingness among community and to develop strategies of green neighbourhood initiatives in urban living.

3.2 Data Collection
Data collection using mixed method integrates both forms of data, various sources and uses different designs. The primary assumptions of this inquiry forms are integration of qualitative and quantitative results to produce a wealth of accurate information with data on population questionnaires and interview. [9] describe various methods, including collecting data through surveys, observation methods and using existing secondary data.
3.2.1 Quantitative Method. This method most often carried out by collecting resident questionnaires. This questionnaire is important to decide the exact number of respondents required. For this paper, the questionnaire survey method will carried out with 400 questionnaires from the communities of Subang Jaya Municipal Council.

**Table 2. Respondents for Questionnaire Method**

| Parties/Residents       | Respondents       | Reasons                                      |
|-------------------------|-------------------|----------------------------------------------|
| Communities/Residents   | Residents         | Issues of communities, willingness          |
|                         | Jawatankuasa Penduduk | Public responsibility, knowledge, awareness |
|                         | JKP (24 JKP)      | Public relationship, advantage, disadvantage |
|                         |                   | Community’s needs, comments, suggestions     |

Table 2 indicates the research method conducted by the questionnaire survey that involves collecting quantitative data from communities or residents.

3.2.3 Qualitative Method. The qualitative method is to hold interview sessions, the basis of respondents about experience and those who manage green neighbourhood initiatives. Samples selected are people from Subang Jaya Municipal Council and other agencies. Questions provided to respondents for data gathering related, policies and guidelines, initiatives, management, planning strategies to solve implementation problems and programs conducted to resolve these issues. All interviews will conducted face-to-face and will need important skills in conducting research to know perceptions, knowledge and behaviour.

**Table 3. Respondents for Interview Method**

| Parties/Agencies       | Name of Departments                      | Reasons                                      |
|------------------------|------------------------------------------|----------------------------------------------|
| Local Authority        | Town Planning Department                  | Issues of local authority and community      |
|                        | Environmental Department                 | Support green neighbourhood.                 |
|                        | Engineering Department                   | Implementation of green neighbourhood.       |
|                        | Landscape Department                     | Managing the problems, expertise, ability    |
|                        |                                          | Future planning, comments, suggestions       |
| PLANMalaysia Developer | Research and Development Department      | Issues and problem, guide line, policies    |
|                        |                                          | Knowledge, willingness, expertise, ability   |
|                        |                                          | Future planning, comments, Suggestions       |

Table 3 indicates the research method conducted by the interviews that involves collecting qualitative data from local authorities, agency and stakeholders.

3.3 Analysis

3.3.1 Quantitative Analysis. Analytical techniques for quantitative data can use descriptive statistical analysis for frequencies, cross tabulation and descriptive ratio. These techniques associated with numbers as ideal tool for various data analysis tasks. Quantitative data will analyze using respond to codes on Likert scale from 1 (lowest) to 5 (highest). The main nodes used are elements of green neighborhood initiatives, challenges and benefits that affect the green neighborhoods implemented, factors that influence the involvement and willingness of the community in urban life and the effectiveness of communities using green neighborhood initiatives within the urban living.

3.3.2 Qualitative Analysis. Technical analysis to analyze qualitative data is computer qualitative data analysis with coding question technique and performed by identifying all the nodes associated with this study. Data will organize, store and retrieve. The use of key nodes is issues and problems, planning, managing, comments and suggestions to carry out green neighbourhoods initiatives.
3.4 Finding and Discussion

Result from observation, interview and resident’s questionnaire that conducted from difference neighbourhood, organisation and backgrounds. The findings consist of various data and information’s from perceptions among the neighbourhood and current practise from local authority. All the data and information’s about implementation of green neighbourhood initiatives will have reported. The finding will include the underlying perceptual categories of planning for green neighbourhood initiatives, trend and demand of green neighbourhood initiatives, implementation from local authority and stakeholders, perception of communities, problems, community needs and correlations between factors.

4. Conclusion

This paper concludes that method is a very important part of the research. Research method is a specific procedure used to find, select, process, and analyse information about a research topic. The method can check the validity and reliability of the entire study conducted in order. This research aim to gather the feedback from communities, stakeholders and local authority on how implementation of these initiatives in urban living and affect to social, economic and environment. The most suitable type of community activities in urban living will make sure the high level of development in urban living. Finally, this study will bring a lot of benefit to resident, developer and local authority and the area itself. Approach from stakeholders, local authorities and residents with implementation of green neighbourhood initiatives will increase quality for communities, economic and environment.

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