



**VERTICAL AND HORIZONTAL VEGETATION AS A
TOOL TO INCREASE ECO-SKYSCRAPERS
ENVIRONMENTAL EFFICIENCY.**

CASE STUDY: RESIDENTIAL BUILDINGS

By

REEM MOHAMED REDA EL-TAHER

A Thesis Submitted to the
Faculty of Engineering at Cairo University
in Partial Fulfillment of the
Requirements for the Degree of
MASTER OF SCIENCE
in
Architecture-Building Technology

**FACULTY OF ENGINEERING, CAIRO UNIVERSITY
GIZA, EGYPT
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Title of Thesis : VERTICAL AND HORIZONTAL VEGETATION AS A TOOL
TO INCREASE ECO-SKYSCRAPERS ENVIRONMENTAL EFFICIENCY

Key Words:

Vertical greening systems, Green roofs, vertical farming, ecology, eco-skyscrapers, energy efficiency and atmosphere, water efficiency.

Summary :

Now the world change, especially after the impact of major oil crises in 1973/ 1979. This research is trying to bring a new way of thinking to understand the need of incorporating nature in the design as one of the aspects and new technologies for eco-design policy, which reduce the negative impacts of buildings and increase the environmental efficiency. By clarifying importance of integrating systems of vertical and horizontal vegetation into eco-skyscrapers, and learn how to develop green spaces in buildings.

Acknowledgments

First I thank God, the glorious and compassionate, for helping me and giving me the strength to accomplish this work.

My appreciation and gratitude goes then to Prof. Dr. Hisham Sameh for his constant support and intellectual advice. I also thank Dr. Hosam Abd El Aziz for his continuous encouragement, guidance and support.

This opportunity is valuable to express my gratitude to everyone who supported me all the way through. A special thanks to my family. Words cannot express how grateful I am to mom, husband and my kind daughter (Reem) for all of the sacrifices that you've made on my behalf ,and I am very thankful for my little daughter (Qamar) for being my blessing. Without your guidance and persistent support it would not have been possible.

Last but not least, my deepest appreciation to my beloved father who have supported me throughout the entire process. Thank you my father.

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