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Improving Sustainability Concept in Developing Countries

Sustainable Site Assessment: A way to Sustainable Hospitality in Egypt

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Abstract

Tourism being a major sector of the Egyptian economy and with the increasing awareness of humanity's negative effect on the planet, the shift towards sustainability became a must. Egypt being blessed with a variety of sites, the research focuses on developing a tool for sustainable sites assessment for hotels to reduce negative impacts on the environment; maximize social and economic benefits for the local community. The research was based on an inductive approach through studying sustainable sites in different International Certification Systems. As a result, an excel sheet for site assessment for hotels is developed that could locally be applied.

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Keywords: Sustainable Sites; Sustainable Sites Assessment; Sustainable Hotel; Sustainable Rating Systems for Hospitality;Sustainable Tourism.

1. Introduction

Nowadays, tourists around the world are becoming increasingly aware of and concerned about environmental protection, a trend that is expected to continue and will influence future choices of tourism destination worldwide. Because of the significant role of tourism in the national economy of Egypt, Egyptian government is creating new policies to encourage sustainable practices in tourism to become globally competitive and to make Egypt a sustainable destination.

In order to realize sustainable development in the construction industry, an environmental rating system has been considered as an effective tool. For that reason The Green Pyramid Rating System (GPRS)-Hotels has been developed by Housing and Building Research Center's (HBRC) team with the technical assistance of consultants and

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auditors with practical experience in the application of the German Certificate for Sustainable Buildings (DGNB) System. The developed rating system could be used as a technical guide for qualified and licensed GPRS_H Assessors to complete the assessment, as an aid for GPRS_H Auditors to achieve the desired GPRS_H rating and as a reference for the client whose proposed hotel is to be assessed.

2. The aim of the research

Egypt has a diverse of natural heritage as well as being blessed with a rich cultural and historical heritage sites and the preservation of these sites is essential for tourism, that's why the research focuses on developing a tool for sustainable sites assessment over the whole life-cycle of the building based on the three pillars of sustainability: ecology, economy and social aspects in pre-design, design, construction and operation stages to reduce negative impacts on the natural environment; maximize social and economic benefits for the local community.

3. Method

The research was based on an inductive approach through studying sustainable sites in three International Certification Systems: the German Certificate DGNB for Hotels as the first sustainable assessment certificate for hotels, LEED for Hospitality as the most famous and widely applicable system worldwide and Estidama as the first rating system in the Middle-East.

3.1. The German Certificate for Sustainable Buildings (DGNB for Hotels)

The “German Sustainable Building Certification” emphasizes an integrated view over the whole life-cycle of the building and is based on the three classic columns of sustainability: ecology, economy and social aspects in planning, construction, and operation of buildings. In addition, two cross section categories were created targeting aspects of the technique and of the process[1]. The location is assessed in an extra grade. The assessment relies on 63 criteria (there are currently 49 from 63 criterions activated) and distributed into six categories. In the criteria are listed the indicators that are evaluated either qualitatively or quantitatively. Each criterion has a value of ten points. The quality of the site is not included in the total performance index and considered separately. The total score for the project is calculated from the other five quality sections.

3.2. The Leadership in Energy & Environmental Design (LEED V4 BD+C: Hospitality)

LEED V4, includes the very first LEED rating system for hospitality. Protection of ecosystem & restoration biodiversity and enhancing social equity, environmental justice & community quality of life were two of the main LEED's goals which were referred to as "impact categories" that have been selected to provide the framework for the technical development of LEED version 4. LEED BD+C: Hospitality system is subdivided into six categories and weighted by points. Categories contain prerequisites that are obligatory and credits which are free to be achieved. Altogether there is a gain of 110 points in 43 credits. Additionally 12 prerequisites have to be fulfilled.

In LEED V4- Hospitality: The Location and Transportation (LT) category in this version was separated from Sustainable Sites (SS) category and is considered as an outgrowth of the Sustainable Sites, which formerly covered location-related topics[2]. Whereas the SS category now specifically addresses on-site ecosystem services, the LT category considers the existing features of the surrounding community and how this infrastructure affects occupants’ behavior and environmental performance.

3.3. The Pearl Rating System for Estidama V.1(PBRS)

PBRS for Estidama addresses the sustainability of a given development throughout its lifecycle from design then construction to operation[3]. The Pearl Rating System is organized into seven categories, two of them relate to site assessment: the Natural Systems and Livable Buildings.