

2009

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Suess, Courtney, "Systematic analysis of identifying key dimensions of environmentally and socially responsible hotels" (2009). *UNLV Theses, Dissertations, Professional Papers, and Capstones*. 702. <http://dx.doi.org/10.34917/1920518>

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Systematic analysis of identifying key dimensions of environmentally and socially responsible hotels

by

Courtney Sues

A professional paper submitted in partial fulfillment
of the requirements for the

Master of Hospitality Administration
William F. Harrah College of Hotel Administration

University of Nevada, Las Vegas
2009

PART 1

Introduction

Development in Southeast Asia involves making good decisions for the future, so the idea that good planning can ignore sustainability is something of an oxymoron. Good development has to be sustainable and we have reached a point where the old ways of tourism development are intolerable. For example, hotels spring up without planning for the future. This short sightedness means natural endowments, like coastlines, erode and forests are cut down, chasing away the wildlife; or cultural history in the form of temples, historic buildings, and sacred places are destroyed. Ironically, tourism development is eradicating the very forms of product that many tourists come to see and the natural economic resources get swept away. In addition, native residential districts are destroyed to make way for hotel construction, forcing the occupants to crowd together in dense ghettos. Developers do not even realize what they are destroying. However, in today's market, we can recognize the need to sustain and even nourish the environment, the native people and distinct cultures, and the hotel investors and developers who are part of the economic scene.

New opportunities for sustainability in tourism development embrace environmental and social ideals together. This little recognized approach has a history. In the last decade, there has been increasing awareness within the global tourism industry that ecological and social protection issues are very relevant to the industry, and many countries are changing their stance by facilitating responsible initiatives (Kasim, 2004). However, addressing environmental and social

measures are neither part of the core competencies nor the primary interest of many nations. In particular, one of the fastest growing sectors of the tourism industry, Southeast Asian destinations, illustrates the clash of interests. Hotel development involves harnessing economic resources through foreign investors and, while doing so, inevitably promotes a type of old “business as usual” tourism development that creates a myriad of social and environmental conflicts (Dowling, 2000).

However, with any ambition to give voice to environmental and social ideals, there are problems. The most important obstacle lies in the sad truth that environmental change is not the primary interest of many growing Asian nations who would need to support and steer any systemic changes. Instead of the environmental or social problems in their regions, these entities focus on their national financial health. Another problem lies in the lack of core competencies within many developing nations to implement and execute future oriented environmental and social ideals over the long term. Nevertheless, within the process of developing particular Southeast Asian tourist destinations, some opportunities exist. These openings involve harnessing their natural resources and uncontrolled hotel development that has inevitably created a myriad of negative dilemmas for national and local authorities (Dowling, 2000).

Unfortunately, the fragmented political nature of incipient developing Southeast Asian countries frustrates any holistic attempts at natural and cultural resource protection (Dowling, 2000) because many of these nations, dependent on foreign investment and tourism for economic stimulus, continue to tolerate uncontrolled expansion in the face of conflicting leadership opinions.

Consequently, it is the cumulative effect of the inefficiencies inherent in the increasing and unregulated development extending over a region's topography that destroys the environment and causes serious social disruption. Inconsiderate planning and political zoning regulations fashion fragmented and dysfunctional landscapes. Short-sighted tourism developers grab inexpensive land sites and erect buildings that are environmentally damaging. This financial response to tourist demand, the justification Southeast Asian governments give for acquiring foreign exchange, is a particularly destructive competitive strategy, and one that inevitably leads to environmental exploitation and social degradation of destinations.

In consideration of the opposition and opportunities, on the one hand, it is not possible to slow down growth and the process of tourism development. On the other hand, the urgent need to address ecological issues is a growing concern among some real estate developers, architects, planners, government officials, and the general population aware of the various influences of development on the region's natural environment and communities. Now, more than ever, select Southeast Asian areas recognize that tourism development has to be handled carefully and appropriately in order to achieve its potential in providing for economic growth.

Therefore, initiatives for change might be more successful by starting with individual sectors. For example, select resort and hotel complexes that are part of the tourism industry offer the opportunity to showcase environmental resource efficiency, sustainable economic development, and social improvement in well-chosen regions. Specifically, Dowling, (1997) asserts that sustainability in the tourism industry of Southeast Asia can be achieved by careful development choices that conserve the natural environment. Purposefully built tourist resort or

hotel complexes will inevitably promote the identity of the term, “Sustainable Tourism Destinations” (STDs), when growth is undertaken by knowledgeable developers and recognized by schemes through international tourism authorities and local community leaders at tourist destinations (Lee, 2001).

If STDs proliferate across Southeast Asia, their expansion will educate the population and the developers about the new opportunities through sustainable ideals. In turn, more hotel and resort developers may seize upon this model as better than others and replicate it. Out of this dynamic, local authorities may, optimistically, be motivated to legislate a set of guidelines of best development practices and performance indicators that reflect criteria established in more developed areas. This would promote ecologically sustainable tourist destinations.

Therefore, this study will promote insight into the practical problems of tourist destinations by developing a way of appraising the industry's best practices of hotel development as well as by benchmarking the construction and operations that underlie holistic sustainability designs.

Problem Motivating the Study:

The Global Hospitality Group (2007) concedes that increased tourism, trendsetting changes and increased awareness of factors of sustainability will actually promote ecologically sustainable hotel development throughout global industries. However, for countries in Southeast Asia, such concepts are new and developments are few (Dowling, 2000).

According to Cohen (1999), some of the changes taking place in Southeast Asia, including the beginnings of regionalization and the concern with sustainability, have increased the

awareness of the need for a more comprehensive view of the social, economic, cultural, environmental and political issues, and the processes and problems related to tourism development. Within the parameters of this context, governing authorities must begin to understand the dynamics and impact of tourism.

A number of studies have addressed the concept of sustainable tourism development (Kasim, 2004; Weaver, 2007; Elliott, 1999; Font, 2002; Puaill & Garrod, 2001; Clarke, 2002; Butler, 2001; Mok & Lam, Nakervis 2000; Edmonds and Leposky, 2000; Dowling, 1997; Dallen, 2000). Much of the previous research has been conducted to explain how existing guidelines, models of development, and frameworks introduced in more developed countries could be applied to sustain and enhance the Southeast Asian regional development. Although these studies have added to the understanding of sustainability, their applicability is diminished by the features of regional demand; the availability and adequacy of resources; the national and regional political objectives; and the organization and management of criteria. There is a concern among conservationists about the ineffectiveness of past efforts to achieve widespread change in sustainable development in Southeast Asia. More seriously for conservationists, many successful practices of sustainability in Southeast Asia are primarily modeled after features promoted successfully in developed countries that operate in a different context.

While some studies have focused their investigations on development of sustainable tourism destinations in Southeast Asia, how countries achieve sustainable development remains unclear (Kim & Dwyer, 2002). For instance, some have said that the directional nature of change within a developed society is different from that of less developed society (Sharley, 2002). A

society's level of economic and political development is a major determiner of the magnitude of sustainable development goals possible because financial and political interests influence so many critical and inter-related factors. Even so, for developing nations it is imperative that achieving sustainable ecological ideals translates into a viable process.

Given the challenges faced by the Southeast Asian countries and the potential of existing sustainability, governing authorities must employ benchmarking strategies to act as a catalyst to encourage sustainability for the region's environmental, social and economic development. Within this context, the following questions arise:

1. How can tourist destinations in Southeast Asia consider sustainability in development?
2. What factors of sustainable development are applicable to tourism destinations in the midst of complex social, economic and political conditions (e.g. widespread poverty, unemployment, international debt, corruption, shortages of foreign exchange, etc.)

To fully address and answer the research problems, the following sub-set of problem research questions arose:

- a) What are the different factors that determine successful sustainability of a hotel accommodation?
- b) What are the nature and the extent of these factors?
- c) Which of these factors are most critical for sustainable development in Southeast Asia?
- d) How do these factors of sustainable tourism development interrelate with the countries' economic and social development goals?

e) What allocations need to be made for tourism destinations to engage in various ideal development initiatives, as outlined in sustainable guidelines?

f) Who manages socio-environmental development initiatives in the region?

As a major component in the tourism industry, a hotel causes environmental and social harm at two stages of its existence: (1) during construction; and (2) during operation.

(1) During Construction

Environmental concerns:

Rapidly raised, unplanned hotels cause environmental damage by land and resource consumption, dust, debris, and contaminate run-off in the air, water, and surrounding environment (Walter, Rutes, Penner, 1998). This output leads to pollution problems, a significant increase in waste, and ecosystem disruption.

Social concerns:

Social problems arise for local authorities in managing labor exploitation, life safety and various human resource issues (Wilson, Uncapher, McManigal, Lovins, Cureton, & Browning, 1998).

(2) During operation:

Environmental concerns:

Hotels create visual pollution, increased noise, traffic, and garbage. Increased numbers of tourists destroy the natural areas. Facility operation creates lighting overload, waste management problems, energy consumption, maintenance, and

so on. Other challenges revolve around the industry's profits that create a rise in property value. More expensive land produces greater returns per square meter to achieve greater profitability for owners and investors; hence, the site's carrying capacities become denser. (Haley & Haley, 1997). In tourist areas, hotel accommodation developments can create heavily degraded environments. Peripheral slums arise as a result of inflated land prices and force local residents into densely packed, residential ghettos (Nimmonratant, 2000).

Social concerns:

Hotels facilitating tourist arrivals may increase social pollution by fueling commercialization of indigenous culture and religion (Pearce, 1995). The ongoing operations and activities of a hotel exert varying degrees of cultural eradication and impact on existing local infrastructure and resources (Pearce, 2005).

Furthermore, the overall process of hotel development and operation can be driven by the vast amounts of cash laundering in hotel real estate and the surplus financing generated, annually, from illegal activities; prostitution and drug trafficking, strategically instituted on a hotel site, managed as a vehicle for illegal activities and underground economies (Nimonratant, 2000).

Purpose:

The purpose of this study is to identify the primary and sub-indices of sustainability that are applicable to Southeast Asian hotel development, including environmental, social and economic sustainability. Then, the study will develop a holistic model that can examine the

ecological sustainability practices of hotels in Southeast Asia, to understand the extent to which indices are utilized in the region and to reveal the best practices. Next, the study presents a series of checklists and questions intended for site visits and interviews with architects, developers, hotel and property management professionals to elicit information about integral ecologically sustainable development in specific Southeast Asian hotel projects. Ultimately, this study will create a systematic method that will enable the distillation and generalization of important lessons of hotel development: what works in selected projects, what problems may exist, and how the hotels are conceived, financed, designed, built and marketed in the region.

More specifically, the objectives of the study were developed and validate ideas for precise features or attributes of ecologically sustainable tourism destinations:

- (1) Economic: Determine practices of investment in and development of hotels specifically programmed to be more ecologically responsible than traditionally developed properties in the region.
- (2) Environmental: Consideration of how a sustainable hotel development meets the needs in integrated environment and ecosystems.
- (3) Social and Community: A community's and culture's infrastructure must be considered for the viability of development. Careful planning and development should create social well-being and enhance local cultures by encouraging preservation to the community.

Research Questions:

- What sustainable elements for businesses in the hotel industry activate the economic potential of tourism destinations?
- How does one obtain an assessment for a sustainable hotel property?
- How does development intent for the hotel acknowledge the complexity of both environmental and cultural issues?
- How can a hotel accept environmental responsibility and make it work within its context of destination?
- How can design create flexibility to allow for environmental technology and social integration?

Background:

For countries in transition from rigid, centrally planned economies to those free markets with booming industries, the success of tourism is the second most important economic factor for survival after exports (Heng, 2006). In general, tourism involves high volumes of domestic participation, and consequently, the success of tourism, next to exporting, has been the most important factor in a region's emergence from economic turmoil such as the 1970 Asian financial crisis (Chon, 2000).

This broad financial understanding is reflected in current developments in Southeast Asia. There, the growing tourism markets give rise to entrepreneurial responses throughout the world financial community, particularly from industrialized countries with high levels of investment capital. Investors consider tourism development and investment property in the less developed countries within Southeast Asia as an attractive and profitable opportunity (Nankervis, 2000).

Land, labor, and building materials are cheaper than in developed nations. Further, under developed regions and countries are hungry for the foreign capital that will move through their banking systems.

In contrast to urban areas, the major reserves that drive the world market towards the Southeast Asian region are the various natural resources that exist. Throughout the region, undeveloped areas, designated as “natural economic zones,” offer many more desirable forms of tourism activity within natural environments that are unavailable in urban areas. These resources include accessible forests, mountains, coastlines, jungles, rain forests, cliffs, coves, volcanoes, and beaches. In addition to nature, scattered indigenous cultures and their artifacts as well as coteries of ethnic communities inhabit some of the natural areas (Kaosa-ard, Bezic and White, 2001). These unique resources beckon tourists into a unique experience not available in the city. An accessible area endowed with any of these natural factors and secured within the geographical borders for control allows market values to rise. Further, these natural areas have the potential to increase in financial value through further development of its products and become destinations appealing to a wide tourism market (Ayala and Hana, 1996). However, many Southeast Asian nations have embarked on destructive strategies to develop these natural settings without regard for their intrinsic value. The hope of nations is to attract foreign capital eager to take advantage of the increased tourism potential. Such national policies would also allow or even encourage eradication of indigenous elements to expand and lift the economic performance of the country in general (Heng, 2006). For example, hotel accommodations as products become major chips in the role of tourism, particularly in remote regional economies. That relationship makes hotels the

largest component underlying investment in and development of any location.

While owning hotels is part of the financial game, the demand for hotels is affected by other complexities. For example, each year, hotels change ownership and new companies and brands enter the marketplace (Ness, 2008). Sometimes, the turn-over is due to poor profits. It may also be due to devastating natural disasters. Regardless of the cause, the primary task of the Southeast Asian regions is to ensure that they continue to facilitate sustained tourism growth, momentum, through development of hotel accommodations in the global value chain. Nations engage in this endeavor despite increasing international competition and unstable economic conditions (Dowling, 2000). With these complexities, adverse, excessive and uncontrolled development of hotels creates environmental and social degradation (Nimmonratana, 2000).

Unfortunately, regional governments and policy makers have concentrated largely on the financial incentives offered by various private sectors and direct foreign investors seeking the vulnerable Southeast Asian markets. Obviously, these investors tap all possible resources to exploit a region in the name of positive financial return. They have consistently ignored the perspective that asks, “who is developing tourism destinations and how they are doing so?” (Richter, 1989). Although foreign and private sector investors maintain a strong influence over hotel development factors, ultimately, a country’s government has the authority to limit ownership, and address the various causative impacts of tourism development. However, managing environmental and social issues in tourism development so those factors support sustainable features poses unique challenges (Hunter and Green, 1995).

Not only do investors ignore environmental concerns but hotels have managed to elude

organically sustainable responsibilities due to the traditional perception that tourism, in general, is a so-called “smokeless industry,” offering a non-intrusive means of economic development to a country (Kasim, 2004). However, tourism has high volumes of domestic participation in which its products and activities greatly affect the well-being of the physical and social environment surrounding it. Given this, hotels also create industry-related environmental problems.

To be fair, the benefits of hotel development are many. For one, obtaining much needed foreign exchange allows governing authorities of lesser developed countries to extend and improve existing infrastructures such as roads, bridges and rails. The increase in tourism and the capital it generates allows local businesses to flourish. The financial resources expended across many local sectors provides increased employment for the local population. Additionally, the most lucrative and solidly booked hotels have the potential to open up tourists’ exposure to another culture. In turn, any resulting social interchange can foster international understanding, and can crack historic social, class, religious, and racial barriers, thus increasing appreciation of the local socio-cultural elements (Cohen, 1995).

Conversely, the ripple effects from hotel development stimulate unrecognized and unintended consequences. Those consequences can increase rents, cause inflation, encourage migrant workers, and leave the country susceptible to foreign exploitation, political corruption and economic fluctuations (Haley & Haley, 1997). Those areas, over saturated with too many tourists, can cause erosion of respected cultural and historical traditions and customs even while it promotes cultural interchange. The cumulative effects of hotel accommodation operations that contribute to cultural shame assume significant proportions when studied carefully (Butler, 2002).

Improperly developed hotel accommodations have the potential to increase visual pollution such as crime and filth, chemical and waste pollution, and the destruction of natural resources and ecosystems (Wong, 2000).

Other, darker problems lurk in the shadows. Increased conflicts between guests and locals alike, crimes of all sorts, and vigorous growth of various sex industries – all have been associated with hotel growth. In terms of crimes, the primary generator behind the explosion of tourism development in many Southeast Asian countries, crime seems to provide the vast amounts of foreign capital generated, annually, from illegal activities such as prostitution and drug trafficking sponsored on sites. Hotels can be, in of themselves, lucrative opportunities and intentionally used for laundering cash within the real estate industry and operating other illegal activities for underground economies (Nimonratant, 2000). These are the social problems that pollute less developed regions.

Thus, degradation of physical, cultural and social environments is pervasive throughout the Southeast Asian region as a result of ineffective hotel development. How can the “old” hotel development movement be defanged? For effective, balanced growth, countries need the ethical commitment to question how they can initiate more sustainable hotel development.

Justification:

The study initiates an understanding of sustainability, holistically. Through its research of alliances of foreign and domestic governments, private sectors, hotel real estate sales people and developers, the study demonstrates that the opportunity exists to address additional factors in an effort to identify what constitutes a truly exemplary and ecologically sustainable hotel

development. Often, developers undertake ecological eradication and poor community development without understanding what they are doing. Yet, their actions have political, economic, ethnic and cultural implications for future generations. Instead, this study hopes that ratings for energy efficiency, increased habitat understanding, bio diversity allowances, and convergences of infrastructure, social, and economic fabrics of communities may all help the Southeast Asian regions salvage their cultures.

Examinations of sustainability and discussions about significant tourism destinations create more focus on specific aspects of tourism planning and economics and provide opportunities for insight into the factors of environmental and social degradation that should be considered. Conclusions arising from this investigative study may contribute to ongoing group coalitions where growing concern for Southeast Asian tourism continues to increase and new sources of information offer a provision of linkage between strategy and action.

In terms of its practical contribution, the findings of the study provides tourism stakeholders in Southeast Asian country destinations with indices to understand and work towards a common view regarding a destination's strategy for tourism development and achievement of sustainable improvement in the community's economic, environmental and social well-being. The development of sustainable hotels in the region is critical. Sustainable tourism development indices and a method to evaluate factors within the context of prevailing economic and social conditions in the region may be able to provide destinations with a conscious way of developing a profitable and holistically sustainable tourism industry.

Limitations:

Region-wide impediments to achieving a range of solutions include a number of competing interests. For example, conservationists face the diversity of economies; the difficulty in establishing governance; the capability of any particular nation to effectively identify and organize physical solutions and operational processes; the fiscal limitations; the governmental instability; the external influences; and the levels of political willingness to address environmental problems and embrace optimal standards of development (Dallen, 2000). These seven obstacles are daunting to tackle.

The track record in cooperation between government and developers on the one hand and sustainability conversationists is poor. Previous explorations in cross border cooperation among and between Southeast Asian countries; sustainable tourism development opportunities for local communities; existing ecotourism organizations; and the vulnerability of current policies and suggestions for changes – all have ended with little success in the emerging practice of ecologically sustainable hotel development because of contention among various political stakeholders.

Considering the many stakeholder obstructionists, research and well-packaged information to help advance green development standards and objectives may still have little influence. Nevertheless, the study's aim of identifying select projects in Southeast Asian regions has critical significance. Meanwhile, researchers must take hold of one central and personal value: remembering that specific ideal goals are vital links in contributing to ongoing efforts in developing countries. A second and lesser value also exists: remember that cultural change moves slowly over huge eons of time.

PART 2

Literature Review

Tourism in Southeast Asia:

Tourism is widely regarded as the world's fastest growing industry (Roe, Goodwin, Ashley, 2002; WTO 2009) and, in particular, the tourism growth potential of the Southeast Asian region is vast. "Southeast Asia became one of the fastest growing regions for tourism globally, in terms of both intra-ASEAN travel and travel to the region from other parts of the world" (UNWTO, 2002, as cited in Karim, 2004: 7). The end of the Cold War reduced political tensions among Asian countries, subsequently bringing the entire region into more globalization and cross border interactions (Chon, 2000) and the whole Southeast Asian region has consistently maintained an ongoing ranking of "second-in-the-world" as a tourism destination (WTO, 2005). Past projections indicated that the Southeast Asian Region tourism industry would rise faster than most other regions in the world, and at rates as fast as twice that of industrialized countries (Chon, 2000). In the last decade, the region has increased tourism arrivals up to 141% with annual growth rates as much as 18% (WTO, 2009). Current projections indicate that the region will continue to sustain an annual growth rate averaging from 11-14% in stable global economic conditions (WTO, 2009).

Tourism is reputed to be a powerful vehicle in providing Southeast Asian nations with the resources they badly need. The industry assumes one of the region's largest environmental

impacts because of its potential for rapid development of land and increased urbanization.

Because of its potential to provide foreign exchange earnings, fiscal revenues, service sector jobs, and backward linkages to industry, tourism has become a predominant element of the social and economic development strategies in many nations (ADB, 2002).

Bryden (1973, as cited in Mena, 2007: 4) considers a “tourist country” as one in which tourism accounts for more than 10% of foreign exchange earnings over 5% of the GDP. In fact, a nation's tourism can be both a manifestation of its economic development level and a means to promote further development (Liu, 1998:21). By 2004, most of Southeast Asia was considered a “tourist country” with many factors contributing to the expansion of tourism. As outlined by (Mena, 2004), these factors include: (1) the growth of the world population; (2) the increasing influence of developed nations in lesser developed countries; (3) the expansion and diversification of travel motivations and expectations; (4) the technological achievements and telecommunications advances. In addition, an increase in the number of destinations on the supply side and international travelers on the demand side emerged because of globalization (Baloglu & Erickson, 1998).

Hotel Development in Southeast Asia:

As tourism further escalates, it becomes a fiercely competitive business for Southeast Asian countries. In order to make tourism a viable economic development strategy, Southeast Asian countries have ensured that they have a necessary level of competitiveness (Dwyer, 2001: 20).

The constantly growing number of hotel accommodations and the enhanced quality of

existing hotels puts great pressure on market development to find ways to compete in the tourism marketplace. The countries in the region have allocated substantial resources and have great expectations of the industry. As indicated by current statistics from the regional hotel construction pipeline reports, with over 60% of Southeast Asia's hotel projects currently under construction, the pace of guest room openings is set to accelerate through to 2010. Lodging Econometrics (2009) forecasts 828 new hotels and 134,673 rooms to open in 2008, with 438 hotels and 69,433 rooms already opened in H1 **what is this H1?**. For 2009, LE expects new openings totaling 693 hotels and 151,692 rooms (Lodging Econometrics, 2009). LE's first forecast in 2010 anticipates 611 hotels and 159,511 rooms as new supply (Lodging Econometrics, 2009). LE's forecasts for new hotel openings are based on current pipeline totals and development trends as of the end of the second quarter 2008 (Lodging, Econometrics, 2009).

From the research and statistics gathered, current hotel construction of all size ranges and magnitudes in Southeast Asia is showing an increase. According to Lodging Econometrics (2009) Three-Year Forecast for New Hotel Openings, new openings in the Asian Pacific are set to increase over the next two years with 119 new hotels and 21,662 rooms slated to open in 2009 and 140 new hotels and 30,731 rooms in 2010. A majority of these are in capital cities and resort destinations in Thailand, Vietnam, Indonesia, and Malaysia, thus indicating that a bottom-line figure is likely to form.

According to executive director Andrew Ness of CBRE Research International Hotel Investment Forum (2009), many expect that property investment transactions in the hotel sector will increase in the second half of 2009. Ness expected that the countries of Asia, China and India

and Southeast Asia would see the most growth. For many regions of the world, the new economic base line will be significantly below 2007, but one area that will continue to materialize is pre-planning activities for construction. Investors and developers will get an early start on planning hotel accommodations in the strongest economies. The advantage of geographically diversifying development into stronger tourism markets of Southeast Asia will be an important mechanism, stimulating the Southeast Asian industry's world leadership in tourism growth.

Foreign Direct Investment in Hotel Development:

Due to changes in the global economy, the Southeast Asian region is affected by a number of very different factors and will be subject to continual fluctuation. Foreign Direct Investment (FDI) in tourism through financing the development of hotels, and foreign larger-scale economic patterns reflect investors' goals to maximize and repatriate profits. As they have done in the past, foreign investors wield political and cultural influence, and this state of affairs has caused many Southeast Asian governments to pursue reckless development strategies and form alliances without consideration of any social well-being or environmental conservation (Leposky, 2000). Unfortunately, developing countries will continue to remain vulnerable to hotel development by FDIs. The native people that form the majority of the populations, including various ethnic groups and indigenous cultures themselves, currently lack adequate resources to sponsor development and generate returns on their own assets.

In this circumstance, according to Richter (1989), foreign investors and strong private sectors are able to maintain a strong influence and levels of control in the hotel industry and develop and enforce their own guidelines of essential site development and environmental and

social resource management. As a result, development of hotels may either augment or harm the vulnerable environment and infrastructures. (Haley & Haley, 1997)

Regional Cooperative Efforts Towards Promotion of Sustainable Development:

As demand for tourism development increases, it is shifting progressively from meeting the generalized financial interests of traditional hotel investors towards the creation of more special interests and opportunities in local markets, serviced by specialized agencies. These particular “sustainable” opportunities are being promoted strongly at regional and international levels.

Thus, crucial to sustainable development success are ongoing collaborative efforts to identify and define products in response to current concepts in development. Promotion of sustainable tourism destinations and linking ecologically sustainable hotel accommodations will require the cooperation of both the private and public sectors to increase the demand for sustainable products. International collaboration is a key factor towards this effort.

According to Elliott, (1999) after 1990, the salient issue of environmental degradation was fast becoming a policy issue for Southeast Asian countries. The 1992 Conference on Environment and Development, which involved sessions and reporting requirements of the Commission on Sustainable Development (CSD), stressed to governing authorities the seriousness of environmental degradation and sustainable development issues in Southeast Asia. In (1994) the “Expert Group Meeting” recognized the inevitability of the creation of regional cooperative modalities to suit the special circumstances of tourism and development policy initiatives. Simultaneously, the Group recommended that combined strengths and networks, including both

private and public sectors, could be utilized. Another recommendation was that regional research institutions and universities could be absorbed into the operational network. Again, the Group called for the regional agencies, such as the Tourism Councils of the South Pacific, the Association of Southeast Asian Nations and its Sub-Committees on Tourism, the Pacific Asia Travel Association, and the United Nations Economic and Social Commission for the Asia and Pacific to adopt a catalysts' role to strengthen national capabilities in sustainable tourism development. The relevant regional agencies were called upon to support member countries in the region with policy guidance, marketing, and "best practice" data through studies, seminars, conferences, and technical advisory missions (Fagence, 1995).

Harmonizing dialogues in regional collaboration can address the issues of development in a country's tourism industry. The capital investment in facilitating these organizations, intra-regionally, is imperative, while cooperation, in turn, can support sustainable tourism development and policy issues in the wider arena that creates new opportunities for sustainable development of tourism destinations. Several agencies are at work on this.

ASEAN:

The number of institutions and interagency structures formed within the Southeast Asian Regions to advocate regional sustainable responsibilities in tourism development include The Association of Southeast Asian Nations (ASEAN), one such collectivity that has the capacity to address tourism development problems (Dallen, 2000). The ASEAN is the largest form of institutionalized regional cooperation; however, their influence on government organizations is contingent on other interregional priority issues at hand.

Tourism and sustainable development is not their primary function. The formation of the ASEAN in 1967 was primarily a response to the threat of communism in Southeast Asia during the 1960's (Timothy, 2000). Countries included in the ASEAN are Thailand, Singapore, Malaysia, the Philippines, Indonesia, and Brunei. This unification was an effort to avoid foreign occupation, to ensure peace and stability in the region, and to promote and facilitate intraregional economic development as well as social and cultural progress (Hussey, 1991).

As part of this history, ASEAN's Sub-Committee on Tourism was the forerunner of future committees, charged with establishing cooperation. It was followed by the ASEAN Tourism Association (ASEANTA), founded to specifically address the promotional aspects of tourism planning (ASEANTA, 1999).

PATA:

The Pacific Asia Travel Association (PATA), has been instrumental in the development of early forms of environmental ethics and principles of sustainable tourism (Dowling, 1996). The Pacific Asian Travel Authority (PATA) created a charter in 1991 which included strategies for tourism development that would benefit the region and population, and it set a foundation of environmental responsibilities, respecting the natural and cultural identity of tourism resources (Dowling, 2000).

ESCAP:

Efforts to strengthen regional economic cooperation, adopted by the United Nations Economic and Social Commission for Asia and Pacific (ESCAP), intensified collective

efforts to spread the benefits of economic and social development. High priority was given to investment, infrastructure development, and tourism. In order to achieve the required specification of modalities of cooperation, the specialist group's attention focused on challenges and opportunities facing tourism development. This was important.

Additional Groups and Efforts:

There are several other commitments in some parts of the Asian Pacific region to the adoption of project-suitable models of sustainability and tourism. Fagence (1995) outlines five in his research notes and reports from the Regional Cooperation in Tourism. First, the Greater Mekong Sub Region project involves joint commitments to promote human resource development programs, regional studies, and a tourism forum. Second, the Silk Road Tourism Project aims to use tourism as a means of economic development and justification for the restoration of historical and cultural sites. Third, the Pearl River Delta marketing initiative involves government offices with the intention of creating multi-faceted tourism in critical mass in Southern China. Fourth, The Growth Triangle developments involves Singapore, Thailand, Indonesia, Malaysia, Brunei, Philippines, China and Hong Kong. Fifth and finally, the Bintan Integrated Resort Project considers and guides an integrated beach resort project with cooperation between Singapore and Indonesia.

Individual countries have also initiated collaboration on the topics of sustainable tourism development and policy guidelines (Dowling, 2000). Thailand has led efforts among Southeast Asian countries as “regionalized eco-tourism destinations.” Thailand

served as a gateway to other Southeast Asian countries (Dowling, 2000), and began to facilitate strategies of the National Tourism Authorities. As part of the push, the Tourism Authorities of Thailand assisted in the design of new hotel accommodations that minimize environmental impact. Thailand led in international exchange and information sharing, encompassing the implementation of ecotourism in planning, developing and managing for sustainability. The Thais also helped develop mass awareness that Southeast Asian countries are developing tourism at the expense of their environment (Chon & Singh, 1994).

Several ecotourism conferences focusing on Southeast Asia have been held in the region, addressing the implementation of ecotourism. The Planning, Developing, and Managing for Sustainability works in cooperation with national Tourism Authorities and Departments of Technical and Economic Cooperation (DTEC). Conferences aim to build on the foundations of ecotourism and promote ongoing forums that stress the need for regional Southeast Asian countries to examine ecological and cultural tourism (Dowling, R.K., 1995). Several regional conferences have incorporated site visits to tourist destinations, including hotel accommodation facilities, to examine the strategies that were used to manage sustainability in select destinations. One outcome was that proposed recommendations on how to integrate conservation with tourism development in regionalized nations were identified and discussed (Dowling, R.K., Wiler, B. 1997). Additionally, a manual, "Policies and Guidelines: Development of Ecotourism," was created with the cooperation of national tourism authorities.

A further indication of the commitment to ecologically sustainable tourism development within the region is shown by the fact that hundreds of other non-governmental agencies have

been established to collaborate and support Intergovernmental cooperation initiatives towards sound environmental policy, cultural preservation and social well-being in Southeast Asia (Dowling 2000). Civilians play a very prominent role in managing collective affairs (Elliott, 1999). “Grassroots Environmental Activism” and regional networks of Non-Governmental Organizations (NGOs) have also been established to focus on the relationship between rapid economic growth, depleted environments, and increasing poverty (Lele, 1996 p. 20).

Rather than allocating decision-making to the public sector, measures have been taken in the context of a shift away from “government” and towards “governance.” In the case of tourism, this shift reflects a more “pragmatic” approach to development, applied by conservation agencies and eco-tourism NGOs. Apart from government and regional regimes' initiatives directed at improving the environmental impact of the tourism industry, these agencies can also be accredited under international standards or linked to specific recognition schemes such as the International Hotels Environmental Initiatives (IHEI, 1995) of the International Hotels Associations Environmental Awards programs. Other sources of guidance on how to improve environmental performance have been accommodations, and managers' in-house environmental programs in accommodations and institutional entities representing professionals such as engineers, architects and property managers.

The first national tourism accreditation scheme with a major focus on environmental issues was launched in 1996 which included the name change to Nature and Eco-tourism accreditation programs. The scheme was widely recognized as one of the leading schemes in the world. The rapid proliferation of eco-labeling schemes serving as marketing tools has led

different countries' governments, together with representatives of consumer groups and industry, to develop programs to standardize eco- or green-labeling. Southeast Asian industries are encouraged by market trends to establish credentials for their products to avoid losing market share (Mendleson, 2007). However, the existence of the current eco-labeling and recognition schemes in countries lacking overall building and development standards is often ineffective. In this case, it is important to identify current products that properly conduct an environmental property assessment, adopt environmentally preferable practices, develop an environmental management plan that guides efforts to continually reduce the environmental consequences of its operations, and incorporates surrounding socio-ecological factors as a sustainable hotel. (Green Hotels Association, 2009).

Currently there are few plausible accreditation programs established to manage initiatives directed at improving environmental and social performance. Although, as discussed in the literature, national strategy is being developed and several eco-labels with schemes for accrediting businesses exist, there is still a huge gap in the benchmarking process, and a proper construct has not yet been properly developed to appraise and manage industry's best practices. A framework must be largely shaped by a three-tier governmental environment (federal state and local). As a result, tourism issues have to be addressed at a national level for any Ecologically Sustainable Development to ensure that:

- (1) Environmental Sustainable Development principles are in tourism strategies at all levels
- (2) Industry codes of environmental practice are developed
- (3) Regulatory mechanisms for achieving positive environmental outcomes are examined

(4) Research into environmental and economic impacts are considered.

The literature describes strategic alliances and functional regionalized efforts towards tourism planning, hotel development, foreign investment, and infrastructural improvement. However, the forms of cooperation described have accomplished relatively few successes. Although the positions are, in theory, strong regimens and structured to be successfully functioning in support of sustainable objectives among countries, they are not. According to a report on Institutions for Global Environmental Change (Elliot, 2000), despite what appears to be a well-entrenched institution for environmental cooperation supported by a sophisticated normative framework, regimes have faced severe difficulties in halting or reversing environmental problems in Southeast Asia, particularly in arena of development and tourism. According to Sofield (1994), many Southeast Asian countries' representatives have complained that national plans augmented by regionally cooperative institutions were long on platitudes and short on practicality. The cooperative institutions have been criticized for their initial policy objectives. They have held that tourism should result in optimal economic benefit to the country's economy. However, they also say tourism development should enhance conservation of the country's natural environment and its historical, social, and cultural heritages, avoiding any harmful effects. Behind these words, they say tourism accommodations should be up scaled; and a positive image and greater understanding of the country should be promoted. But these contradictory words illustrate the problem: do what I say, not what I publish.

Conclusion:

The environmental issues discussed throughout the literature review are an ongoing, pressing concern, and the incapacity of provincial governmental and governance agencies to create policy or an institution that limits environmental and social degradation in practices and tourism development is a serious problem. However, the forms of institution are important, due to their potential for important gains such as promoting intra-regional investment in tourism to raise the profile of tourism, initiating and hosting international ecotourism conferences and forums, establishing official Guidelines and Environmental Acts, and fiscal governmental commitment toward domestic sustainable tourism and project development in ecotourism research. The previous Cooperative initiatives are useful and may expand in relevance throughout the entire Southeast Asian Region through regional and international exchanges between private as well as public sectors, inter-agency cooperation, and general networking and communication. They are the most important examples of operationalizing improvement in the conduct of tourism planning and development, and are the foundation of future governance for managing credentials of ecologically sustainable development.

Definitions and Concepts:

The Concept of Tourism:

Many definitions have been reported in studies, including Lieper's (1995, as cited in Mena, 2004: 32) defining 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.

Tourism Destination:

As one of the five elements from the tourist product model developed by Smith (1994: 582), “The physical destination is the core of any tourism product and refers to a site, a nature resource, a facility or a property. It also includes the attributes of the physical environment and tourist infrastructure.”

A New View of Tourism Destination:

Although strategically increasing tourism and promoting development can provide multiple economic benefits for the region, it also presents threats to the environment and social

ecology. What is essential is the recognition that unless underlying requirements for ecological sustainability are established, tourism and development could be a regionally destructive process, destroying the very tourist product forms that offer the Southeast Asian sub-region a comparative industry advantage when weighed against other tourism economies (Dowling, 2000).

Sustainable Tourism Destination:

Sustainable tourism destination is a concept that arises from the ecological science, a science that studies the interrelationship among and between organisms and the environment. Ecology entails the preservation of indigenous human cultures as well as biological communities in their nature (Leposky, 1997). Sustainability, then, ideally refers to methods of development and visitation that minimize the disturbance or disruption of the locale of the host's distinctive attributes. Sustainable tourism destinations simply can be defined as a destination that is environmentally friendly and has relatively undisturbed natural areas. This allows tourists to enjoy and appreciate nature (including any accompanying cultural features) yet still promotes conservation and has impact. It also provides for beneficially active socioeconomic involvement of local populations. (Ayala & Hana 1996).

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, 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).

The objectives of “sustainable 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.

The Notion of Sustainable Development:

The practice of ecological sustainable tourism development in Southeast Asia is by no means consistent throughout the region (Fagence 1995). Sustainable development is a relatively new concept to emerge in Southeast Asia. Patterns of development and designs for sustainability have been employed for centuries. Only in recent decades, post World War I, have practices been delineated in respective guidelines. According to Knott (1998), sustainable development is “a return to a climactically, geographically, and culturally appropriate ways of architecture and

building”. In more developed countries, “sustainable development” is strictly managed to meet a sufficient number of credentials for water-use reduction, storm water management, use of renewable energy, recycled content in building materials, materials certified for their natural versus synthetic content, manufacturing processes, fuel emission, shipping and transport, recycled content, consideration of treatments, paint, sealants, carpets and adhesives with low volatile organic compound (USGBC, 2009). Sites must include featured services and amenities such as chemical-free landscaping, recycled water, efficient irrigation, sound waste disposal, minimum impact to natural surroundings, or historical artifact alterations. Additional credentials extend to product and service offerings like transportation that utilizes alternative fuel (Butler, 2008). Social factors include use of local labor, local businesses, local resources, impacts of the constructed environment to the natural environment and economy, traffic increases, noise, air pollution, impacts on local culture and communities.

Sustainable development is multi-faceted. For one project, the most visible feature might be its energy performance; for another, restoration of rainforest ecosystems; for yet another, the fostering of community cohesion and reduced dependence on fuel consumption. More significantly, though, sustainable development is about the integration of all these features and many more. It is about solution multipliers (Wilson), whereby one feature provides multiple benefits in reducing a development projects' impact on the overall environment. Sustainable development is new to the Southeast Asian region, and existing projects are few. An ideal model has yet to be built.

Sustainable development is neither a style trend nor a vernacular. A sustainable

development is an establishment that solidifies a commitment to environmental concerns by achieving a set of environmental standards. Although properties achieve standards uniquely, a development that conducts an environmental property assessment adopts environmentally preferable practices, and develops an environmental management plan that guides its efforts to continually reduce the environmental consequences of its operations and incorporates surrounding socio-ecological factors.

The conceptualization of Sustainable hotel development:

Sustainable, as a term that refers to hotels, would incorporate the synonyms of ecology used to refer to the goods and services considered to inflict minimal or no harm on the environment (Green Hotels Association, 2009).

The essence of sustainable hotel development lies in destinations that preserve environmental (biological) and social (cultural) diversity (Ayala & Hana, 1996). Historically, sustainable hotels have been associated with the results of a concept, founded in the 1970s as a tourism sub-industry by the hotel/resort developer, Stanley Selengut. In 1976, Selengut developed a series of resorts in the Virgin Islands, introducing tourist destinations that kept environmental impact to a minimum. From the success of attracting customers, he was able to research and determine a market that was willing to pay a premium to specifically patronize ecologically sustainable tourist destinations (Honey, 1999) The rise of the model, as an industry, is indicative to the Southeast Asian region that discerning tourists will not patronize destinations where industry-led economic growth assumes an overwhelming priority over environmental conservation.

The elements of Sustainable Hotel Development:

The hotel and accommodation industry is a major consumer of resources and products. Consumption includes land, construction materials (carpet, paint, and wood), fixtures and furnishings, cleaning supplies, food, and equipment (air conditioners, computers, elevators, furnaces). Facility Management must be considered as an overall process, taking into account the entire process of managing buildings and properties across their operational phases. Particularly for buildings in the hotel and service industry, property represents the largest part of their overall assets (Hassanien, 2002). Management must be considered in a hotel with daily consumption of water and energy. Hotels are active 24 hours a day, seven days a week, year in and year out, using water and power throughout the day for general operations, cleaning, and guest use. The massive ongoing use of products and resources by hotels confirms a need for environmental action towards preserving the environment and conserving resources for future generations.

A sustainable hotel is one that would be developed in a natural landscape, utilize indigenous architecture with local materials, employ local labor, exercise adaptive re-use, incorporate historical aspects, engage the traditional culture, and involve the surrounding community. It should not only be financially successful, but also fit into the cultural surroundings, and embody the environmental ideal. In building a hotel, the property should demonstrate energy and resource saving technologies, strengthen the local community, and financially reward its participants and stakeholders.

Design for Regional Scale:

-Hotel design strategies make the density livable

- Hotel site provides tourists and residents with a means of transportation that minimizes traffic impact
- Hotel is planned, within a hierarchy of park, greenway or bike/hiking trailways throughout urban regionalized
- Affordable housing is located around the hotel, allowing for local (specifically native) residents
- Hotel has a regional tax sharing system that distributes funds fairly and eliminates the fiscal interpretation of Land-in-use
- Sensible balance is planned around the hotel for balance between jobs and local retailers, *hospitality in and housing in the community*
- Hotel development is concentrated in existing urban areas and prevents sprawls beyond urban growth boundaries

Neighborhood Scale:

- Hotel is planned for a fine grain mix of buildings to add character, interest and diversity.
- Hotel Promotes a mix of land uses in the neighborhoods to enhance community vitality
- Bikeways and foot paths for non- automobile travel
- Greenways, parks or gardens on or near hotel site
- Site adds trees and plants
- Site restores natural landscape features such as streams, hill tops, shorelines, and tree groves as *area identity*
- Hotel promotes diversity by including a variety of building types, sizes, and prices.
- Hotel is encouraged to be an appropriate size or a scaled development project that adds to the

neighborhood characteristics

- Hotel works with existing residents and neighborhood groups to meet their needs and learn their perspectives

Site Scale:

- Outdoor spaces are provided (private yards, balconies, semi-private courtyards, sand boxes, gardens, walkways, play areas)

- 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. asphalt and so on

- Buildings relate to local streets and interior courtyards, and allow for improved safety. Porches, benches, and stoops are provided for public and private guests

- 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

- Hotel integrates natural features such as streams, slopes, rocks, and distinctive vegetation into the design

- The hotel responds to the scale and architectural character of adjacent structures.

Building Scale:

- High quality detailing and design variation between hotels

- Sites are minimally obstructive to land, foundations do not erode natural landscape

- Maximizes lights naturally

- Roofs as open spaces, decks, pools, green roofs, roof gardens

- Porches provide outdoor places, and variety or vertical exposure to units, units are slanted to allow maximum light (for example)
- Ventilation, Air quality, Mold Prevention, and Pest control are pervasive
- Hotel provides a good public interface, (sociable entranceways, front porches, no blank walls or monolithic building fronts, facing the streets)
- Hotel considers resident's needs and tastes when designing. Hotel is designed in flexibility
- Hotel incorporates natural history exhibits, or cultural performance areas- acting as a civic center

Measuring Sustainable Tourism Development:

Development, Construction, and Ongoing Operation Phase Activities

- The project driver for the hotel (Developer, owner, investor, architect) is concerned with sustainable development goals
- Key stakeholders, contractors and consultants clearly communicates sustainable goals
- Contractors are brought in as part of a sustainable development
- Detailed environmental guidelines or latest information on environmentally sensitive and health-conscious ways to treat the site and buildings are used
- Contracts are drawn up and signed and outline responsibilities and liabilities, and potential rewards and consequences to ensure that an ethical and green agenda is coherently addresses
- Planning stages are considered green, and so on
- Community considered in planning process
- Quality of construction is insured by certified professionals and inspectors
- Green specifications written, known and followed in advertisements for bids in pre-bid meetings

and pre-construction

- The most appropriate vendors are located and sourced for materials
- Sufficient construction and labor conditions on site
- Construction minimizes pollutants and other waste products
- Construction waste management established for material separation and handling, recycling, and hauling
- Existing materials salvaged, hotel renovates aspects of existing buildings
- Salvage infrastructure
- Commissioning ensures premier building performance
- Construction site safety is exercised
- Fair Labor standards on hotel construction site
- Proper human resource issues are addressed
- Sex industry and prostitution is discouraged
- Gambling is discouraged
- Drug use, trafficking, purchasing, and so on is discouraged
- Money laundering is discouraged.
- Labor force is local and ethically comprised
- Crime is managed
- Security is on site
- Religion is respected
- Ethnicity is respected

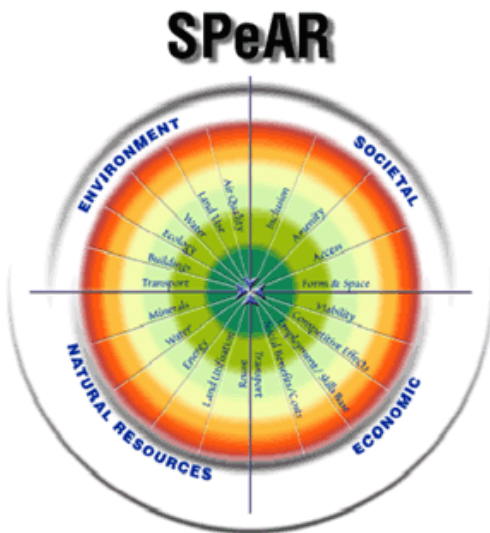
- Local resources are used and purchased for ongoing operations
- Local food, product and retail exists and is available for consumers
- Inflation in local community does not result from hotel development

PART 3

Methodology:

In order to help balance the many factors that affect a sustainable hotel project, be it a large scale planning effort or the development and adaptive re-use of an existing site in Southeast Asia, the ® SPeAR assessment tool, developed by McGregor and Roberts (2001) in conjunction with ARUP was a good tool to use as a foundation to build on for this study's methodology. This is not dissimilar to how LEED is often used. Many projects, world wide, utilize LEED as a framework for improving building design and development. In this case, the study will develop its own form of, a 'SPeAR' (sustainable performance assessment routine) that will be able to be used to summarize informal results of data collection that will be completed in a separate, future study.

Figure 1. ® SPeAR Base



Source: ARUP (2009) www.arup.com

Dealing with the Complexity of Southeast Asia:

A sustainable solution results from optimal balance of sometimes competing requirements. Therefore this study divided its problem into the following four categories as indicated in the original version of the ARUP ® SPeAR model:

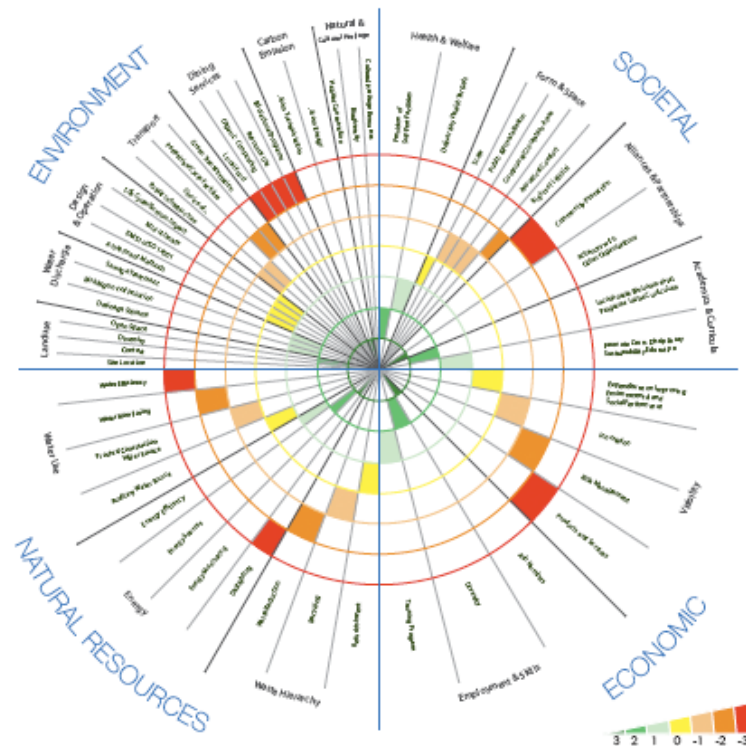
- a) Social Equality
- b) Economic Vitality
- c) Environmental Integrity
- d) Natural Resource Conservationist

This is an extension of the 3-category model or “triple bottom line” (People, Planet, Profit) which lumps environmental issues with natural resource conservation. By using the ® SPeAR model base, environmental integrity covers the effects of a given project on the environment, natural resource conservation and deals with what the project takes from the environment (ARUP, 2001).

These four main categories cover the wide range of issues some of which can be quantified as well as those requiring a subjective ranking. At many hotel projects in Southeast Asia, there may be insufficient data to evaluate in detail the quantifiable issues. However, there are many stages of a project when impact can be made in terms of achieving a sustainable outcome. Furthermore, several of the issues are inter-related. Therefore, the task of reviewing and making informed decisions on the broad range of topics needed for a sustainable outcome rapidly becomes too complex and the study would be at risk for reducing the problem to quantifiable issues and ignoring entire sections of a so-called sustainable 'pie'.

Using the ® SPeAR baseline model, an attempt was made to tackle the issue of complexity by establishing the sets of indicators and sub indicators that have both traditionally been ranked as well as those contextual indicators (as identified from the literature review) that can be added to receive a ranking from worst practice to beyond best practice. This ranking utility allows subjective data to be given a weight that will subsequently equal numerical data.

Figure 2. Example of Sustainable Performance Appraisal Routine Adapted for Case-Specific Study



Source: University of Virginia (2009), www.virginia.edu/sustainability/documents

The example from University of Virginia demonstrates how a suitable model can be

adapted. A number of indicators particular to aspects of sustainability are already in existence and can be utilized. This study will adopt such a set of indicators and assemble them into its own Rose Diagram. It was decided to use as far as possible, a set of universal indicators that have already gained acceptance in the international arena. These were drawn from the existing ® SPeAR indicators that have been developed based on 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 baseline indicators for this study's Rose Diagram were drawn from the United States Urban Land Institute, The United States Green Building Council, American Institute of Architects, Committee on the Environment, Local Government Commission, and the Rocky Mountain Institute. The sub-indices that were incorporated into this study's diagram were determined based on the literature review, and were incorporated to make the model applicable to specific contextual issues, prevalent in Southeast Asia.

One of the unique aspects of the development of this study's rose diagram, was the culmination the indicators used that the FTSE Group, (FTSE) has recognized, in light of the need for social responsibility and using principles provided by government organizations and private sectors and businesses. This has produced what is referred to as the FTSE 4 Good Index, (Originally published in 2001). The Indices provide a workable means of meeting the complex needs of socially responsible investment and offer practical guidelines.

Also of interest to this study, are the principles of Leadership in Energy and Environmental Design (LEED) which has been developed as a method of rating the sustainability

of buildings in the United States. It allows different buildings to be compared against each other. For this reason, LEED is very rigid in its criteria, and each LEED credit receives numeric results to compare against the 'benchmark'. This aspect of LEED system is a strength in more developed countries. In lesser developed countries, this is a weakness. There are certainly projects in Southeast Asia where the largest contributors to sustainability that a project makes, could be missed entirely by a LEED assessment because it does not fit into the confines of any of the credits. Therefore, a SPeAR model does not produce a single numeric result. (Although there could be a sum of individual indicators, produced). The goal of adapting and using SPeAR in this study is to make sure that all the sustainable opportunities that the researcher has identified have been reviewed and optimized; its foci on individual project improvement for Southeast Asian hotels. However, the natural resources sector of this study's Rose diagram bears some resemblance to the main sector outlined in LEED. And, this is not a coincidence. ARUP initially developed the sector in the baseline SPeAR to be easily quantifiable in numerical terms. Additionally, backup calculations could be transcribed for LEED into this sector. Thus LEED has, and does form an important part of a more overall assessment required for a SPeAR.

Development of the SPeAR for this Study:

The following themes from this study in Southeast Asia are central to the Rose Diagram's indices:

1. Working towards environmental sustainability
2. Developing positive relationships with governments, regional and local authorities and stakeholders

3. Upholding and supporting Human Rights in Southeast Asia.

The result of this work is a series of primary indicators allocated to the 4 major categories as follows:

Environment:

- (5) Land Use
- (6) Density
- (7) Social Ecology
- (8) Cultural Heritage
- (9) Indigenous Architecture
- (10) Design and Operational
- (11) Wildlife
- (12) Transportation

Societal:

- (1) Health and Welfare
- (1) Labor Relations
- (2) Life Safety
- (3) Access
- (4) Amenity
- (5) Inclusion
- (6) Racial and Socioeconomic Segregation
- (7) Community Planning

Natural Resources:

- (1) Materials
- (2) Water
- (3) Energy
- (4) Light
- (5) Land Utilization
- (6) Waste Hierarchy

Economic:

- (1) Social Benefits
- (2) Transportation
- (3) Employment
- (4) Competition Effects
- (5) Illegal Activity and Crime Effects
- (6) Viability
- (7) Taxes/Inflation
- (8) Local Entrepreneurs
- (9) Government
- (10) Investments

Using these indicators for inclusion in the study's Rose Diagram, allows the tool to have application in hotel development in Southeast Asia. However, to be able to make an assessment of where a project sits in respect to each of the above indicators, a set of sub-indicators for each

indicator was required.

It was necessary to develop a base set of sub-indicators, which will be then individually assessed on the A-3 to +3 ranking, applied on the Rose Diagram format. This tool averages the cores for all sub-indicators within an indicator to produce an overall rating of that indicator for a specific hotel project. The ratings are displayed within segments in a circle as different colors; dark green (+3) as beyond best practice, red (-3) as worst case.

The circle of Rose Diagram does not give a single overall score, rather, it is a way to graphically illustrate the sustainability and visualize the hotel projects at a point in time. It clearly shows where a project is weak and where it is strong and this can be used to guide development to focus on areas that need improvement.

The core set of indicators are locked into the program, these can neither be altered or deleted. This is typical when applying a SPeAR model, and in this case, will ensure that there is a level of consistency between assessments across varying hotel projects with different scales, sites, and dynamic factors. It is possible to do this, as the SPeAR tool was initially designed to be used for a wide range of project types. Therefore, for this study, it was possible to add Southeast Asian Hotel project specific indicators and retain the model of consistency. These project specific indicators were identified and discussed in the literature review and are included in its development of the Rose diagram (see Appendix A).

However, it was not necessary to use every indicator that was identified, itself. There was a need for this study to balance some degree of simplification with the need to maximize the unique and relevant information related to the study. How this study proposes assessing additional

indicators, will be discussed later as additional methodology.

Advantages of Developing a Model based on SPeAR Method for this Study:

- a) It allows the sustainability of a hotel project to be assessed and illustrate graphically, regardless of project stage, demonstrating continual improvement and evolution of a hotel over time;
- b) It allows the many aspects of sustainability to be balanced and the inter-relationship of these assessed;
- c) It Identifies where there is room for achievement to achieve optimum benefits in hotels
- d) It is a logical and transparent methodology that was fully adaptable for the purposes of this investigative study;
- e) It demonstrates the interaction between various social, environmental, economic and natural resource indicators of sustainability;
- g) It prompts innovative thinking to include sustainability into hotel projects design and is easy to display to stakeholders and authorities.

SPeAR Adapted for Hotels:

The traditional planning has broadly taken an architectural approach to planning the developments of hotels. The hotel plan is transformed into a physical setting in the plan. However, sustainability planning demands an assessment in a totally integrated way about planning and those issues of infrastructure, economic and environmental effects on the surrounding community.

In order to avoid the common results of not integrating all the components of planning,

from a systems viewpoint, a SPeAR assesses the entire performance of a hotel development- which leads to performance of infrastructure. However, in many cases the infrastructure may be designed in a vacuum from the design guidelines developed for the buildings. Adapting the SPeAR, is a great aid in approaching this thinking. The rigor of assessing each sub indicator and how it can be optimized, ensures that a balanced approach is taken when assessing hotels. It also provides a structure workshop making sure that consideration is given to all aspects of the hotel project. LEED, for example, provides the same rigor in building design. However, a hotel development in southeast asia has a much greater impact on the surrounding community and the right side of the SPeAR diagram, which includes Societal and Economic Indicators, becomes important.

As the indices, applicable to southeast asia were identified, the rose diagram acquired more segments moving towards the center. These segments can be filled in accordingly for each subject, analyzed. So the Rose diagram in each case, will therefore provide a simple visual indicator of sustainability of the hotels, as researched in the previous chapters.

Using the SPeAR for further Study:

This study attempts only to develop its own adaptation of a SPeAR for assessing sustainability in hotel planning in the Southeast Asia to use in trial mode for a future, separate study, to be conducted at a later date. Initial feedback that the structure provides to the discussion is very valuable. In the case of hotel development, it will be a simple vehicle to present the complex issues of moving from 'business-as-usual' to a more sustainable development to governmental organization. The resulting Rose diagram diagram, (see Appendix A), was also

developed in combination with a set of checklists (see Appendix B) and interview questions (see Appendix C) that form the basis of a case study method and template (see Appendix D) that would be completed in the future study via direct observation, on site and in-depth interviews.

The Future Study:

As a part of this study and development of the methodology the researcher needed to play an interactive role with a sampling of the subjects of inquiry, and on a methodological level, confirm the multiple qualitative paradigms. This was seen as involving an inductive process of inquiry that seeks clarification of multiple critical factors affecting the assumed sustainability of hotels. In the process, several hotels were visited, and 12 hotels were selected for future analysis and application of the rose diagram, interview questions and checklists, which will ultimately result in a series of case studies conducted.

Individual assessments will be conducted for each of the hotels that will include (1) Best and Worst practices identified (2) Illustration on the Rose Diagram (3) A Case report detailing Significance and Background information about the hotel and condensed observations from the field (2) A section including “Areas Requiring Improvement” that will cover according issues of sub-indices as specified in a SPeAR model (3) A section including “Areas Scoring Highly” that will cover according issues of sub-indices as specified for the study's rose diagram.

In order to provide this future study with a more detailed investigation of each hotel, many sub-indices that were not included within the Rose Diagram will be addressed using the other forms of qualitative methodology (as previously indicated).

The qualitative terminology, places an emphasis on distinction at the level of tactics, i.e.

the techniques for gathering and interpreting evidence and data regarding the hotel properties within the context of their locations. Therefore, the research will employ the combination of qualitative tactics and will require significant qualitative techniques. A 'qualitative analysis', must be conducted based on the need for further description and interpretation via documentation of many more sustainable elements of the several hotel sites and properties in Southeast Asia. The overall qualitative analysis, addressing the paradigms within the adapted SPeAR model, can be complemented by various individual recording cases on objects on which investigation is focused, with methods including data collection from (1) individuals (2) program.

These data will include observations, interviews, documentation (e.g., existing sustainable and green standards). In many instances, the researcher will spend a period of time on location, and interact with the people and hotels being studied. The researcher's role, will be to fill out the checklists, conduct interviews with key informants following the leading questions, record the details about the context, surrounding the individual cases, including the information about the physical environment and any historical, economic and social factors that have bearing on the situation.

By identifying the context of 'sustainability' in Southeast Asia, the context of the cases, the researcher will be able to help others, who later observe the information gathered in the reports to draw conclusions about the extent to which the this study's rose diagram was developed, and how overall, it is generalizable to other situations of sustainable hotel development.

Within the future study, the multiple forms of 'quantitative research analysis' developed by this study, will more properly address the subjective dimensions of the hotel site. Therefore

this research is framed by diverse systems of inquiry, complementary by nature. The use of them in the research, provides appropriate and useful '3-part' framework of reference. The objectives of this study's methodology seeks to yield a form practical application for assessing sustainable design. To this end, it follows that the use of the multiple systems of inquiry will also require cross-evaluation, in order to determine its standards of quality.

Furthermore, the research sets up a foundation for future investigations that would be confirmable. This can be achieved through triangulation, as methods discussed previously; multiple methods, sources, and investigators will establish triangulation. Additionally, reflexivity will be employed, revealing the initial assumptions drawn from an initial exploratory visit to the sights, their influence on framing the research questions, and the changes in perception that will emerge during the future research.

This will allow the future research to achieve triangulation in two distinct ways. (1) overall details of its case studies, although a series of about 12 case studies will be reported. In other words, the details will be in an overall conclusion, articulated as an architectural model's framework, as applied to hotels compromised by various development practices, regulations, and infrastructural impact. The framework will be conclusive, as a compilation of sustainable features demonstrated in the dynamic of multiple instances. Secondly, within each case study, it will be indicated that the data derives from multiple means such as open-ended interviews, document collection, participatory observation, and visits to built facilities (as previously discussed). Key informants will include hotel managers, owners, architects, architectural consultants, staff members, committee and board members, state regulators, and residents.

The primary device, ensuring dependability for research will be the establishment of an “audit trail”. The audit trail will document all the processes by which data was collected, analyzed, and interpersonal. This includes interviews and observation notes, drawings, diagrams, patterns of activity, pictures, patterns of building, journal notes, etc. Although this research will not specify the extent to which a comprehensive audit trail is established, it can be inferred from subsequent discussion of the data analysis, that an audit trail will need to be substantial.

This study will set up for the future research's findings to be consistent, as the research methods that were determined from this study, would yield the same results if the study were conducted under the same conditions across hotels within Southeast Asia. However, it is important to note, that changes in technology and building practices and availability of resources may occur. In the future, the lack of subsequent consistent or stable results, could be attributed to the fundamental changes in the conditions of the study and new criteria needing to be considered, rather than to lack of reliability.

Checklist Development:

The checklists (see Appendix B) were developed after conducting an extensive literature review. The principles in Wilson, Uncapher, McManigal, Lovins, Cureton, & Browning's (1998) Book for the Rocky Mountain Institute were used in wording and ordering the checklists. The checklists were developed and are intended for the researcher to take on site to each of the future subjects of inquiry (the hotels, previously listed). All checklists are to be completed on site.

Interview Question Development:

The in-depth interview questions (see Appendix C) were developed to facilitate various

participants including the key informants (hotel managers, owners, architects, architectural consultants, staff members, committee and board members, state regulators, and residents) open exchange of ideas which will be useful in developing and validating the ideas, specific features and attributes of the sustainability in the hotel, and the viability of SPeAR model.

The questions were broken down into 3 categories:

- a) Financing
- b) Design and Planning
- c) Social Interaction and community.

The interviews seek answers to the questions, asking which activities the hotel engages in, that affects investors, stakeholders, property, community and market demand. The first set of questions addresses financing, related to specific development and investor programing. The next set of questions determines planning strategies of the design, and the adaptability to the environment, and the end-use/least-cost consideration of how a hotel meets the needs of the market and the environment it is designer for. They will also determine what levels of useful life span site has. Finally, the third category of interview questions addresses he communities' needs. These questions will determine links with local cultures, society sensitive design, and hotels that encourage social interaction and more economic involvement.

Case Study Template:

(See Appendix D) A Case study template will frame the relevant information to be necessarily summarized from the hotel property investigations.

Discussion:

This study set out to develop a systematic way to assess hotels in Southeast Asia. The goal was to develop a holistic way of determining sustainability to identify hotels that would not only be successful financially and fit into the Southeast Asian vernacular, but would also contribute to the identification of factors embodying both social and environmental ideals, together. Not only just on the care of the natural environment, but also guided by the impact of development on cultures.

The tool for assessment that was developed in the methodology, in the form of a Rose Diagram that emulates SPeAR method and builds on previous models, includes indices and sub-indices that were isolated from an extensive literature review that can be used to analyze a sampling of hotels in Southeast Asia for future study. In a separate study, these hotels will be investigated in order to determine if the hotels possess several fairly successful features of the new kind of real estate development that should be emerging throughout Southeast Asia and the rest of the world. This, referred to as sustainable development, integrates social and environmental goals with financial considerations in projects of every scale and type.

In addition to the Rose Diagram, the various interview questions and extensive checklists developed in this study will determine additional threads running across many of the hotel development projects. These can be grouped into four broad categories: environmental responsiveness, resource efficiency, economic impact and cultural sensitivity.

Before this study's methodology was developed, the researcher visited many hotel sites in the Southeast Asian regions of Singapore, Malaysia, Thailand, and Indonesia in order to better

recognize conditions that informed the identification of the Indices and Sub Indices contextually relevant to sustainability. This was useful and informed the development of the appraisal method because the preliminary observations of several regional hotel sites confirmed that the 4 core categories (Environment, Society, Natural Resources, and Economy) as developed within the rose diagram, were manifested in many ways and reinforce each other. As the researcher traveled throughout Thailand, Indonesia, Malaysia and Singapore on 4 separate trips throughout the course of 12 months, preliminary assumptions were confirmed and therefore formed a premise of study.

For example, the researcher determined that hotel developments in Ubud, Indonesia designed to reduce dependence on automobiles is likely to foster greater community cohesiveness and lower crime rates, since residents walk more and get to know the local neighbors and surrounding communities. A hotel visited in Bali, Indonesia was designed in regional vernacular style and was more efficient in its use of resources for construction because more local materials were used.

In light of the problem that conventional development is frequently insensitive to the natural environment and certain hotel projects scar the landscape, take valuable agricultural land out of production, and destroy wildlife habitat; such is the case with developments on Sentosa Island in Singapore. In contrast, many of the hotel developments, located off the coast of Singapore on Bintan Island of Indonesia on the other hand were designed to enhance or restore the natural habitats and resources. A key to the environmental responsiveness of the hotels observed, was those that respected that which is already at a location and naturally belongs there. Environmental responsiveness was applied to land use by some carefully sited hotels to blend

with the natural environment, such as the case with the Hotel observed in Ubud, Indonesia. Additionally, in Bintan an integrated resort and hotel reused already developed land, and even sought to restore degraded land on the island. This is a particularly sustainable practice, preserving as much virgin land as possible.

Environmental responsiveness by hotels was applied to infrastructure by capitalizing on natural features for storm water management, erosion control and roadway design, and it was applied to certain hotel buildings by using such natural resources as the sun, wind, landforms, and natural vegetation to provide heating, cooling, lighting, ventilation and protection from the elements. This was evidenced at hotels in, Indonesia. Particularly, one hotel could be seen as an “economic engine” for bringing about ecological restoration. This process was seen where hotels incorporated 'open-air pavilion' structures that minimized modification and encouraged interaction to the natural surrounding landscape, and when gardens were restored, and many complexes in the form of villas, were imposed sitting lightly on beaches, hills, cliffs and within forests. These particular hotel elements were seen to have formed the essence of environmental responsiveness.

Resources are the physical materials and energy flows that the regions have access to and use: land water, soil, minerals, timber, fossil fuels, electricity, solar energy, and so on. In hotel development, these resources are a form of capital that a traditionally a hotel developer works with in siting, constructing, and operating the hotel buildings. Resource efficiency was the process of doing more with less- and using fewer resources and in the case of southeast asia, using exotic and scarce resources, was of particular relevance when considering the same goals.

Resource efficiency applied to many aspects of the hotel developments, including building design and material selection, waste reduction, water conservation, and energy efficiency. The clustered development patterns of Nusa Dua in Indonesia, reduced infrastructure needs, saving resources and money simultaneously. Pedestrian friendly planning and the tourist oriented planning of retail, restaurants, and activities reduced the amount of automobile use, and cut pollution.

In the case of the hotels in Sanur Bali, reusing the existing buildings prevented would prevent unnecessary land development and reduced building material use. Recycling demolished buildings and construction waste saves manufacturing energy and reduces landfill loading. Burning practices are of particular concern in Southeast Asian countries. Hotels observed in the area have the potential to capitalize on the use of reclaimed lumber and building materials. Unfortunately, many existing residential buildings are destroyed for resources- in efforts to conserve cutting down lumber rather than 'recycling' and therefore contributes to cultural degradation by tearing down existing, local architecture. Cultural areas like Sanur would need to ensure that hotels are effectively re-cycling the neighborhood's materials. However, considerable effort was observed to have been made in developing hotel buildings that fit in with the local aesthetic and vernacular, were scaled appropriately and added vitality to the indigenous arts and crafts district. Much interaction with local culture could be seen, and sourcing for services and products from the immediate surrounding.

Additionally, in regards to hotels in Bali located in a cultural district, it was noted that there may have existed quite a bit of sensitivity towards suburban sprawl. Homogenous

development pattern, auto dependence, and the mourning of the eradication and loss of uniqueness of southeast asian cultural identity was not observed as much at the hotels in Sanur, in contrast to the hotel developments of Nusa Dua. Southeast asian community and culture involves many things, including the quality and quantity of human interaction and neighborliness. In the case of the Sanur, community involved patterns of local entrepreneurs instituted on the hotel site, cultural performances on the hotel's site, sense of involvement with the natives, living in housing situated next to the hotel, and patterns of relationships individuals, families, and institutions relating to the environment. In this sense, the community was connected, and the community was voluntary. Although hotel development did not intentionally create community in the hotels, in instances pieces were aligned that were inevitable.

Community existed on many scales at the hotels observed, and community sensitivity was reflected through certain land use, hotel building's layout and design, and the operations. Some of the more sustainable developments within Nusa Dua and particularly in Thailand, used land appropriately at both scale and function; they planned for pedestrians as well as cars, shopping, and offered a range of public spaces and quasi-public spaces such as porches, courtyards, pavilions, cultural performance and gathering spaces for accidental as well as planned activities. Just as important, sustainable hotels addressed community in the way they were operated including the marketing component in which components of sustainability were conveyed to users. The nature based hotels, was a leader amongst the hotels observed, in this aspect. Most hotels that employed green marketing, were affiliated with some sort of third party eco-labelling program, or green recognition scheme.

Sustainability sensitivity in Southeast Asia also involve respecting and promoting a sense of place by recognizing the uniqueness that every religion offers. In one instance, a hotel which should be praised for its embrace of cultural and religious customs, preserved a temple on the hotel's property.

One of the key features of successful sustainable hotel development is that it establishes and reinforces connections: between people and place, between people and natures, between hotels and nature. The hotels in this discussion have exhibited some features of successful sustainability largely because they start to give the people who stay there a sense of place and character, a connection with the locale that is very welcoming to travelers. This process of establishing connections can be seen as the application of ecological thinking to hotel real estate. Ecology describes the interconnections or mutual relations between humans- and their environment. As presented in the literature, in social theory, “ecology” has been described as the social and cultural pattern that results from the relationships between people and resources. Ecological thinking for hotels means looking at things in their whole context while seeking also to understanding the interconnections between parts. It realizes that nothing, including hotels, exists in isolation and everything is part of a larger system.

Therefore, to summarize this discussion and its key recognition: sustainable hotel development is the application of ecological thinking to the business of creating hotels for people. Each of the four core elements outlined in the methodology, in its own way, is a means of interrelating ecology and hotel real estate. Environmental responsiveness, as discussed is a recognition that a hotel development contributes to the ecosystem in which it sits and should

respect that position. Resource efficiency is a way to achieve a level of sustainability in or resource consumption. Community and cultural sensitivity addresses the fact that people, exist within a context. 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. All of these factors can be rated, observed, identified, rated and organized on the Rose Diagram developed in the Methodology and the observations will turn into rated appraisal.

Recommendations:

The reality is, that in the future, well executed sustainable hotel developments, that have high levels of best practice may out perform other market segments. It may be the norm to do well financially by doing the right thing environmentally.

There are couple of drivers that will bring hotel development into the category of 'sustainable' hotel development. The first is an increasing awareness that we all need to do out part in ensuring the the world is a safe, healthful and enjoyable place to live and travel. Many of the pioneering sustainable hotels came to the field through this altruistic awareness and concern for the environment. The second driver, which will increasingly pull mainstream hotels into the fold, is the economic one. Developers of hotels, need to understand that they can generate profits by sustainable hotels, that will be attractive financial investments in the future.

This study could try and make value judgements about these two motivations- that altruistic reasons for sustainability developing a hotel is better- but the distinction is in a grey area. Because Southeast Asian hotel development is driven by profit-seeking developers and

Foreign direct investment, corrupt political relationships with private sectors, the 'profit' driver' for sustainability in the future, may offer the most powerful vehicle in chance. Profit seekers will appreciate hotels as they begin to see what sustainable hotels achieve financially, as well as how they benefit the communities and nature. If Sustainable hotels make a slightest bit of profit- even subtly- their commitment will be reinforced.

One one hand, hotel development can be strongly supportive of underlying social and environmental values inherent in sustainability, however on the other hand it can remain just as influenced by the bottom line as it ever was in Southeast Asia. Although many environmentalists and conservations will continue to think of hotel developed as enemies of the environment, developers need not carry forward this reputation. Hotels will win environmental awareness for their efforts to protect natural areas, even while making money. Southeast Asian governments and developers control billions of dollars spent annually on land and building, they have the financial power- and, increasingly the philosophical will- to help ensure that future hotel development will have the regions Southeast Asia's natural endowments to enjoy.

Conclusion:

Achieving ultimate sustainable development in Southeast Asia will require support a many levels. It will require Governments, Developers and Investors who are willing to risk money on the expectation that a sustainable hotel can succeed. It will require a public who is educated and understand what is difference about sustainable development and demands it. And it will require municipalities that are willing to put in place incentives to encourage sustainable innovation in hotels. This will happen as tourism planner, and elected officials begin to recognize that a hotel

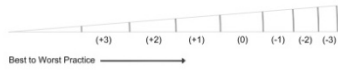
development reaches far beyond the immediate boundaries, effecting surrounding communities, economies and ecosystems. Only then will Southeast Asia will be able take its place among the number of pioneer countries today which are making strides in developing comprehensive framework within which a development can weave projects that both support community and make a profit.

APPENDIX A

Figure 1.

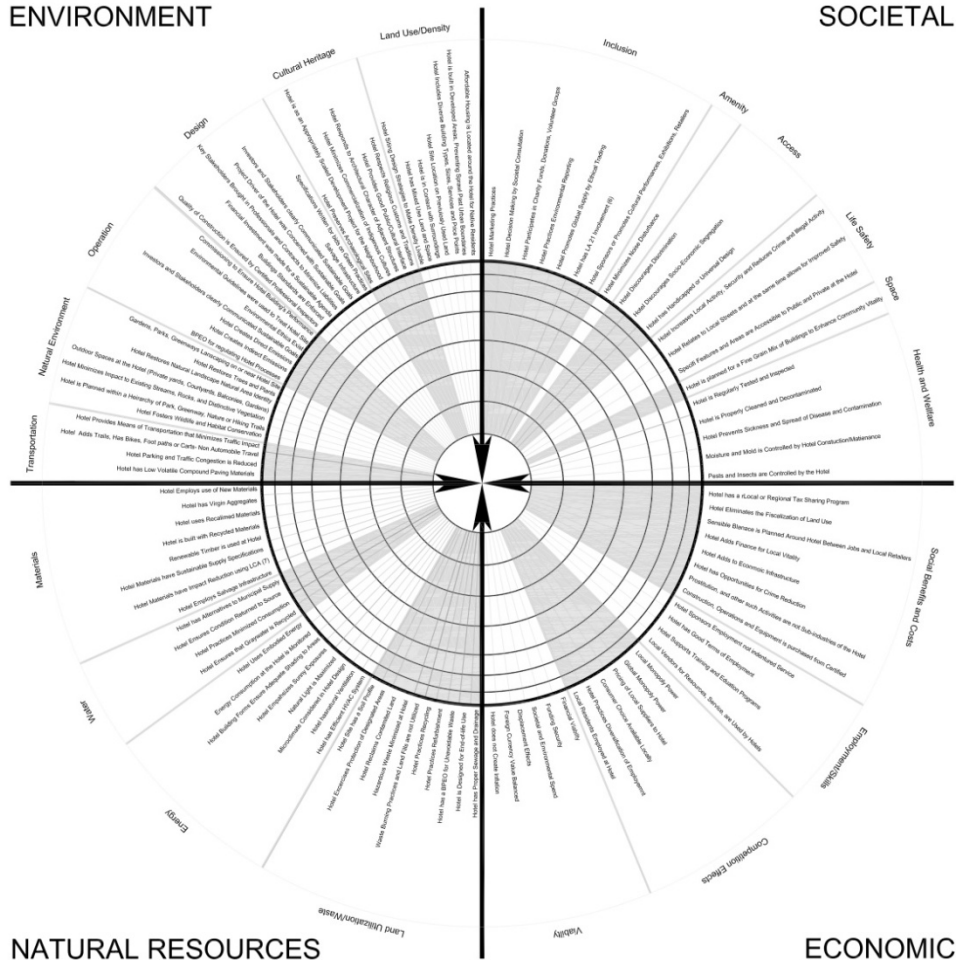
Sustainability Assessment Routine Case-Specific (Hotels)

Courtney S. Suess, Assoc. AIA
University of Nevada Las Vegas, 2009



ENVIRONMENT

SOCIETAL



APPENDIX B

APPENDIX C

APPENDIX D

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