

**A STUDY ON ADOPTING SUSTAINABLE
DEVELOPMENT IN CONSTRUCTION INDUSTRY OF
SRI LANKA**

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Master of Science in Project Management

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Dissertation submitted in partial fulfillment of the requirements for the degree Master
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DECLARATION

I hereby declare that this dissertation is my original work, and that, to the best of my knowledge and belief, it does not have any previously published or written works by other people, except for those instances where an acknowledgment is made within the text. It also does not incorporate without acknowledgment any material previously given for a master's or degree in any other university or higher education institution.

In addition, I thank Dr. Devapriya, my research supervisor, for her insightful advice, which helped me finish this dissertation. I declare that unless I have my supervisor's written consent, I will not publish any findings from this research without including his or her name as a contributing author.

Furthermore, I hereby give the University of Moratuwa the non-exclusive right to print, electronically distribute, and otherwise use my dissertation in whole or in part. I reserve the right to use all or part of this content in future writings, including books and articles.

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The above candidate has conducted research for the Dissertation under my supervision.

Name of the Supervisor: Dr. K A K Devapriya

Signature of the Supervisor:

Date:

This study investigates Sri Lanka's situation of sustainable development and construction methods. By analyzing the socio-economic, environmental, and cultural aspects, this research looks to evaluate how well the nation's existing approaches promote sustainability in the building sector. The study assesses the application of sustainable frameworks, regulatory policies, and technical breakthroughs through thoroughly evaluating literature, case studies, and empirical analysis. The results highlight the obstacles, achievements, and possible avenues for improving sustainable growth in the construction industry in Sri Lanka. In the end, this study provides information and suggestions that are essential for developing sustainable methods in project planning and construction in the context of Sri Lanka.

Key words: Sustainable Development, Green Building, Sustainable Construction Practices

DEDICATION

This research is dedicated to my devoted wife, parents & esteemed instructors whose unwavering support, patience, and encouragement have been guiding light throughout this journey. To my mentors and educators, whose wisdom and guidance have shaped my understanding and passion for sustainable development. And to the resilient spirit of the people of Sri Lanka, whose experiences and perspectives have enriched this study and inspired a commitment to fostering sustainable progress in our communities.

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LIST OF ABBREVIATIONS

BREEAM	- Building Research Establishment Environmental Assessment Method
BSA	- Building Sustainability Assessment
C&D	- Construction and Demolition
CIA	- Cumulative Impact Assessment
DFD	- Design for Deconstruction
DGNB	- Deutsche Gesellschaft für Nachhaltiges Bauen
EIA	- Economic Impact Assessment
EIA	- Environmental Impact Assessment
GBC	- Green Building Challenge
GBI	- Green Building Index
GDP	- Gross Domestic Products
HVAC	- Heating, Ventilation, and Air Conditioning
IAQ	- Indoor Air Quality
ICT	- Information and Communication Technologies
IEQ	- Indoor Environmental Quality
IHDI	- Inequality-Adjusted Human Development Index
LBC	- Living Building Challenge
LCA	- Life Cycle Assessment
LCI	- Life Cycle Inventory
LEED	- Leadership in Energy and Environmental Design
MEP	- Mechanical, Electrical and Plumbing
MSDWRD	- Ministry of Sustainable Development, Wildlife, and Regional Development
SAM	- Sustainable Architecture Matrix
SD	- Sustainable Development
SDGs	- Sustainable Development Goals
SDI	- Sustainable Development Indicator
SI	- Sustainability Indicators
SIA	- Social Impact Assessment
UK	- United Kingdom
UN	- The United Nations

UNCED	- United Nations Conference on Environment and Development
UNDP	- United Nations Development Program
UNESCO	- United Nations Educational, Scientific and Cultural Organization
US	- United States
VNR	- Voluntary National Review
VOC	- Volatile Organic Compounds
WCED	- World Commission on Environment and Development
WERS	- Water Efficiency Rating Score