
A Case Study for Developing and Operating Sustainable Resorts: Innovative sustainability practices for the next generation of green resort managers

By A.J. Singh

Introduction

A recent report published by the Urban Land Institute, titled "Hospitality Going Green." (ULI, 2009), summarizes and highlights the emphasis of global hospitality companies on sustainable and operational strategies. To varying degrees, hotels and resorts in particular, are realizing the value of implementing these practices within their organizations. These practices may include educational programs, reforestation programs, development of eco-resorts, community engagement, ecological protection, and implementation of energy-efficient practices, sustainable purchasing, sustainability branding, marketing, recycling, and development of high energy efficient buildings. The motivation for implementing these programs varies. At one end of the spectrum it may include resorts that recognize that these programs have a direct impact on their economic bottom-line and at the other end of the spectrum (fewer) those that see the value of a Triple bottom-line approach³ to operating sustainable resorts. As a result, there is a growing demand, particularly in the resort sector, for hospitality professionals and managers with knowledge, skills, abilities and a sustainability ethic. In a report written by Mr. Herve Houdre, a Regional Director with the Intercontinental Hotels Group, he stated, that while it is very important for hotel General Managers to focus on the economic bottom-line and therefore maximize the value of hotel assets; the next generation of hotel managers are more than asset managers. According to him, the next generation of hotel General Managers are Citizen Hoteliers, in that they should be concerned about social responsibility and environmental protection (Houdre, 2006).

Conventional wisdom tells us, "What is good for the environment cannot be good for business." This statement becomes more forcefully embedded in our psyche with each media story of, "long haired, tree hugging hippies disrupting business meetings and conferences." Recently however, a new movement is beginning to question the validity of this paradigm. For example Paul Hawken in his book, 'The

³ The term Triple bottom line was coined by John Elkington' in 1994 to express a balanced approach to operating a business, which should include, Economic Prosperity (Profit), Social Responsibility (People) and Environmental Protection (Planet).

Ecology of Commerce', argues that intelligent consumption is the golden rule for the restorative economy. He states "...leave the world better than you found it, take no more than you need, try not to harm life of the environment, make amends if you do" (Hawken 1993). In a new approach that they term, "Natural Capitalism," the authors state that the capitalized book value of the earth's ecosystem is close to half a quadrillion dollars, (Harkens, Lovins & Lovins, 1999). Their approach shows how new business practices can synchronize the interests of industrial capital with the natural capital of the environment where businesses exist and operate. This sentiment is mirrored by Michael Porter, the strategy guru at Harvard University. In a recently published paper in the Harvard Business Review, titled "Creating Shared Value," he propositioned that business and society need not be at odds with each other. In the article he states that the concept of shared values proposes that business benefits when society benefits and there is an alignment of these values. (Porter and Kramer, 2011)

While top Hospitality Management programs in the United States and globally have evolved from being technical schools into those with a largely business based curriculum, they are behind the curve with regard to incorporating sustainable development into the curriculum. As industry cannot wait for the academy to catch up they have sought to fill the gap by creating in-house programs or hiring professionals from outside the hospitality industry. This widening gap between the need of the industry and dearth of educational programs represents an opportunity for schools that want to become more competitive in the student job market, fill a gap in research on sustainable development, attract research grants from governmental and private companies and create revenue generating non-credit programs in an area where limited programs exist. Furthermore, schools that take the lead in this arena will enhance their brand and be viewed as leaders. This is similar to those schools that helped lead the transition from "Hotel Training" to "Hospitality Business Education." While the demand for education on sustainable development topics is universal across all hospitality sectors, the resort sector has the most direct alignment and greatest need. Hospitality programs and students who possess both the business skill set and an understanding of sustainable hospitality will be the clear winners in the future. This case study seeks to provide an

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integrated story which could be used by Hospitality Schools to structure and deliver a marketable program in sustainable development.

Development of Case Study

The basic design of the research uses the Ethnographic method. This approach is a commonly used practice in social sciences such as anthropology and sociology. The premise of this approach is primarily inductive and data collection is conducted through participant observation, interviews, and questionnaires. More commonly used synonyms for Ethnography are “field study” and “case study” approach.

This approach is particularly suited for the present research for two reasons. First, the study is location specific. The subject location is a destination resort on St. John (part of the U.S. Virgin Islands), called Maho Bay. Secondly, the researchers, in this case were hospitality business students and faculty who designed the program the purpose of developing an immersive program to teach sustainable development and operations.

The researchers spent eight days in the subject location to conduct interviews with several managers at the subject property and related area resorts, experience the work environment in various departmental areas of the resort, interview local tourism officials, and educators. The proposed case and learning outcomes were based on the immersive experience, data gathering through structured questionnaires and supplemented with a literature and document review of existing sustainability programs.

Teaching Objectives of the Case

- To communicate an understanding and appreciation of the sensitivity of Real Estate Development in environments with fragile ecological systems.
- To provide students with examples of the importance of involving multiple stakeholders in development of resorts
- To illustrate the successful development and operation of a resort in harmony with Economic, Social and Environmental perspectives.
- To spur innovative thinking when working in environments which are resource dependent and resource constrained.

Developing Resorts with a Triple Bottom-line focus: A Profile of Environmental Philosophy and Leadership

Virtually all resort developments in the United States and across the world are driven primarily by a profit motive. The extent to which these resorts comply with environmental preservation is influenced by external forces such as regulations, customer preferences or community compatibility. It is rare to find resorts driven primarily with a conservation and preservation ethic and is profitable at the same time. These resorts are typically developed by innovative entrepreneurs with a strong environmental ethic. Maho Bay Camps and Estate Concordia is a unique case as it was one of the earliest examples of a hospitality enterprise's efforts to incorporate Triple Bottom-line

philosophy of value creation through a balance of ecological, social and economic goals. In the case of Maho, the organization's founder is Mr. Stanley Selengut, a civil engineer by training, entrepreneurial and innovative by nature and an environmental Avant-Garde foresaw in 1975 a sustainable future for affordable, environmentally friendly, close to nature and comfortable resort accommodation. His expertise in site-sensitive development and sustainable resort design led to his appointment to the National Park System Advisory Board by Bruce Babbitt, then Secretary of the Interior. (The Board is comprised of twelve experts in various fields who have demonstrated commitment to the mission of the National Park Service.)

Selengut also served as the Chair for the Committee on Environmental Leadership and Sustainability in the National Park Service. He's worked with the American Institute of Architects, The American Society of Landscape Architects and several environmental agencies and developers to produce a National Park Service handbook on sustainable eco-tourist development. Selengut is a founding board member of The Ecotourism Society, and has served two five-year terms. He also participated in the Cornell University Mentorship program. Maho Bay has hosted numerous developers, and has inspired nearly all to include sustainable design elements into their developments. Stanley Selengut has lectured extensively on ecotourism and sustainable design to schools, workshops, conferences, and government agencies around the world. He freely shared his design ideas, lists of responsible building materials and operating procedures with others in the industry.

Mr. Selengut's philosophy for his project is best captured in his quote, "I don't see why human comfort and environmental sensitivity couldn't be compatible." The purpose of the case is to share Maho's journey and identify lessons and best practices which could be used by hospitality educators with an interest to incorporate the development and management of sustainable resorts in their curriculum. With a thoughtfully designed curriculum, students may be inspired to consider Maho's tenets of sustainable development and operations as they design, develop and operate resorts in the future. In order to succeed, a sustainable venture ultimately needs to be profitable. By consistently turning a healthy profit for the past 35 years, Maho counters the popular notion equating sustainability with deprivation. Perhaps the greatest contribution to ecotourism is the confirmation that sustainable tourism can be a winning endeavor.

Overview of U.S Virgin Islands and St. John

United States Virgin Islands is a group of islands in the Caribbean that are part of United States. They are located in the Caribbean Sea and the Atlantic Ocean, about 40 miles east of Puerto Rico and immediately west of the British Virgin Islands. The U.S. Virgin Islands consist of the main three main islands of St. Croix, St. John and St. Thomas. The total land area of the territory is 133.73 square miles. Based on the Bureau of Economic Research for USVI, the resident population of the islands

in 2009 was 117,011 of which St. John accounted for only 4,500 (www.usviber.org). This is not surprising as among the three U.S. Virgin Islands it is the smallest and two thirds of the island is a National Park. The 7200 acre park is a sanctuary of mangroves and subtropical forest. The park was a gift from Lawrence Rockefeller in the 1950s. Cruz Bay, the islands main town, is a twenty minute ferry ride from St. Thomas.

On average the temperature reaches a high of 79 degrees Fahrenheit and varies six degrees between summer and winter. Typically an arid island it receives about forty inches of rainfall a year. The island consists of many woodland trails that end on a plateau high in the sky.

As a result of its proximity to the U.S. and lush natural surroundings, tourism is the primary economic activity. The islands hosted 2.2 million visitors in 2009 according to statistics from the Bureau of Economic Research. While most visitors to the islands are cruise passengers; eco travelers represents a niche segment that are attracted by the natural beauty of the island. The United States represents approximately 80 percent of the tourist market, with USVI residents at about 9 percent and Europe, Canada, South America and West Indies and Puerto Rico making up the rest.

The islands have a limited agricultural sector therefore most food products are imported, and the manufacturing sector consists of petroleum refining, textiles, electronics, rum distilling, pharmaceuticals, and watch assembly. The agricultural sector is small, with most food being imported. Due to the high cost of transportation, a fragile eco system, and high cost of waste disposal, conservation, and waste management are critical for sustainability on the islands.

Maho Bay Camps is located in Maho Bay on the northern tip of St. John. After opening its first canvas-sided eco tents to its first visitors in 1976, on St. John, in the U.S. Virgin Islands, Maho Bay Camps remains one of the most popular Caribbean vacation destinations and one of the world's best known resorts.

Maho Bay Camps: From Concept to Sustainable Construction

Almost thirty-five years after opening the resort with its canvas-sided eco-tents, Maho Bay Camps remains one of the most popular Caribbean vacation destinations and one of the world's best known resorts. Since inception, the underlying theme has been a resort that provided an outdoor, close-to-nature experience combined with basic human comforts.

Innovative Sustainable Site Planning-Design and Construction

In 1975, Stanley Selengut acquired a lease on 14 acres of a commercially-zoned in-holding within the National Park on St. John. The in-holding was above a white sand beach with fragile coral reefs, endangered turtles and abundant marine life. The National Park Superintendent was concerned about development within the boundaries of the National Park. Resort construction in the seventies was clear-cutting the land, building what you wanted to build, then re-landscaping foreign exotics such as grass and palm trees, eliminating the land's value as a natural habitat. When the park superintendent

of St. John learned a New York builder had leased commercially zoned property, the superintendent was not pleased. He met with Selengut, telling him that development could easily disrupt topsoil, potentially ruining the landscape, the beaches and the coral reefs.

A New York developer with little background in sensitive development, Stanley had built housing within Fire Island National Park, a seashore barrier island close to New York City. There, the U.S. National Park Service had constructed elevated walkways to protect the sensitive dunes and rare vegetation from pedestrian traffic. At Maho Bay, Selengut worked with the Park Service to design similar walkways to protect the plants and to avoid erosion. Inspired by elevated building practices within the Fire Island National Park and by structures he'd seen on a trip to Africa, and working with the Park Service, a light inexpensive unit was designed which could fit within the existing trees and plants, and consisted of a wood-framed, canvas-covered tent-cottage built on elevated, 16' x 16' platforms. The walkways were built first on hand-dug footings and construction materials were wheeled along the walks and carried into place. No heavy construction equipment was required or used. Pipes and electrical cables were hidden under the walks rather than buried in trenches. The finished walkways flowed naturally through the landscape and avoided rock outcroppings, mature trees and leave as much valuable flora as possible. Guests could traverse the steep hillside without trampling the ground. People would fit comfortably into this natural setting.

And after almost 35 years of operation and well over one million guest nights, the landscape has been restored to a healthier wildlife and horticultural habitat than existed before it was developed. Prior to 1976, the property was denuded by goats and donkeys and much of the indigenous plants were gone. Exclusion of feral animals, native plant restoration and, because St. John is a dry arid island, recycling of wastewater accounts for this landscape change. In addition to capturing rainwater, Maho has to import over one million gallons of fresh water each year for drinking, washing and flushing. For almost 35 years, the treated water has been used to irrigate the hillside. EPA regulations have restricted how rain water can be used but treated waste water still irrigates the hillside. Today the tent-cottages and support building are hidden in the foliage and to the guests most of the tent-cottages appear to be situated in the trees.

Partnerships Critical to Sustainable Development

Selengut not only worked extensively with the National Park Service, he worked with the local US Virgin Islands Government. Maho took part in a Government sponsored tax abatement program in exchange for occupancy growth, local capital investment and an increased labor force. Because of IDC (Industrial Development Commission) benefits initiated in 1977, Maho Bay Camps was able to continue with constant upgrading and improvements needed to not only compete in an increasingly competitive tourism market but to develop a resort which could continue to pioneer environmentally

responsible methods of building on fragile environments. The IDC benefits afforded the opportunity to construct elevated walkways throughout the entire hillside and construct brighter, airy, cloth-covered cottages between the existing vegetation. The campground grew to 114 units, exceeded all the IDC goals and led to more innovation and new levels of development.

Filling a Market Niche-Growth and On Going Innovative Practices

Started small with only 18 units and a modest cash investment, Maho won a 1978 Environmental Protection Award; and was featured in the New York Times Travel Section. Maho attracted more guests than the 18 tent-cottages could accommodate. Since inception with 18 tents, the resort has grown to 168 units which include Maho Bay Camps, Harmony Studios, Estate Concordia and Concordia Eco-tents, each serving a specific market niche. However, despite its growth over years they have maintained their unifying theme as a resort that provides an outdoor, close-to-nature experience combined with basic human comforts.

A strong conservation ethic coupled with an awareness of the fragile environment has been practiced and Maho Bay remains an ecotourism pioneer and model of enlightened development. Conservation efforts have included the use of solar and wind power, ecological restoration, feral animal control, recycling of glass and aluminum containers, water flow restrictors and low flush toilets, rainfall collection, recycling of wastewater, composting garbage as well as the use of environment-sensitive products. Most have been successful and continued, some have not. For example, composting garbage became a rodent and insect problem and was discontinued. Hurricane Marilyn discontinued the wind power efforts. The costs of energy and smoke scrubbing costs for a small smelter operation have ended efforts as melting aluminum cans for craft objects. On-island recycling is more cost efficient. One secret for Maho's conservation efforts and enduring success is owner Stanley Selengut's penchant for ongoing innovation.

Research Driven Sustainable Development

In November 1991, the National Park Service hosted a workshop on Sustainable Design at Maho Bay, to establish guidelines for construction within the U.S. Park System. It was attended by over 60 renowned architects, engineers, landscape architects and naturalists. They addressed solar design, the use of recycled building materials, energy from wind power and photovoltaics, responsible waste disposal, building ecology and produced a book, "The Guiding Principles of Sustainable Design."

Development of Harmony Studios

After participating in the workshop, Stanley decided to put these concepts to work both in the existing property as well as a totally undeveloped property. At Maho he used the Park guidelines to build 12 apartment studios called Harmony Studios—these became the first prototypes following the new National Park Service guidelines, built

from ecologically sensitive recycled materials, energy efficient appliances and solar panels for heating water and generating electricity. While Maho Bay's spartan dwellings, public bathhouses, cold-water showers and simple amenities are popular with younger and more adventuresome travelers, an expanded market existed that agreed with Maho's principles but were interested in a greater degree of comfort.

In 1992, Maho Bay Camps, Inc. applied for and received an IDC extension of benefits to develop this concept. Harmony was initially designed and permitted as detached single-family housing units but, with an extension of the IDC benefits and the encouragement of the Virgin Islands Energy Office, the function of the buildings was changed to a special education center and environmental demonstration showcase with rental studio units. Ecologically and environmentally sensitive building materials, mostly recycled; the latest in alternate energy systems, i.e. solar and wind; and energy-efficient appliances and equipment were utilized in the construction.

The National Park Service's "Guiding Principles of Sustainable Design" was used as a guidebook. Working with the Virgin Islands Energy Office and the Southwest Technology Development Institute, a computer system was installed that was designed to display the studio units' energy generation and usage, and to provide user-friendly tutorials on topics such as renewable energy, conservation, recycling, etc. Harmony studio rooms were promoted as an education center where visitors could leave with practical ideas for sustainable living at home.

Eco Tents at Estate Concordia

In the 1970's Selengut purchased vacant land on the south-east corner of St. John (Estate Concordia) with the thought of building a residence and a community of like-minded people. Selengut took over a partially constructed project and finished the buildings and began a program of constructing self-sufficient eco-tents that offered more amenities than the Maho tent cottages.

The 25 Eco-Tents provide living space that was totally supported by renewable technologies. "Responsible Energy" is what Maho likes to call their approach at reducing energy waste. Units are equipped with renewable electric power as well as solar power. Each unit is energy self-sufficient and collects solar energy thru photo-voltaic cells to energize a refrigerator, fans, water pump and electric lights. A cistern, solar hot water heater and a composting toilet adds bathroom convenience without environmental impact. Composting toilets are located underneath the walkways saving the environment from potential pathogens which would be discharged from normal flush toilets. The compost is a great asset to the land because of the nutrients which it contains. The smell can be an issue however and should be taken care of by placing the composting toilets downwind from the units and keeping it out of the sun as much as possible.

Space-age fabrics provide great strength and come in colors which blend into the landscape. And the super-reflective roof fabric maintains a temperature 14 degrees cooler under the fabric than on

the surface, and provides a perfect surface for water collection. The floors are made of recycled plastic and wood. The units also have a barometer which provides weather information and thermometer to show water temperature and water usage and a gauge that shows the user how much power their unit is generating. One simple but efficient way to keep power usage to a minimum is by putting timers on their appliances, shutting them off when necessary. A gauge is located in each tent to allow the guest to monitor battery level and use their power appropriately. Voltmeters are also installed in each facility to let the guests adjust their solar panels and even further reduce the waste of energy. Water is easily available in cisterns attached to each unit setup to collect rain water runoff from the roof. The guests are then able to pump this rain water into a container over the shower which provides water pressure and acts as a water heater. This allows for a great deal less water usage than other facilities and lets guests use the water for drinking, showering or the flushing of toilets. The units were also connected by elevated pedestrian walkways.

The object was to offer an affordable, close-to-nature vacation experience with almost no intrusion into the environment. The tents were constructed at an elevation which provides clear and unobstructed views of the bay, each tent maximizes the value of the natural landscaping and faces the direction to capture the sunrise in the morning and moonrise at night. Stanley's creativity in sustainable design is the natural synergy he has adopted in each of his development projects. A example of this is seen in a particular feature of the eco tents. The natural slope promoted water flow to help grow aromatic flowers around the tents, which attracted hummingbirds. Both of these features provide a natural experience for guests sitting on the balcony. As a result of the location, unique design features and very inimitable ambiance the eco-tents have high occupancy, when combined with low maintenance costs, the eco tents provide a strong financial payback.

Sustainable Resort Operations and Innovative Sustainable Best Practices

Given the fragility of an Island's eco system, resorts that operate in such sensitive environments need to develop operational practices that intelligently and creatively balance the use of resources on the island. These have to be developed with an understanding of the complete life cycle of the product from the time it is purchased to its eventual disposal. This type of "cradle to grave" analysis requires the tabulation of energy consumed and the environmental impacts of each action and material. At Maho Bay camps several systems have been developed to not only reduce, reuse and recycle products on the island but also profit from the processes developed.

The registration desk is where guests first encounter Maho Bay Camps. The orientation given here stresses the importance of recycling and minimizing waste. It is here that the guests are informed of the recycling program and encouraged to assist in Maho's efforts by dividing up their trash for recycling. During the checkout process,

registration personnel facilitate guests who are interested in donating their \$30.00 security deposit to the FRIENDS of the Virgin Islands National Park. Being a member of FRIENDS is a nonprofit organization based on St. John, which raises funds for activities such as research, advocacy, and educational programs in the park.

Sometimes guests have extra items, especially when it's time to leave. In the continuing effort to reduce the amount of waste the resort produces, Maho decided to set up the Help Yourself Shelf where guests can leave things that other might be able to use. As the saying goes, "one person's trash is the next person's treasure". Guests are instructed to go ahead and "help themselves" to anything they like in the cabinet or refrigerator. What might have ended up in a landfill becomes an unexpected 'gift' for another guest. While the traditional business thinking may see the presence of a help your self shelf reducing sales from the general store, Stanley views this practice of "generosity" having two practical benefits. It creates goodwill among guests when they see that the resort is actually helping them save money, and helping the environment. Furthermore, the cost of hauling leftovers off the island actually may end up costing the resort more than the marginal reduction of its store sales.

In housekeeping, Maho utilizes 100% biodegradable laundry detergent and keep the amount of bleach that is used to a minimum. Old towels are cut into strips and used as cleaning rags. This not only extends the life of these items, but also completely eliminates the use of paper towels for cleaning purposes.

One characteristic of Maho owner Stanley Selengut is his ongoing innovation. In 1997, Mark Koenings, then the USVI National Park Superintendent, initiated an aluminum-recycling program on the island and Maho contributed to the purchase of a can crusher. Not only did Maho send all the resort's cans to the crusher but also Maho employees did much of the actual crushing. Then Maho started its own recycling center with a glass crusher to condense the resort's large amount of waste glass. Maho used the crushed glass bottles for back fill and as aggregate for non-structural concrete offering it free to contractors and home builders on St. John. This evolved into a center that manufactured objects from the resort's trash.

The program became Trash to Treasure and is a recent chapter in Maho's efforts to design and operate ecologically sensitive resorts that serve as models for sustainable development both in the hotel industry and elsewhere. The original "Trash to Treasures" program was envisioned to be a modest center where guests and staff might learn to produce craft objects from Maho Bay's waste bottles, cans, cardboard and paper as well from articles found at beach clean-ups. To equip the center for small-scale production, a glass furnace, annealing oven, glory hole, cardboard shredder, glass crusher, pottery wheels, kilns and hand tools were purchased. A "visiting artist" program was established where potters, glassblowers, jewelry makers, metal workers and other crafts people were invited to make saleable art objects

from the resort's trash stream.

The art center has been a three-fold benefit to Maho Bay Camps: it recycles trash to treasures; teaches classes which educates guests in recycling as well as providing entertainment; and finally it has created a vital profit center through selling these products. New marketing programs include an online store linked to the Maho Bay, displaying items in guest rooms, expanding the wholesale operation and develop a joint program with cruise companies. With sufficient capital, and employment of creative talent Mr. Selengut feels the trash to treasure program can be expanded to become a major economic development tool for communities by creating micro business ventures. At the same time, this would considerably reduce trash collecting in landfills. A project of this scope would however require a multilateral collaboration between public, private, and academic institutions, with funding from government or environmentally active foundations.

The Maho restaurant and bar coordinated its ordering with the store to keep camp-wide deliveries to a minimum. By keeping deliveries down and storing a majority of our supplies they are able to lower the amount of fuel that is consumed on their behalf. Their system of ordering significantly reduces the total amount of waste that is produced here on camp. Condiments are ordered in bulk and placed in centrally located refillable containers. Reusable utensils, plates, and cups are also an asset in the effort to cut down on waste.

The Store carries numerous items from businesses that have demonstrated a commitment to environmental issues at the corporate level. For instance, Maho sells T-shirts made from organic cotton, as well as clothes that have been created on camp. The store does not bag customer purchases. Shipping boxes and other materials are reused when a customer requires a container in which to carry items. Plastic ring holders used in shipping holders are flattened and left for customers to reuse. The store have removed individual sale of small water bottles in order to minimize our plastic waste. As mentioned, food and beverage deliveries are coordinated with the restaurant in order to minimize traffic on Maho's road and burning of fossil fuel. Local providers and distributors are contracted for food and boutique items as much as possible. This not only reduces the distance items must be shipped (reducing the use of fossil fuels and packing materials), but also helps to bolster the local economy. The temperature of store coolers and freezers is monitored on a regular basis in an effort to reduce energy consumption.

Through its various practices Maho Bay Camps has been a trend setter in waste management by its policies to, REDUCE garbage and use of resources, REUSE items, energy and water resources, RECYCLE waste and resources. These have influenced practices at several resorts and campgrounds around the world.

Maho welcomes comments and suggestions from its guests. The Eco Box serves as a vehicle by which guests can make suggestions to assist Maho in fulfilling its eco-friendly program. For example, Maho

used to carry Fiji bottled water. When guests pointed out that Fiji water is shipped a very long distance (coming from Fiji in the Pacific), Maho discontinued selling it. The resort sells larger bottles of water in an effort to reduce the number of purchases and therefore plastic waste. Maho encourages guests to reuse their water bottles by filling them with water from the resort when empty rather than buying more water. Most guests understand and adjust.

Even though some guests are not eco-sensitive when they arrive, they have a better understanding of ecological issues by the time they leave. One evidence of this comes from an internal resort study that showed that its guests use many fewer gallons of water per person per day compared to a typical resort. Some guests (and employees) come to the resort with an environmental ethic already; others develop one as a result of their experiences at the resort.

A meeting with the Resident Manager of Maho and Harmony, Scott Drennan shed light on the absolutely crucial volunteer exchange program at Maho, more popularly known as the "Four Hour" program. The volunteer program runs from June until mid-November. It allows Maho to operate for guests without incurring the operating expenses with regular full time staff. So, Maho is able to stay open 12 months with 6 months minimum expenses. Maho has about 25 volunteers per month during the off season in which time a substantial amount of reorganization and housekeeping tasks can be accomplished. In general they work 4 hours a day, 5 days a week for a 30 day stint. Another bonus of the volunteer program is that the employee immersion in the destination makes them much better able to connect with the guest. Just about all of the managers came through the volunteer program.

Maho Bay Camps is also very proactive with the community. Demonstrations are conducted for local schools from St. John, St. Thomas and St. Croix, both at Maho and at the schools, for visiting groups, for tours conducted by the Virgin Islands Department of Tourism and for visitors and guests. Maho now offers art classes and workshops, conducted by the Maho staff and visiting artists to residents, all visitors and guests. To date, seven scholarships have been extended to local St. John children and adults. They are also involved in several projects such as local clean-up projects, If security deposit is required for accommodations, guests have the the option to donate the deposit to a local environmental group or to the National Park, local hiring whenever possible and inviting locals to give evening talks and sell locally-made handcrafts or gift items at the camp store..

In addition to the community, Maho has consistently engaged guests in its conservation efforts, and aimed to make them better stewards of the environment. Upon arrival, each guest is informed of our recycling program and encouraged to separate their refuse. Glassblowing and craft demonstrations each evening expose guests to the possibilities of manufacturing arts and crafts from household waste. Children's programs combine crafts with an introduction to environmental issues, which inspire a broader concept of sustain-

ability. Art classes are available almost every day in season and have included paper making, origami, fabric batik, weaving, t-shirt dying. The Guest Pavilion is the center for interpretive functions. On Sundays, there are slideshow presentations on St. John and its attractions. Local musicians play on Monday nights. The National Park rangers give lectures on Tuesdays and Wednesdays. Movies such as “Planet Earth” are shown on Fridays. Other days you may find concerts, dances, lectures or just listening to the tree frogs on quite night. But most activities are designed to promote health, fitness and an appreciation of the world around us. A most valuable lesson that guests learn at Maho is how little one needs in life to be truly happy and comfortable.

Marketing Maho: Making the sustainability story “Go Viral.”

The direct marketing expenses at Maho are much less than at a typical resort of its size. The marketing manager said the resort spends less than \$15,000 per year on direct marketing. There are two reasons for this. First, Maho has a unique physical product; second, as a pioneer in sustainability its methods of operation are also unique. As a result, over its history Maho has received a huge amount of free media coverage in travel and special interest magazines, newsletters, newspapers, television programs, and Internet blogs. This does not include the free publicity from its loyal repeat guests, many of whom may be considered generational clients of the resort, as guests who first visited Maho as children are now bringing their young families to Maho.

This aspect of Maho’s culture is perhaps its single most unusual attribute. Based on the author’s personal experience from touring Maho Bay Camps and interacting with its guests, it was clear that these guests had a sense of ownership and proprietorship associated with the camp. It was evidenced by their sharing common experiences, planning repeat visits to the camp, and bringing their spouses and family members to share their experiences at Maho. As the author walked around the camp with Selengut, Selengut was stopped repeatedly by guests who thanked him for creating the resort (some hugged him as well). Selengut’s comment after the walk was that many resorts, including his, make money, but he has the added benefit of the genuine appreciation the guests have for Maho. The strength of this emotional bond with Maho was seen when Hurricane Hugo battered St. John in 1989. Several guests who had expertise in various aspects of construction, development, facilities, etc., volunteered their time and money to come and repair the resort’s facilities. Some even donated equipment and other things in kind.

This kind of guest involvement in a property is virtually unheard of in regular hotels. It reveals the ownership that guests feel about Maho Bay Camps—“their camp.” This sentiment resurfaced recently when guests learned that the lease for Maho was due to expire and the camp may close for good. Many of them publicly lobbied to keep the camp open and contributed money to a fund created to buy the

land on which Maho is built. Ultimately, this type of feeling for a hotel, resort, or campground can only be created if there is a sense of shared values between the facility’s owner and its guests. In Selengut’s case at Maho, the shared values happen to be preservation, conservation, and the simple appreciation of nature.

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- United States National Park Service, “Guiding Principles of Sustainable Design,” a document available at http://www.nps.gov/dsc/d_publications/d_1_gpdsd.htm.

Reference to Visual Resources

- Photographs of Maho Bay Camp and Estate Concordia site, St. John USVI and various eco developments on the property. <http://www.maho.org/map.cfm>

Case Study Interviews

- Mr. Stanley Selengut. President and Founder of Maho Bay.
- Ms. Maggie Molyneaux, Assistant to the President.
- Mrs. Maggie Day: Vice President Operations, Maho Bay and Estate Concordia.
- Mr. Adrian Davis: General Manager Maho Bay and Estate Concordia.
- Mr. Scott Drennan, Resident Manager, Maho Bay and Estate Concordia.
- Ms. Melody Smith, Director of Marketing, Maho Bay and Estate Concordia.
- Ms. Bonnie Burkholder, Controller, Maho Bay and Estate Concordia.
- Ms. Ginger, Manager Trash to Treasure program at Maho Bay.
- Mr. John Garrison, Director, Trust for Public Land
- Mr. Mark Longevin, General Manager Ritz Carlton, St. Thomas
- Ms. Chantel. USVI Tourism Department.
- Mr. Mark Hardgrove, Superintendent USVI National Park.
- Mr. Bob Carmody: Consultant and Investment Advisor to Maho Bay.

Student Researchers and Learning Outcomes

The development of the case study provided a learning opportunity for two undergraduate students in The School of Hospitality Business, Jake Abrahamson and Kristin Randall, who accompanied the author and assisted with interviews and synthesis of the internal documents for the case study. Furthermore, an undergraduate student, Rose Halle, working on a specialization in sustainability used the data collected to create a 15 week course titled: Sustainability Leadership in Hospitality and submitted that as part of her class assignment for the semester.