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SUSTAINABLE TOURISM:
EXPLORING THE FRAGILE ENVIRONMENT IN EGYPT

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With increasing frequency, environmentally sustainable tourism or ecotourism is being adopted as a way of ensuring environmental conservation while enabling economic development. Around the globe, developing countries in particular are now encouraged by various interest groups to consider such a type of tourism as a solution to environmental and economic challenges. The supporters of this development strategy are typically international funding agencies, global environmental organisations, international tourism businesses, national governments, and local community organisations. While these groups have different interests, environmentally sustainable tourism appears to be a tool for negotiating those interests.

A demand for ecotourism and its support facilities and infrastructure is clearly on the rise. This is evident across the southern hemisphere where there has been and still is a surge in the construction of resorts that promote the ideals of sustainable tourism, from the Caribbean Sea to the Far East.

However, the Middle East is starting to shake off its typical image of traditional tourism, and new sustainable tourism initiatives are now taking place. Exploring the evolutionary aspects of sustainable tourism in Egypt unveils some of these initiatives. In this article, a considerable number of issues are covered:

A comprehensive understanding of ecotourism, its support facilities and infrastructures
An outlining of the concept of the “ecolodge,” and how it differs from traditional tourist facilities
Ecotourism in the Egyptian context
An exploration of a number of different levels of architectural and construction interpretations toward achieving the goals of environmentally sustainable tourism.

These levels show that the development of sustainable tourism...
facilities is an evolutionary process that does not end at their official opening, but is a continuous process of adaptation to the environment, the context, and emerging needs.

**A great challenge**

Looking at recent debates on sustainability, one can observe that implicit within these debates is a criticism against the values, attitudes, and tools by which most of the built environment has been produced over the years; it is an environment that has led to social alienation and environmental depletion. Several definitions of sustainability correspond with this criticism, some focusing on environmental criteria while others additionally integrate socio-cultural aspects into environmental concerns. The main idea behind the notion of sustainability, according to the European Commission on the Environment (ECER), is to create an effective system of resource distribution and utilisation with a long-term perspective in mind. A sustainable society in this respect is one that can persist over generations, one that is far sighted enough, flexible enough, and wise enough, not to undermine either its physical or social systems of support.

Within the scope of sustainability, sustainable development has been defined in international declarations made by many international bodies as "development that meets the needs of the present generation without compromising the ability of future generations to meet their own needs." This very general statement, requires further elaboration based on the literature that has been developed over the past 15 years. The concept of sustainable development, with emphasis on environmental sensitivity, has presented a great challenge to both developed and developing nations. It has an essentially relative and normative character, which makes it difficult to put into practice. In this kind of development, socio-economic objectives are balanced with the constraints that nature sets. It is based on the principles of self-reliance, the fulfillment of basic needs, and an emphasis on the quality of life. The implications of this understanding in ecological, social and economic terms for design, planning and management of human settlements can be framed in a number of aspects, including appropriate technology and ecologically based designs, low energy consumption, the selective and efficient use of resources, ecological principles to guide land use planning, participatory design, community involvement, and waste and urban recycling. The questions that should be raised here are: What exactly is eco-tourism? And what is the relationship between its underlying practices and sustainable development?

Tourism as a global phenomenon has emerged as a relatively new social activity. Before the emergence of the tourism industry, interaction between different societies took place primarily through commercial trading, war, or migration. Thus, cultural exchange was relatively limited. But with the development of communication and transportation, people began to travel for the sake of traveling, which launched a process of cultural globalisation that has been accelerated in recent years by further developments of the information industry.

**Major impact**

Concomitantly, tourism has become a major impact on social, cultural, built, and natural environments. It is an attractive phenomenon that affects both the hosts and the visitors. According to The International Eco-Tourism Society (ITES), tourism is one of the fastest growing industries in the world. More countries are recognising this and are developing measures to minimise the impact that tourism has on cultural and natural environments. Thus the latest trend in the travel industry is a newly emerging type of tourism that combines preserving the natural environment and the protection of existing human cultures within that environment.

The relationship between ecotourism and sustainable development can be found in the many interpretations of ecotourism. Critics assert that ecotourism is a sub-component of sustainable development, and that as such it should be considered in any attempt to understand human history and its interaction with natural environments. I have argued elsewhere that ecotourism should be viewed as a key mechanism in the spread of general environmental knowledge and awareness.

The problem with five-star resorts
in ecotourism destinations, or in out of the usual places is how they are being supported. An outsider develops a property, profits from which then go to the developer, while locals are hired often at minimal wages for the service they provide to tourists. This immediately creates a barrier between the locals and the tourists. Other problems arise. What is done with the waste that is generated? Water and food: Where do they come from? How do people arrive? Is overuse destroying the immediate surrounding? What overall impact has the resort made? All these questions are challenges to traditional tourist facilities.

The socio-cultural impact of traditional tourism is also a crucial issue. When tourists arrive at their destinations, they bring with them different beliefs and behaviours. The influence of tourists on the societies they visit is much stronger than that of the host society on the visitors. The majority of tourists come from affluent countries and dominant cultures, which are relatively unaffected by visitors from smaller local cultures.

One problem is that foreign cultures, as portrayed by tourists, appear out of context. On the other hand, tourists while on vacation change their styles of socialising. As a result, the view that local people receive of the visitor’s culture is not only strange to them, but also inaccurate.

**Natural world**

Increasingly, people are abandoning the traditional vacation for a new type of tourism that gives them a greater involvement in the natural world. Mountain trekking, bird watching, archaeological digs, photo safaris and scuba diving are new types of vacations that attract tourists to travel to relatively remote and unspoiled areas. This nature-based travel begins to address the dialectic relationships between the natural and the manufactured, tourists and the local population, tradition and modernity.

The concept of sustainable tourism parallels to the realisation of the benefit in combining peoples interest in nature with their concern for the environment. It appeals to people who love nature and indigenous cultures. It allows them to enjoy an attraction while protecting local cultures and environments. As the sustainable tourism expands in the Middle East, well-planned, ecologically sensitive facilities are in high demand, a demand that can be met with “ecolodges”; small-scale facilities that provide tourists with the opportunity to experience nature and local cultures.

**Response to the shift**

The world is changing around us and has been changing us. The way we think, approach our problems, our value systems, and the way our societies operate are changing accordingly. Our understanding of culture, science, and industry is gradually integrating these new insights, and sustainable tourism is a response to this shift in our approaches to the planning and design of built environments.

The concept of sustainability has emerged as a reaction to environmental depletion and degradation. The acceptance of the concept of sustainable...
development means the harmonisation of the concepts of economy and ecology, which increasingly share the same meaning: the intelligent running of the household within available human and natural resources. The old way of thinking is characterised by three basic assumptions: man is more valuable than nature, man has the right to subdue and conquer nature, and man has no responsibility for nature. On the contrary, the new way of thinking values the environment alongside economic development, and social equity alongside material growth. In this respect, one can assert that environmentally sustainable tourism relies on a change in cultural values that is supported by an adapted economic system and fed by appropriately used technology. The same technology that has been employed to conquer and subdue nature needs to be employed for its benefit, and in turn, for the long-term benefit of the human race. This characteristic of the new thinking creates the need for mature and competent professionals; the new sustainable society will need to identify non-material means for non-material needs. In response, professional development will need to become more interdisciplinary, with the practice of non-technical and complementary skills.

Environmentally sustainable tourism can help us understand the differences between techno-development and eco-development. It is the difference between a mechanical contrivance and a living organism. Technology does not build environments; people build them. Techno-development is based on the modernist illusion of technological determinism. It is an assault on nature. Eco-development, on the other hand, is a package of concepts, ethics, and programs. It provides designers and planners a criterion of social and ecological rationality that is different from a market-driven logic. It is rooted in the real need to fit human settlement within the patterns of nature. Politically, eco-development is decentralised and democratic. Socially and culturally, it reflects the diverse reality of human affairs and the tapestry of life. Economically, it adopts the premise that economy and ecology are both essentially to do with the flow of energy and materials.

The ecodge concept
In his 1995 book, Ecodge Sourcebook for Planners and Developers, Donald Hawkins identifies the term "ecodge" as a tourism industry label used to identify a nature-dependent facility that meets the principles of ecotourism. Such a facility is developed and managed in an environmentally sensitive manner in order to protect its operating environment. Ceballas Lascurain, an ecotourism expert, argues that the most important thing about an ecodge is that it is not the most important thing in the environment, but that it is the quality of the surrounding environment that counts the most. Other critical concerns would include the nearby natural and cultural attractions, the way in which ecotourism is operated and marketed, and the way in which local people are involved in the process of their development and operation. A design that respects the environment and is in harmony with the landscape and cultural setting of an area should be constructed using recycled and locally produced building materials. It should rely on solar or alternative energies, recycle the waste and the wastewater it generates, and serve locally produced food. An ecodge is a small-scale facility that blends in with its surroundings, offering visitors an experience of the natural and cultural world around them. The ecodge concept affirms that building footprints and other necessary impositions should be designed in harmony with its environment.

An alternative?
The ecodge concept is generic. In order to be useful, it has to be redefined according to the attributes of a particular environment. The characteristics of ecodges can also be clarified through comparison to traditional tourist facilities. Generally speaking, they do not provide many entertainment and luxury services, such as casinos or retail complexes that are provided by conventional hotels. This means that the initial investment in an ecodge facility is often much less, and the environmental impact resulting from the operation of a more complex resort facility can be avoided or minimised.

Their design should provide an atmosphere appropriate to the site's specific setting. It is this atmosphere that is one of the key ingredients in distinguishing ecodges from traditional facilities. Any ecodge project requires the adoption of four principles:
• Design solutions stem from the physical features of a place and its interaction with the cultural setting around it.
• Design should be based on ecological and environmental constraints.
• Local communities should be actively involved in the design and
TDA-owned lands stretch across different regions, from the Red Sea and Sinai Peninsula in the East to the Western Desert and with its oases, and from the wetlands in the North to Abu Simbel and Lake Nasser in the South. Each of these regions has a distinctive topography, landscape, wildlife, archaeology, cultural setting, architectural character, and variety of building materials and technology. This distinctive and rich biological and cultural diversity makes Egypt an appealing and excellent ecotourism destination. They can be classified into four distinct ecosystems: desert, coastal, riverine, and wetland, each of which portrays a number of sustainable tourism development features.

Although Egypt enjoys a richness of natural and cultural resources, the dependency of tourism on the environment does not appear to be well understood within the local tourism industry. The practice of sustainability is in its infancy; local authorities argue that many regions of Egypt are still remote and without modern infrastructure, and that this limits the expansion of traditional tourism. However, this does provide an opportunity for the ecotourism to provide numerous socioeconomic benefits of tourism to Egypt, such as generating foreign exchange, creating local employment, stimulating local economies, and increasing and fostering environmental awareness and education. It can foster a culture of conservation of Egyptian resources, even while exposing tourists to them: to enjoy, experience, and appreciate.

Ecotourism in Egypt

According to the World Tourism Organisation, the demand for ecotourism and nature-oriented tourism is on the rise. The World Tourism and Travel Council estimates that today sustainable tourism accounts for over 15% of all international travel expenditures.

The tourism industry in Egypt has traditionally focused on cultural tourism, especially, with the presence of ancient Egyptian antiquities that have a worldwide reputation, and until the mid-seventies this was the main determinant of Egyptian tourism. However, over the last 15 years, new regions have been undergoing strong tourism growth, especially the Sinai Peninsula and the Red Sea. According to records of the Egyptian Tourism Development Authority (TDA), there are a growing number of tourists whose priorities are different from those of mainstream tourists. They seek peace, wilderness, local culture, and colour.

Although the hotel's main buildings, villas and golf clubhouse (the work of Michael Graves and his project associates Rami El-Dahhan and Soheir Farid) is such a fresh take on traditional aesthetics that it dips into the realm of avant-garde. Kafr Al-Gouna, labeled as an "eco-village" is designed to evoke the pace and feel of a traditional Upper Egyptian town. It is essentially a sterilised and stylised local village. Arched walkways, cobblestone streets and russet-colored Mediterranean-style buildings and winding back roads leading to the residential villas are some of the important planning features of the village.

Sheraton Miramar is part of the overall master plan of the Al-Gouna, and is an important feature of the project. A five-star resort hotel consisting of 400 guest rooms, the site is dramatically surrounded on all sides by water and shoreline. The landscape features a myriad of canals and lagoons that provide each guest room a waterfront view. In addition to being an integral component of an integrated sustainable development tourist centre, the resort displays several other features of sustainability:

- The hotel is built using traditional Egyptian construction methods and symbolic elements such as brick vaulted and domes ceilings
- The variety in the forms and detailing creates a unique resort that reflects its desert and waterfront context in an elegant, surprising and visually appealing manner
- Climatic aspects, shades and shadows are all considered in the treatment of masses and facades
- The sense of belonging and the sense of community is emphasised through the creation of clusters of rooms, each of which has its own distinctive set of treatments in terms of color, material expression and massing. However, all represent a unity and work well in harmony.

Nweiba's Basata Camp and Castle Beach Resort

Ecolodge development in Egypt is in its infancy. However, several attempts have been made to develop eco-friendly facilities over the last 10 years. In 1997, I conducted a survey of proto-ecolodges on four candidate facilities identified as part of a US-Aid funded project. These were Basata camp, Castle Beach resort, the Meditation resort on Nweiba-Taba road, and Safari camp, which lies close to Fayoum, south east of Cairo. A comparative analysis of the four lodges was then undertaken, which covered
descriptive and qualitative aspects of the lodges. Analysis of the four lodges revealed a varied degree of eco-friendliness with regard to materials, construction, facilities, activities, energy, water, and waste. However, several lessons can be learnt from Basata Camp experience, the positive aspects of which can be identified as follows:

- Natural resources such as coral reefs, sea life, and desert life are protected and preserved.
- The special character of the desert is conserved and enhanced through the use of local architecture.
- The use of natural building materials, such as bamboo, reed, belt shawr, and wood, is non-intrusive to the environment and supports the local economy. Moreover, such materials can be easily modified to accommodate changing needs.
- The use of space between accommodation units provides a feeling of privacy.
- The overall atmosphere offers general appreciation and awareness of the environment and its local culture, and provides a sense of belonging.
- Social interaction and verbal communication are encouraged through the absence of modern entertainment facilities.
- Local people are part of the business and benefit from it.
- Minimal building and construction waste has been produced.

Basata camp has accomplished several other achievements that reflect a deep commitment toward the environment. Basata in Arabic means simplicity. It was the first eco-lodge facility in Egypt, and appears to be the most efficiently operated from several perspectives. Unlike other facilities, it is built entirely from natural materials, and although it has not employed many ecological design techniques, such as the use of wind or solar energy, cross ventilation, building orientation or wind scoops, it does use some strategies for energy conservation; while diesel generators are its major source for energy, electrical power is restricted to the lobby, front desk, and communal spaces.

An efficient system has been devised for water resource management. The camp has a desalination plant that currently produces 500 cubic metres of high salinity waste per day. This rejected water from the plant is used for toilet flushing, and for in the manufacturing of clay bricks that are used in the construction of new units. Plates and dishes are washed in salt water, then rinsed with fresh water. Delay-type faucets are used to limit water waste. Bathrooms are grouped and separated from the units and bungalows. Also, a solid waste management system is in place. Garbage is separated into organic and inorganic materials. Organic waste goes to an animal farm, while animal waste goes to the greenhouse. Inorganic waste is separated into plastic, to be shredded and moved to the city for recycling, glass, which is recycled in Cairo, and aluminum waste, which is recycled by the staff on-site. All in all, one can conclude that these eco-friendly tourist facilities represent individual attempts to develop and run eco-tourism operations that are based only on the inspirations and interpretation of...
nature and desert loving owners, and it is heartening to note that over the last three years several similar facilities have been developed to accommodate the rising demand of ecotourism.

Siwa Oasis and AdremeAmellal

AdremeAmellal in Siwa Oasis is an important model ecododge development in the Egyptian context. Designed and developed by EQI—Environmental Quality International, in a manner that ensures minimal impacts on the land, it is a built out of indigenous material using traditional Siwan building techniques and styles. Natural ventilation, which takes advantage of the dry desert climate of the area, was adopted, ruling out the need for expensive, maintenance and energy-intensive air conditioning. The lodge was designed to rely on solar and alternative energies, and to recycle the waste and wastewater that it produces. Food prepared at the lodge is organic and predominantly locally grown.

AdremeAmellal, or White Mountain Lodge was opened in 1999. Situated at the base of a majestic white mountain and overlooking olive and palm groves as well as the Siwa lake, a series of traditional Siwan kershef houses were restored and reconfigured into ten suites and 17 rooms, all of which offer desert-style comfort. Furnishing is simple, but of the highest quality, drawing exclusively on local material and design to reflect Siwa’s rugged spirit. Kershef, a mixture of sun dried salt rock mixed with straw, is used for wall building. Furniture, and fixtures are made of palm trunks and fronds, while carpentry and accessories display the rich local color and variety of the region’s indigenous handicraft. Oil lamps and candles are currently used for lighting. Photovoltaic energy generation system for lighting was also envisioned for the future, while currently solar heat-collecting panels are used for the supply of hot water. About 60 more kershef units were constructed in 2000 to accommodate a greater number of visitors to the area.

A desert park was created for the preservation of rare plant species. A 360 acre stretch of land west of the resort is gradually being developed into a large park, including an arboretum to grow native and exotic trees and shrubs, flower-beds for annual species with colourful flowers, and a nursery for germinating seeds.

A natural extension to these interventions is will be the future creation of a multipurpose health spa, capitalising on the area’s rich and varied resources. Hydrotherapy, using the locally produced mineral waters of Siwa and Saïfi, Peleotherapy, through immersion into the hot sands that are readily available in the area; and Balneotheraphy, through bathing in the numerous hot springs found at the oasis, are some of the natural therapies that are being examined for use at the health spa.

Notably, almost all of the ecododge employees are Siwans, except the chef. They are trained in hospitality and foreign languages. Furthermore, the ecododge has initiated numerous ventures in Siwa that promote the economic development of the local communities. For instance, the ecododge owner EQI launched a micro-credit programme in order to help locals rehabilitate their properties in Siwa’s abandoned old city Shali, and turn them into tourist accommodations. In 2001, EQI started the Women’s Artisanship Development Initiative, which today numbers some 300 Siwan women. The cooperative not only provides a steady income to its members, but it also revitalises Siwa’s traditional handicrafts by both introducing new prototypes and establishing collaborative projects with fashion designers. Finally, EQI collaborated with local farmers to create an organic produce cooperative supported by biogas digesters and a packaging and distribution plant.

Redefining the Ecododge in an Egyptian Context

Earlier I argued that four basic types of ecododges can be developed according to the availability of local building materials and dominant traditional construction techniques. It should be noted in this
context that old and traditional buildings are not just beautiful and attractive because they are built of local natural materials or because are just old, but rather because they represent a building culture and construction tradition that was mainly a social phenomenon. Imitating and duplicating the visual attributes of traditional buildings would not produce the same buildings because the spirit is not there. Thus, I assert that the building industry of ecologies in Egypt as well as in the Middle East should be directed toward its social dimension, and in doing so, it will produce an architecture that is in harmony with nature and is admired by local populations. Although within a specific environment local materials and construction techniques vary, analysis of the suitability of such techniques and materials supports such an argument.

**Desert Environments**

Available materials in desert environments include mud bricks mixed with straw, and different types of sandstone. In Siwa, Kershef, a mixture of sun-dried salt rock mixed with straw is used for wall building, and palm trunks and fronds are used for beams and roofing.

**Marine/Coastal Environments**

Available materials include natural stone, reeds, palm trunks and fronds. In Quseir, Hokklak, a sandstone available in many colours is extracted from nearby mines. Its low price and durability encourages builders to use it even for pavements. Limestone is available, but builders do not use it because of its roughness and the difficulty in cutting it. Where available, corals are used. Flat wooden roofs are common.

**Riverine Environments**

In the North, the main building materials in towns like Rosetta include red fired bricks, with a unique method of plastering the mortar joints between the bricks, resulting in neat and uniform facades. In the South, building materials include mud bricks and rough mountain limestone. Walls are covered with either flat or vaulted roofs. Plastering and wall painting are abundant in villages around Luxor. Walls are plastered using raw mud and straw, and then painted with decorative expressions that reflect religious events and document village scenes.

**Wetland Environments**

In wetland environments, building materials include reeds, mud bricks, locally fired bricks, and palm trunks. Construction techniques are similar to those used in riverine environments.

Within the Egyptian context, two different attitudes in dealing with the natural environment and developing facilities for tourism can be identified as follows:

**Negative Attitudes**

- Altering the natural landscape and building concrete blocks
- Damaging wildlife and killing birds
- Damaging the natural environment and cutting palm trees
- Disruption of marine life, damaging coral reefs
- Waste and garbage burned on site
- Western image for hotel staff
- Positive Attitudes

- Buildings do not compete with the landscape but complement it
- Bird watching activity
- Conservation of the natural environment. Palm trees are preserved
- Snorkelling, swimming, and exploring reefs
- Garbage is separated and waste is recycled
- Traditional local image of hotel staff

**A conscious design attempt**

As part of our exploration, it is important to stop and look at how we can incorporate the goals of environmentally sustainable tourism within our designs. The following example illustrates a conscious design attempt toward understanding and reacting to nature in a collaborative manner.
Contextual analysis of Al Qula'an

A biologically sensitive destination.

Field trips to the Southern Red Sea region were conducted with a special focus on the coastal area between the towns of Quseir and Shalateen on the Sudan border. Several environmentally sensitive areas regarded as potential sites for sustainable tourism development were identified, and in collaboration with experts in marine biology, geology and environmental planning, Al Qula'an Bay was selected as a site for the demonstration project.

Al Qula'an is located 320 kilometres south of the city of Quseir and 40 kilometres north of the town of Bernice. It contains a rich abundance of natural and cultural resources. Natural features include distinctive fringe coral reefs, sandstone dunes with slight slopes, and biological diversity. The site encompasses dense mangrove trees, desert shrubs, and desert acacia trees. It enjoys wildlife such as migrating birds, lamer falcons, black kites, and plovers. Cultural features include a traditional settlement of about 150 people of the Al Ahabda tribe. The settlement has its own cultural lifestyle and speaks both Bishariya and Arabic. Most of its members are fishermen and animal breeders, and they live in very poor conditions. Preliminary interviews with members of this settlement revealed their needs and aspirations.

Intensive site analysis studies were conducted, looking at five major factors - the overall environmental context, topographical features, climatic conditions, natural and cultural attractions, and positive and negative views. Each factor was constituted in terms of design constraints and responses, thereby, establishing a set of planning imperatives specific to the site. The response to topographical constraints confirmed that water creeks should be avoided, that hilly areas were appropriate for accommodation units while nearby flat areas were appropriate for larger one-storey service buildings. In order not to compete with the physical setting, all buildings should be less than four meters high. However, light structures and pergolas were proposed for certain recreational activities on building roofs.

The environmental context was an overriding design factor; while utilising the existing acacia trees as landmarks, the introduction of buildings or dense activities around the mangrove trees is avoided. Placing accommodation units far apart was one of the important responses to the overall environmental context so that wildlife movement was not disturbed. Integrating the traditional settlement into the new project was conceived of as an important value that should be considered while at the same time preserving the integrity of traditional life and providing the settlement with employment opportunities. Many aspects of the design were influenced by the interviews that were conducted with the surveyed individuals representing the settlement. Interview responses informed the design, minimising building openings in Southern facades, exposing large amounts of building surfaces to the Northerly breeze, and in the use of traditional building techniques and local materials. To reduce the consumption of energy, cross ventilation was emphasised including the spatial distribution of buildings within the site and the distribution of openings in interior spaces. A matrix of design responses was established, acting as a guiding tool for defining planning and design imperatives.

The Ecolodge Charette Process

Literature on participatory design asserts the value of collaboration. A design charette can be defined as a process that convenes various interest groups in intensive interactive meetings. The charette process refers to the rapid pace at which design decisions are made. In his book, Community Participation Methods in Design and Planning, Henry Sanoff argues that it is a remarkable participatory design strategy when applied to a specific goal-oriented objectives of a clearly defined problem. Participants in the process represented...
different specialties of local and international experts including policy planners, architects, environmental planners, geologists, environmental management experts, economists, and marketing specialists. The process involved two two-hour events. The first was a visioning session that aimed at exploring the project vision while evaluating layout alternatives. It was regarded as a catalyst for interactive discussions. The second event was a goal setting and alternative generation meeting that aimed at defining the project’s objectives and activities while generating alternatives utilising gaming techniques.

**The visioning session**

Visioning sessions are critical to the success of collaborative planning and design. It should present a picture of what the future that we intend to create might be and that participants should give direction to that vision. Without visioning, designers will not be able to comprehend what the true goals of the project really are and what is expected from a project in a specific community or context.

Based on a preliminary architectural programme for the demonstration project, two-layout alternatives were prepared. The session was preceded by a kickoff short event allowing participants to get to know each other and to understand the purpose of the process. A presentation was delivered to sensitise participants towards understanding the planning and design intentions. Layout alternatives were presented and a checklist was used where each participant compared the alternatives against a number of measures as shown in the table below. This was followed by a group discussion where site issues were elaborated and the merits and disadvantages of each alternative were explored. Participants contributed new ideas while narrowing down the range of options. The diversity of backgrounds and disciplines represented by the participants helped form a comprehensive vision towards developing another alternative. While architects and planners introduced specific recommendations for actions, other specialists provided ideas for establishing a framework within which design decisions are made, including feasibility and marketing issues. The visioning session resulted in a consensus decision on developing a third alternative that combines the merits of the initial alternatives.

Goal setting is regarded as the guiding process necessary for successful planning. The primary inputs to goal setting are the collective knowledge, skills, abilities, and experiences of the participants. The results of the visioning session and the assessment of the ecododge layout alternatives served as a prelude for the identification of the project objectives.

A design game was devised for the goal setting session. The game is based on the belief that objectives generate activities and activities generate spaces and places. It included a set of sheets handed out to the participants to work in groups of three, forming a total of five teams. The first sheet outlined a list of objectives classified in environmental, socio-cultural, and economic terms. The second sheet was a list of possible activities that may take place in an ecododge project. A third sheet was to record a fewer number of objectives and the corresponding activities. The fourth sheet contained building blocks representing the activities. The final sheet was a spatial layout game board and a site map illustrated on the board using a grid. The process followed the procedures outlined below:

- Defining different types of activities that match the identified objectives
- After extensive discussion among the participants, they were asked to record the objectives and the activities they have selected

Teams were asked to generate design alternatives using the building blocks and the spatial layout game board, based on the objectives and activities each team has defined.

Each team produced an ecododge layout alternative representing their conceptions and thoughts based on their understanding of the site, and the project purpose. This was followed by extensive

(Courtesy of Aziza Chaouni and Open House International)
collective discussions, elaborating on the alternatives while debating the merits of each alternative, and the way in which those merits could be incorporated into a final planning and design scheme.

Discussion: The Ecolodge Demonstration Project

The results of Al Qua’an contextual analysis and the charrette process led to a clearer definition of the final list of project objectives as follows:

Environmental Objectives:
- To provide the simplest technology that incorporates energy conserving strategies
- To educate visitors that knowledge of local environment represents a valuable experience
- To provide awareness and education for visitors on traditional and natural features, wildlife, and local culture

Socio-Cultural Objectives:
- To provide a sense of belonging and ownership among the tourists
- To provide opportunities for interaction between domestic and tourists cultures
- To provide the most relaxing environment for tourists
- To provide opportunities for the demonstration of local crafts and traditional arts of the region

Economic Objectives:
- To raise the local standard of living by involving the local population in the operations of the ecolodge
- To enhance economic awareness through the most efficient use of local resources
- To offer opportunities that achieve a self-reliant local economy “self contained community”
- To provide research opportunities for the visitors toward interpretation and development of projects that minimise human impact on the environment

A set of activities was identified based on these objectives. In turn, it was translated into the ecolodge architectural program. The program included:
- The main building that encompasses reception space, administration, restaurant, and lounges
- Two types of accommodation units
- A crafts and cultural centre integrated with the existing traditional settlement
- An environmental research centre for training and interpretation
- A waste recycling unit and the site central utilities
- Camping area
- Staff housing
- An observation tower for bird watching
- In addition to outdoor areas designated for outdoor recreation and nature-based activities

In order to develop the final planning alternative, the results of the assessment process together with the site analytical studies were incorporated to establish a layout adjacency matrix that map out the required proximity relationships between the buildings. Building designs were developed with two principles in mind. The first is building “less”: the minimal required areas that accommodate the ecolodge activities. The second is integrating traditional building materials and construction techniques. Building materials included sandstone hokkak that can be extracted from nearby mountains for walls, and reed, dried palm trunks, and tent fiber for roofs. The proposed construction techniques included a wall-bearing system with vaults and domes for the roofing of larger spaces.

Prologue

To conclude, I feel that it is important to highlight a few considerations looking towards the future of true sustainable tourism.

Because of the high ecotourism potential in the Middle East, and in Egypt in particular, it must be recognised that ecolodge development can become an important factor and a key tool in the sustainable tourism process.

A true ecotourism and ecolodge culture has to develop amongst different sectors of society so that all key players (local authorities, NGOs, private sector, professionals and local communities) are properly and actively involved, and benefit from the process.

The creation of appropriate regulations and guidelines does not mean the end of the process. Guidelines do not provide blueprints on how ecologges can be designed and built. The development of ecolodge demonstration projects and pilot projects in selected relevant sites should be regarded as one of the most practical ways of demonstrating concrete examples, and that should be coordinated with local authorities together with the active participation of developers and consultants.

Intensive and extensive training programmes are needed in the fields of sustainable development and environmental architecture, with the participation of architecture and planning schools in this process. It should be mentioned here that there is a real need to develop positive attitudes toward the environment in our future professionals.
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The collaborative approach to planning and designing of the ecodge demonstration project clearly revealed that the process strongly influenced the quality and acceptance of the final project. In Egypt, officials from the Tourism Development Authority reported previous unsuccessful attempts at initiating collaborative planning processes. Engaging the key players together with experts in a structured process provides the support base necessary to move forward through a pilot project; while additional funding can be raised through international grant programs and the private sector.

The techniques utilised in the process represent a dramatic departure from conventional planning practices. Research findings that are integral parts of the ecodge planning and design process are transformed into a plan of action. Typical approaches that direct the efforts only toward the development of guideline documents involving gaps between the guidelines and their implementation require extensive interpretation by the professional community. The structured collaborative process resulted in a valuable knowledge base that is directly utilised in the planning scheme. Using collaborative techniques for decision-making should be seen as a strategy for involving all key players where creativity and innovation can be achieved by having all concerned parties involved in the process while identifying the best collaboration strategy that acts as a feedback mechanism.