

DEVELOPMENT OF A PROCEDURE TO ASSESS HOTEL SUSTAINABILITY IN MARGINALLY DEVELOPED SOUTHEAST ASIAN TOURISM DESTINATIONS

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ABSTRACT

The purpose of this paper is to develop a procedure for the assessment of hotel sustainability in marginally developed Southeast Asian tourism destinations. Twenty-four hotel case studies on the basis of geographical backgrounds in regionalized tourism destinations were analyzed. The issues of assessment of sustainable hotel development are discussed. A procedure for a model development is proposed, employing a combination of reductionist and holistic approaches to modeling: identification of systems, dimensions, and indicators, ranking of sustainability, gradations of sustainability, development of a hotel sustainability assessment map, and evaluation. A conceptual framework is formulated to assess sustainability with the above components in a Rose Diagram. 'Sustainable Project Appraisal Routine' (SPeAR) by ARUP and Partners; United States Green Building Council's Leadership in Energy and Environmental Design (LEED) Rating System; FTSE Good Index; assessment procedures in studies by Ko (2001 & 2005); AMOEBA of Tourism Sustainability Indicators (ATSI); and Barometer of Tourism Sustainability (BTS) are introduced as devices for the assessment of sustainability. The research builds on these instruments and proposes a new applied assessment model for hotels. The model represents a way to assess comprehensive levels of sustainability within the context of the Southeast Asian regions, combining specific social, political, cultural, environmental, economic, and natural resource indicators into an index of analysis. The indicators are both numerically calculated and conceptually ranked. Results in an overall graphic map on a rose diagram display a hotel's 'best' and 'worst' development practices.

INTRODUCTION

The 1992 Conference on Environment and Development involved sessions and reporting requirements of the Commission on Sustainable Development (CSD), which stressed to governing authorities the seriousness of environmental degradation and tourism development issues. Since the conference, many academics, community groups, governments, non-government organizations (NGOs) and international organizations have been attempting to convert theoretical intentions in relation to sustainable tourism development into practice (Ko, 2005). However, specific criteria on how lesser developed countries should assess sustainable development, remains unclear (Kim & Dwyer, 2002).

With respect to sustainable tourism development strategies in marginally developed areas of Southeast Asia, little practical methodology has been developed. A number of studies by (Kasim, 2004; Weaver, 2007; Elliott, 1999; Font, 2002; Puall & Garrod, 2001; Clarke, 2002; Butler, 2001; Mok & Lam, Nankervis 2000; Edmonds and Leposky, 2000; Dowling, 1997; Dallen, 2000) were conducted to produce guidelines, models of development, and introduce frameworks that could be applied to sustain and enhance the Southeast Asian tourism development. However, mostly are at a theoretical level rather than at a practical level.

Research and well-packaged information to help advance practical sustainable development standards can start with individual sectors. Identifying hotel projects in Southeast Asian regions, in particular, has critical significance. Assessment of individual projects offers the opportunity to showcase environmental resource efficiency, sustainable economic development, and social improvement. Development of scientific and objective methodologies for the assessment of hotel sustainability is a necessary feature of the idea of sustainable tourism development. If sustainable hotel development is one of the tourism industry's major contemporary objectives, then research needs to measure performance impacts in this area.

This study addresses the issue, namely, by addressing how progress towards sustainable hotel development in marginally developed areas of Southeast Asia can be measured. The question of 'how' is based on the premise of International Hotels Environmental Initiatives (IHEI, 1995) that hotel development affects regional economic vitality, and the extent to which it impacts the cultures, natural resources and bio-systems, policies, and infrastructures should be measured.

Purpose

The purpose of this study is to develop a procedure for assessing hotel sustainability in the context of marginally developed Southeast Asian tourism destinations. The contribution of the study, is, therefore, to present a practical and useful model for the assessment of hotel development. The major contributions of this paper are as follows: First, to incorporate, systematically, existing regional political, economic, socio-cultural and environmental impact and natural resource consumption considerations (including foreign investment) into a sustainability assessment process. Thus, this research seeks to improve the utility of existing hotel impact studies. Secondly, to provide a sustainability assessment tool which will enable stakeholders to understand easily and clearly the viability of the process of assessing a hotel; a succinct and accessible presentation format in a rose diagram illustrates levels of hotel sustainability among individual indicators. Finally, it encourages stakeholders to apply appropriate information in the process of hotel planning and development as well as assessment of existing features. (Including decision on priorities in policy implementation and resource allocation, and involvement of foreign direct investors)

LITERATURE REVIEW

Many definitions of tourism have been put forth, including Lieper's (1995, as cited in Mena, 2004: 32) who defined tourism as a sector of regional and national economies; as an industry; as a market; as an environmental complex; and as a system. Gunn, (1979, as cited in Mena; 2004: 34) developed a model reflecting the influence of the external environment including the political, economic, historical, natural and cultural, and the two-way relationships between various elements of the system (i.e. attractions, tourists, facilities, transportation, and information direction). This outlines the mutual influence that elements have on each other and the various facets of the tourist system (Mena, 2004).

Methesian and Wall (1982, as cited in Mena; 2004: 36) also depict a complex representation of the tourism system. This includes the consequential elements of the tourism system: dynamic and static. The dynamic element encompasses demand. The static encompasses characteristics of the "destination" including political, environmental and economic influences and the tourist, including socioeconomic characteristics of a person. These combine to constitute the "destination," the pressure on the destination, and the carrying capacity.

The consequential impacts of tourism are the physical, social and economic impacts and tourism which need to be controlled by comprehensive management and planning. Westlake (1998) emphasizes the importance of planning and development strategies at a destination or resort to minimize the overall impact of tourism.

Moore (1996) defines sustainable tourism broadly as total integration between communities in a given destination to include conservation of natural resources, health and safety aspects, renewable energy supplies, and all other aspects of environmental manifestations. Total integration, in addition, involves maintaining the social dignity and lifestyle of indigenous inhabitants and the local community. This is achieved by guarding against exploitation and by assuring local economic opportunity (Leposky, 1997).

However, the idea that a precise definition of the term, “sustainable tourism,” exists is incorrect, even in the case of the term being used in legal and administrative applications or planning and development or policy. There is no universally accepted definition for sustainability or sustainable tourism (Evans-Pritchard & Salazar, 1992; Mowforth & Munt, 1998, p.104). Due to the loose definition of “sustainability” and disagreements around what exactly “tourism” encompasses, it is a difficult industry to regulate (Honey, 1999). Additionally, there are over 100 eco-labels for tourism, hospitality and ecotourism, with many of them overlapping in sector or geographical scope, and there is no regulation to limit which or to what degree tourism, hospitality facilities, ecotourism businesses and destinations self-declare themselves to be, whether they self declare sustainable, green, environmentally friendly, eco friendly and so on (Font, X., 2002:197).

Therefore objectives of “sustainable” in a tourism destination are to consider planning and development of tourism products (e.g., hotels and resorts) which ensure that they are competitive, effectively contributing to national socioeconomic goals, and adaptive to change.

METHODOLOGY

Case Study Review

The first part of the study reviews 24 case studies on hotels in Southeast Asia. The purpose of this review is to determine which features at hotels are explicit to various issues of regional development. Twenty-four case studies reviewed by the researcher arrive at conclusions of which features across existing hotels in Southeast Asia are ‘sustainable’ or ‘not sustainable’. Case studies that did not determine whether a hotel was sustainable or unsustainable were not included in the review. Sustainability and development journals and texts were used as information sources to identify suitable hotels for case study. Specific destinations were selected based on studies published in a period of 1995-2005 which highlighted Southeast Asian tourism destinations, previously investigated by (Chon; Dowling; Timothy; Edmunds & Leposky; Nankervis; Nimmoranta; Jantararat & Williamz; Mok & Lam)

Destinations were identified and those hotels that presented a specific conclusion regarding the sustainable hotel development were then identified and visited by the researcher. In the process, it was found that few published studies categorized specific details of sustainability; thus, the researcher visited sites and conducted an analysis of issues at hotels in person, with the ability to identify relevant issues of sustainability by observation in the field.

Observation and prolonged contact in the field by the researcher allowed for coverage of a broad range of indicators. However, given the rapid development of hotels and the ecotourism industry, many relevant hotels may not have been identified, especially ones that were recently undertaken for development. It is, however, believed that the hotels selected by the researcher are suitably representative of hotels built within the period of study. This analysis also attempted to highlight the hotels under case study using pre-existing guidelines based on the Rocky Mountain and Urban Land Institutes publication on Green Development (1990).

The elements for the review are assessment participants: (qualified researcher); assessment components (hotel features, examined qualitatively); indicator selection procedure (hotel features identified as ‘unsustainable’ or ‘sustainable’) data gathering methods and data analysis methods (scaling of sustainability) and identifying indicators in relation to sustainability based on previous studies from a review of literature.

TABLE 1 Case Study Review

Regional	Indicators
Neighborhood Scale:	<p><i>Hotel design strategies make the density livable</i></p> <p><i>Hotel site provides tourists and residents with a means of transportation that minimizes traffic impact</i></p> <p><i>Hotel is planned, within a hierarchy of park, greenway or bike/hiking trailways throughout urban regionalized</i></p> <p><i>Affordable housing is located around the hotel, allowing for local (specifically native) residents</i></p> <p><i>Hotel has a regional tax sharing system that distributes funds fairly and eliminates the fiscal interpretation of Land-in-use</i></p> <p><i>Sensible balance is planned around the hotel for balance between jobs and local retailers,</i></p> <p><i>Hospitality and housing in the community</i></p> <p><i>Hotel development is concentrated in existing urban areas and prevents sprawls beyond urban growth boundaries</i></p>
Area Identity Scale:	<p><i>Hotel promotes diversity by including a variety of building types, sizes, and prices.</i></p> <p><i>Hotel is encouraged to be an appropriate size or a scaled development project that adds to the neighborhood characteristics</i></p> <p><i>Hotel works with existing residents and neighborhood groups to meet their needs and learn their perspectives</i></p>
Site Scale:	<p><i>Outdoor spaces are provided (private yards, balconies, semi-private courtyards, sand boxes, gardens, walkways, play areas)</i></p> <p><i>Parking is reduced (May not apply to many countries/hotels in Asia. Of particular interest to these countries is, most definitely, the paving issues. Gravel vs. dirt vs. concrete vs.</i></p>

	<p><i>asphalt</i></p> <p><i>Buildings relate to local streets and interior courtyards, and allow for improved safety. Porches, benches, and stoops are provided for public and private guests</i></p> <p><i>Building forms are selected as well as landscape elements (Flora/fauna to ensure adequate light to areas in the hotel and outdoor spaces, emphasizing (particularly) sunny exposures</i></p> <p><i>Hotel integrates natural features such as streams, slopes, rocks, and distinctive vegetation into the design</i></p> <p><i>Hotel responds to the scale and architectural character of adjacent structures.</i></p>
<p>Building Scale:</p>	<p><i>High quality detailing and design variation between hotels</i></p> <p><i>Hotel sites are minimally obstructive to land, foundations do not erode natural landscape</i></p> <p><i>Hotel Space Maximizes lights naturally</i></p> <p><i>Hotel contains roofs as open spaces, decks, pools, green roofs, roof gardens</i></p> <p><i>Hotel porches provide outdoor places, and variety or vertical exposure to units, units are slanted to allow maximum light (for example)</i></p> <p><i>Hotel has appropriate ventilation,</i></p> <p><i>Hotel Air quality, Mold Prevention, and Pest control are pervasive</i></p> <p><i>Hotel provides a good public interface, (sociable entranceways, front porches, no blank walls or monolithic building fronts, facing the streets)</i></p> <p><i>Hotel considers resident's needs and tastes when designing.</i></p> <p><i>Hotel is designed with flexibility</i></p> <p><i>Hotel incorporates natural history exhibits, or cultural performance areas- acting as a civic center</i></p>
<p>Social Scale:</p>	<p><i>Fair Labor standards on hotel and construction site</i></p> <p><i>Proper human resource issues are addressed</i></p> <p><i>Sex industry and prostitution is discouraged</i></p> <p><i>Illegal gambling is discouraged</i></p> <p><i>Drug use, trafficking, purchasing, and illegal sales (black market) discouraged</i></p>

	<p><i>Money laundering is discouraged.</i></p> <p><i>Labor force is local and ethically comprised</i></p> <p><i>Crime is managed</i></p> <p><i>Security is on site</i></p> <p><i>Religion is respected at hotel</i></p> <p><i>Ethnicity is respected at hotel</i></p> <p><i>Local resources are used and purchased for ongoing operations and management of hotel</i></p> <p><i>Local food, product and retail exists and is available for consumers and hotel guests</i></p> <p><i>Inflation in local community does not result from hotel development</i></p>
<p>Development, Construction, and Ongoing Operation Phase Activities:</p>	<p><i>The project driver for the hotel (Developer, owner, investor, architect) is concerned with sustainable development goals</i></p> <p><i>Key stakeholders, contractors and consultants clearly communicates sustainable goals</i></p> <p><i>Contractors are brought in as part of a sustainable development</i></p> <p><i>Detailed environmental guidelines or latest information on environmentally sensitive and health-conscious ways to treat the site and buildings are used</i></p> <p><i>Contracts are drawn up and signed and outline responsibilities and liabilities, and potential rewards and consequences to ensure that an ethical and green policy is followed</i></p> <p><i>Planning stages are considered green, or follow policies</i></p> <p><i>Community is considered in hotel planning process</i></p> <p><i>Quality of construction is insured by certified professionals and inspectors</i></p> <p><i>Green guidelines developed with specifications written, for bids in pre-bid meetings and pre-construction</i></p> <p><i>Local vendors are located and sourced for materials for hotel construction</i></p> <p><i>Non hazardous construction and labor conditions on site</i></p> <p><i>Construction minimizes pollutants and other waste products</i></p> <p><i>Construction waste management established for material</i></p>

	<p><i>separation and handling, recycling, and hauling</i></p> <p><i>Existing materials salvaged, hotel renovates aspects of existing buildings</i></p> <p><i>Salvage infrastructure is presence</i></p>
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From the examination of the 24 hotels that resulted in case studies, as mentioned above, a number of issues were identified. (1) The issues, problems, and concerns, for hotels vary from one tourist destination to another. (2) Most of the judgments about sustainable or unsustainable features were determined by the researcher, without the participation of the stakeholders. (3) A broad number of indicators were examined generally to arrive at the researcher’s conclusions regarding the sustainability of a given hotel development. (4) Indicator selection procedures are developed based on the researchers professional expertise and literature review. (5) Data gathering methods are somewhat unclear (6) Scaling, and quantification of sustainability indicators is attempted based on comprehensive literature review and researcher’s judgment; modes of sustainability may vary (9) Future scenarios of sustainability may not be determined.

The researcher’s methods of developing systematic sustainability assessment indicators based on findings from the case studies may yield results not currently addressed in many urbanized and more developed countries. A study by Ko, (2005) argues that sustainability, however defined in the tourism and sustainability literature, is measurable. However, Ko’s study has significant limitations in that it fails to explain what specific indices with respect to sustainability can be measured and how to identify individual subjective indicators inherent to a particular geographic region and culture. Although Ko’s study may be useful in presenting a comprehensive level of sustainability, the assessment lacks a substantial evaluation of idiosyncratic factors, which, if included could lead to the development of a more robust and relevant sustainability assessment model, encompassing in depth and contextual issues associated with regional communities. Therefore prolonged contact in the field and in depth analyses of cases rather than superficial approaches to indices development are required. Without the researcher and qualitative techniques, an assessment is likely to lack a holistic concern for specific environments, people and hotels types.

There has been intense debate about the process of sustainability assessment. Some suggest that the issues are ‘difficulties in context’. Such barriers can be seen when assessing marginally developed regions. The following question outlined in a study by Ko, (2005) citing (Kholosa, 1995, p. 9) indicates a typical concern: How do we measure areas which constitute sustainable development? Can we put numbers and or colors or other descriptors to indicate the quality of life and well being? Are indicators amiable to quantifications? Do we try and qualify them?

Previous studies have not presented ideal sustainability assessment models (Ko, 2005). Therefore, one approach is to give priority to discussing practical applications of the concept of sustainable development. Thus, in considering the sustainable development of hotels, the qualitative analysis of such items as insights into people’s quality of life, commercialization of the environment, and cultural and religious beliefs is essential. Protocol provided by a qualitative analysis can ensure a comprehensive, careful and deliberate decision making process. Approaches lead to an improved understanding of the structure and function of the social systems, ecosystems in the Southeast Asian region and a development of protocol for assessing sustainability in a comprehensive, careful, and deliberate way. This will assist the process in the countries of interest; including research on local and regional

municipalities, observation of the sites, interviews with various stakeholders, investigation of natural resources, historic analysis of financial and economic conditions and interaction in the community.

The strength of the research, in the area of sustainability assessment, has practical methodologies and implementations rather than superficial approaches. Carpenter (1995) identifies barriers in sustainability assessments of human systems and ecosystem contexts. Therefore, it was addressed in an attempt to avoid broad methodological dilemmas, as outlined by Cocklin (1989) including: Single resource analysis, boundary problems, and quantification problems in goals of sustainability (Hodge & Hardi, 1997).

Model Development

The researcher's field observations from the 24 case studies and existing practices are used as the basis for the development of the hotel sustainability assessment model (Appendix A). A five sector scale from the Barometer of Sustainability (BTS) Model and other possible orders including a three and four point from 'Unsustainable' to Sustainable' are assigned.

Other factors of sustainability at hotels identified from the literature are rated and organized into the index. The combinations of indices allow for coverage of a wide range of issues, many of which are quantifiable as well as those requiring a subjective ranking. The researchers tackled the issue of complexity by establishing extensive sets of indicators and sub indicators based on traditionally ranked as well as contextual indicators. All indices receive a traditional ranking from -5 to +5. Various ranking utilities were researched in order to allow subjective data to be given a weight that subsequently equals numerical data. Ratings are displayed within segments in a circle as 7 different colors; dark green (color gradation) as beyond best practice, red (color gradation) as worst case.

The SPeAR model, developed by Arup and Partners is a means for inter-relating ecology and hotel real estate. The following categories: (1) Social Equality; (2) Economic Vitality; (3) Environmental Integrity; and (4) Natural Resource Conservation; are incorporated into the model development in terms of (1) Environmental responsiveness; a recognition that a hotel development contributes to the ecosystem in which it sits and should respect that position (2) Resource efficiency; a way to achieve a level of sustainability in or resource consumption and disposal (3) Community and cultural sensitivity; addresses the fact that people, exist within a religious, cultural and political context; and (4) Economic viability; projecting in the hotel development industry, should concern itself with environmental and social issues and improve the overall economic benefits and infrastructure of the community.

The model's main indicators are drawn from a set of universal indicators that have already gained acceptance in the international arena. These include United Nations, European Union and the United Kingdom's DETR's publication 'A Better Quality of Life: A Strategy for Sustainable Development for the United Kingdom' (May, 1999). Other indicators are drawn from the United States Urban Land Institute, The United States Green Building Council, The United States Environmental Protection Agency, The American Institute of Architects' Committee on the Environment, Southeast Asian Local Government Commissions, Energy Star, The Royal Institute of British Architects and the Rocky Mountain Institute. Also employed to the model's development, are select principles of LEED Leadership in Energy and Environmental Design (USGBC, 2009).

The sub-indices incorporated into the sustainability assessment model are drawn from both the AMOEBA ATSI social index and site observations of specific contextual issues, prevalent in Southeast

Asia. Prescott Allen (1997) The AMOEBA model developed sustainable bands and using a 10 point scale. The Sis of the AMOEABA ASTI are placed in one of 8 sectors of a circle: political aspects; economic aspects; socio-cultural aspects; service and product quality; biodiversity; and environmental policy and management. The connection of the maximum end of 32 Sis in the bands produces a graphic thumbprint and levels of sustainability are illustrated.

A unique aspect of the model's development is the employment of indicators used by the FTSE Group, (FTSE) recognizing the need for social responsibility in light of several principles provided by government organizations, private sectors and local businesses. The FTSE 4 Good Index, (2001) provides a workable means of incorporating indices into the model that address meeting the complex needs of socially responsible financial investment.

Adapting indicators from the United States Building Council's LEED rating system into the model allow it to produce results in numerical terms and utilize baseline calculations that are transcribed. Particularly, the natural resources sector bears resemblance to a main sector of material resource requirements of LEED. A numerical rating, on a 7 point system is easily quantifiable in numerical terms for indicators. Calculations can be transcribed for LEED into the qualitative sector. Thus LEED-type system forms an important part of a more macro-level assessment. While it does not produce a single numeric result, it creates a sum of individual indicators.

The final model, in the form of Rose Diagram does not give a single overall score. Averages are calculated for individual sectors. It also produces a graphic map and an illustration of a thumbprint of sustainability in order to visualize hotel projects. These are clearly depicted in color, where a project is weak and where it is strong. As a result it can be used as a visual to guide development to focus on areas that need improvement.

RESULTS

A sustainability assessment model for hotels was developed with the following ideas in mind: (1) The model allows the sustainability of a hotel project to be assessed and illustrate graphically, regardless of project stage, best and worst practices of a hotel. (2) The model allows the many aspects of sustainability to be balanced and the inter-relationship of these assessed. (3) The Model identifies where there is room for achievement to achieve optimum benefits in hotel. (4) The model is a logical and transparent methodology that was fully adaptable for the purposes of investigative and qualitative study. (4) The model demonstrates the interaction between various social, environmental, economic and natural resource indicators of sustainability. (5) The models prompts innovative thinking to include sustainability into hotel projects design and can be easily displayed to audiences.

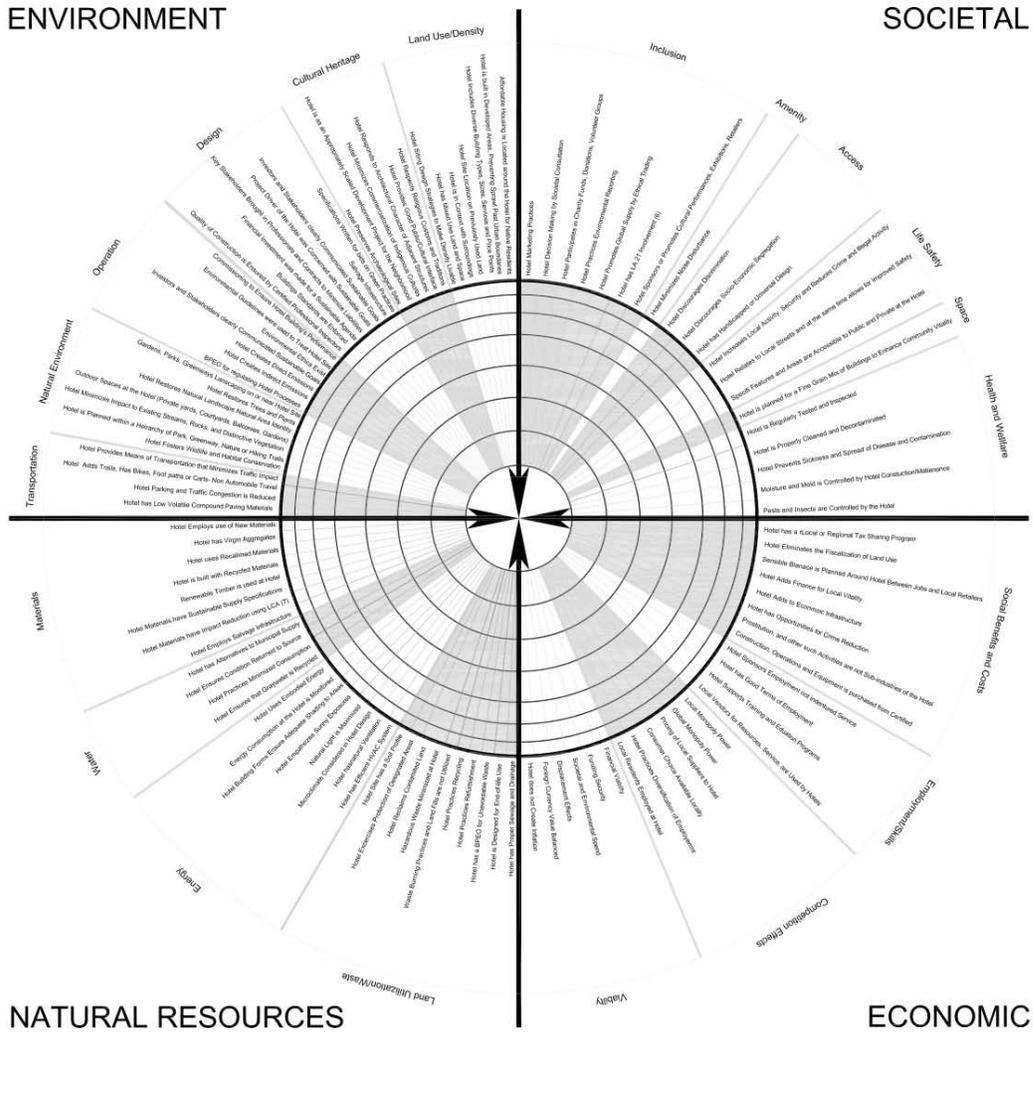
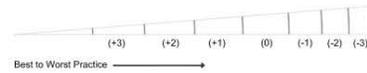
Future Recommendations

The assessment model should be tested; used to collect data from a hotel, in a region of Southeast Asia. The model could also be adapted to assess hotels in other marginally developed geographic regions of interest. Multiple case studies on hotels, resulting in numeric averages across indices could be statistically analyzed, in a quantitative study with the 4 categories and various indicators and sub indicators analyzed against dependent variables, using multivariate statistical methods.

APPENDIX A

Sustainability Assessment Routine Case-Specific (Hotels)

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