UNIVERSITI TEKNOLOGI MARA

INSTITUTIONAL FRAMEWORK AND URBAN GOVERNANCE FOR LOW CARBON CITY DEVELOPMENT AT LOCAL GOVERNMENT LEVEL

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Thesis submitted in fulfilment
of the requirements for the degree of
Doctor of Philosophy
(Built Environment)

Faculty of Built Environment

October 2025

ABSTRACT

Malaysia's government emphasises achieving Low Carbon City status by 2050, and therefore, cities under several local authorities now endeavour and are committed to achieving the government's target. Despite that, the government is facing challenges in implementing the Low Carbon City (LCC) approach, particularly at the bottom-level implementer. Hence, to ensure a more effective process in the delivery of LCC initiatives, there is an urgency to address the issues by empowering the institutional framework for LCC delivery practices. Significantly, this research aims to formulate an institutional framework as an urban governance approach to administer the LCC delivery at the local government level. Three (3) objectives were established to look at (i) existing governance in administering the LCC approach at the local authority; (ii) the current delivery practices of the LCC initiatives at the local level; and (iii) propose a comprehensive governance institutional framework for low-carbon delivery at the local government. The research consists of two (2) main local authorities in Selangor, as targeted by the government to attain the status by 2050, as well as due to their progress in achieving the LCC status. A multiple-case study approach was applied, using Shah Alam City Council and Subang Jaya City Council as the case studies. The method used to collect the data comes from a qualitative approach, whereas an expert interview was conducted with Eleven (11) experts from various agencies to gain insight from two (2) notions: local authorities and stakeholders' perspectives. The Focus Group Discussion was conducted involving eighteen (18) participants who represent the authorities, internal and external agencies related to low carbon initiatives, private sectors, including developers and industrial consultants, and community representatives. Results from the Delphi Method indicate participation from ten (10) local authorities selected through Groups 1 and 2 of the National Low-Carbon City Master Plan. All the data were then analysed using qualitative analysis techniques through thematic analysis. The results exhibit that the low-carbon city approach was governed at the local government level through the existence of a Sustainable Unit under the Planning Department. The research found that the existing organisational setting affects the effectiveness of low-carbon governance primarily due to the limited jurisdiction and inaccurate unit placement. Moreover, the absence of legal impulsion stimulates the governance of a low-carbon city and determines the priorities of its administrative approach. Meanwhile, the current delivery practice elucidated that local authorities act as mediators by integrating the national policies and local initiatives into the climate action plan as a delivery tool. However, the absence of a centralised data management approach undermines the effectiveness of public-private partnerships in implementing low-carbon initiatives. Through the institutional frameworks, it is fundamental to redesign the organisational structure to enhance coordination, clear jurisdiction, proper allocation of responsibility, and strengthen it through a legal framework, hence allowing efficiency in the decision-making process. It is expected that this research will be able to unveil the fundamentals of low-carbon city governance, particularly at the local government level, to enhance the current practices, hence meeting the government target and adhering to the national plan to improve the LCC delivery practices.

ACKNOWLEDGEMENT

All praise to Allah s.w.t. for granting me the blessing to complete this research. I believe this journey is the best planned for me by the Almighty. My deepest gratitude and appreciation to both of my supervisors; their love and advice have made me strong and given me the confidence to complete this thesis. To my beloved main supervisor, Professor Dr. Yusfida Ayu Abdullah @ Mohd Zain, thank you for the opportunity to embark on this PhD. You have a special place in my life and play a major role in ensuring that I achieve my academic success. Your unwavering trust in me inspired me to be independent, strive for excellence, and give my best for my PhD thesis. I feel honoured to have the opportunity to learn from you and grow both academically and personally under your guidance. To my Co-Supervisor, Associate Professor Dr. Na'asah Nasrudin, thank you very much for the endless support, advice, encouragement, and guidance. I am very grateful for your kindness and for having you as my supervisor.

Many thanks to the Institute of Postgraduate Studies (IPSiS), which had arranged various programs, and also to the Postgraduate Office from the Faculty of Built Environment for their assistance throughout the process. My appreciation also goes to the officers from various agencies and all the experts who were involved and facilitated my research during the data collection process.

Special thanks are also extended to my parents for their constant prayers and to all my family members for their unwavering love and support. I gratefully acknowledge the support and encouragement of my husband throughout my doctoral studies. Furthermore, this doctoral thesis is dedicated to my beloved daughters, Aisyah and Asyfa. May this journey be a special memory for us and an inspiration to both of you in the future.

Finally, I would like to express gratitude for all the wishes and prayers from my friends, lecturers and students in the School of Town and Regional Planning, Faculty of Built Environment. Their encouragement made my day and inspired me to do well. Alhamdulillah

TABLE OF CONTENTS

CHAPTER 1
INTRODUCTION

1.1 Preface

This chapter presents the purpose of the research and offers a detailed overview of the entire thesis. It begins by explaining the research background, setting the context, and addressing the key issues related to the topic. Through an initial desktop study, the research has identified gaps in the existing literature, which not only highlight an underexplored area in the field but also serve as the foundation for the scope and significance of this study. In response to the problem statement, the research questions have been formulated, and the statement of aim, objectives, and scope of the research are clearly outlined in this chapter. Additionally, this chapter highlights the significance of the research while acknowledging the limitations encountered during the study. Furthermore, a research framework is introduced to provide a deeper understanding of the study, followed by an overview of the thesis structure.

1.2 Research Background

Generally, climate change is understood as the change in global temperature and weather. The United Nations (2022) defines climate change as "long-term shifts in temperatures and weather patterns" due to various human activities. It was witnessed by many countries around the world that climate change affects the global temperatures, extreme weather patterns or natural disasters, drought, and the rise of the sea level. To date, climate change remains an ongoing global issue, and its effects have become more intensified, especially in terms of global temperature, extreme weather events, and the rise of sea level (The Intergovernmental Panel on Climate Change (IPCC), 2023).

One factor driving the increase in climate change is the rise in carbon emissions. According to Emissions Database for Global Atmospheric Research report by European Union (2024), the total of global carbon emission is increasing from 32.7 $GtCO_2e$ in 1990 to a record 53.0 $GtCO_2e$ in 2023. This represents an overall growth of more than 60% over three decades. While, Malaysia's total greenhouse gas emissions (CO_2-equivalent) were approximately 325.4 Mt CO_2e in 2023.