SUSTAINABLE BEACH RESORT DEVELOPMENT:
A DECISION FRAMEWORK FOR COASTAL RESORT DEVELOPMENT IN EGYPT AND THE UNITED STATES

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(ABSTRACT)

In recent decades, coastal tourism has grown significantly bringing enormous economic benefits to host communities, and causing many environmental and social impacts to the coastal environment. Beach resort development faces problems due to an inability on the part of stakeholders to make sound decisions about sustainable design due, in part, to the complexity of the sustainability issues and the lack of a comprehensive decision-making tool to assist them. In Egypt, design and planning regulations have not changed for decades, resulting in non-sustainable beach resort development. This study provides a “decision framework,” a conceptual “Sustainable Design Model”, which shifts the focus of stakeholders from the application of traditional physical carrying capacity procedures to a comprehensive approach linking sustainability indicators and carrying capacities. This approach includes an array of acceptable capacities based on the ecological, social, psychological, physical, economic, and managerial capacity thresholds of a site. This framework assists stakeholders in making rational decisions about what is to be built, where it is located, and how to build it. To test the model, a survey was conducted at 10 beach resort destinations (5 American, 5 Egyptian) to measure the difference in perceptions between stakeholders concerning sustainability indicators and carrying capacities. The instrument was determined valid and reliable using a test/retest procedure. A total of 276 responses were obtained for data analysis. Statistical analyses included frequency distribution, t-tests, analysis of variance (ANOVA), factor analysis, and a stepwise multiple regression analysis. Sample demographic information was also collected. Results revealed a strong link between sustainability indicators and carrying capacity thresholds. While both Egyptian and American respondents recognized the importance of sensitive environmental developments, there were significant differences due to differences in culture, environment, regulations, and priorities. The American sample placed greater importance on the ecological indicators, while the Egyptian sample placed greater importance on the social, psychological, and managerial indicators. The American sample conveyed a positive attitude toward government regulations,
design, and management efforts to incorporate sustainability principles into the built environment, while the Egyptian respondents conveyed a more negative attitude. As a result of this study, future Egyptian policy may be better informed of the gap between the theoretical concepts of sustainability and real world coastal development implementation.
"The more clearly we can focus our attention on the wonders and realities of the universe about us, the less taste we shall have for destruction."

Rachel Carson (1954)

“We are now engaged in an epic battle to right the balance of our earth; the tide of this battle will turn only when the majority of people become sufficiently aroused by a shared sense of urgent danger to join an all-out effort.”

Al Gore, 1992

“The reality of our understanding comes from practicing and making things work.”


“The difficulty lies not in the new idea, but in escaping from the old ones.”

John Maynard Keynes (1936)

“A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise.”

Aldo Leopold (1966)

“All things … have their own will, their own way, and their own purpose; this is what is to be respected.”

Healer Rolling Thunder (1995)
DEDICATION

I dedicate my research to the spirit of my father,
               My mother,
               My future sons and daughters, and
               All whom I love and care for,
               in hope that they may
enjoy life in an environment free from pollution.
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Finally, I am very grateful to my mother, sisters, and my brother for their support. I thank all of them for always believing in me, and I dedicate this dissertation to the memory of my father.

There are many people to thank. Space, time, and memory prevent me from mentioning all of these individuals; I shall express my gratitude to everyone who has helped along the way providing intellectual, physical, or emotional support. I am profoundly grateful to all.
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Several years ago, I became concerned with the big boom of tourism development for recreation along the Egyptian coastal zones, and the quality of design, planning, construction, and operation of beach resorts. I witnessed shoddy developments destroying natural beauty and demolishing resources, an aggressive attitude of disregard toward nature; a general lack of public awareness concerning the value of our natural resources, degradation of natural and virgin coastal environmental qualities; loss of natural beauty where new tourism developments were being constructed; and careless pollution of air, water, and land. Moreover, the results were an over crowded development pattern that taxed the limits of the carrying capacity of the coastal environment. I felt a deep sorrow for the rapid degradation that was taking place in some developed parts of the Egyptian coastal zones that could be extended to other areas. I believe natural places should serve as sources of enjoyment and wonderment to human beings, and that they deserve respect and reverence. With the rapid growth of these careless developments nature can’t sustain itself indefinitely. This research addresses a number of issues that have been on my mind for many years since I was participating in the design, planning, and construction of some beach resort projects in Egypt. I hope, with the implementation of sustainability principles and carrying capacity control, we are able to enhance the protection of these natural places.