

## **JAMAICA - IMPLEMENTING ENVIRONMENTAL MANAGEMENT SYSTEMS (EMS) FOR SUSTAINABLE TOURISM CASE #153**

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As the tourism industry continues to grow, the coastal ecosystems that attract many visitors will face increased degradation and resource stress. By establishing environmental responsibility and awareness in the Jamaican hotel industry, this case illustrates how to instill environmental responsibility into the private sector, helps hoteliers recognize cost savings associated with water conservation, and builds capacity within local businesses and institutions to improve water use efficiency and protect coastal and freshwater resources.

### **ABSTRACT**

#### **Description**

The tourism industry in Jamaica is a large component of the economy with over 158 licensed hotels and approximately 13,500 rooms on the island. Tourism, while vital for job creation and economic growth, can place a strain on the infrastructure and the natural resources of a destination by inflating the population of an area with large numbers of transient guests. High-density tourism in coastal areas can result in potable water scarcity, water quality degradation, and mangrove, wetland and reef destruction. This multi-year, multi-phase project funded by USAID has improved environmental management in over 30 hotels in Jamaica, reducing resource consumption and minimizing the environmental impacts of the hotels.

A program of water use efficiency activities was successfully designed and implemented as part of this environmental management project, which has institutionalized "best practices" in the tourism industry in Jamaica. These best practices include equipping all areas of the hotel with water conservation devices, such as faucet aerators, low-flow showerheads, flow restrictors and water saving toilets; installing drip irrigation and low pressure sprinkler systems in landscaped areas; installing sub-meters to monitor water use in key areas; and implementing voluntary towel reuse programs in guestrooms. These measures contributed to water savings of over 41.4 million Imperial Gallons among the participating hotels as well as reduced energy and chemical use. Significant improvements in water use efficiency and reduced chemical use help protect the sensitive coastal ecosystems that attract tourists.

In addition to implementing these conservation measures, the project focused on training and awareness building for both staff and guests to conserve water, reduce pollution and protect coastal ecosystems. The project has served as a model throughout the Caribbean for industry programs to meet voluntary environmental standards for the protection of water and related land resources and has established Jamaica as a leader in sustainable tourism in the Caribbean. Currently, efforts are underway to replicate this project in other areas of the Caribbean.

#### **Importance of Case for IWRM**

The case illustrates how environmental management systems (EMS) can achieve reduced demand for potable water, promotion of water recycling and greywater reuse, improvement in proper handling and treatment of wastewater, reduced amounts of chemicals, fertilizer and pesticides released into Jamaica's water bodies, training and increased awareness on best practices for sustainable environmental management of coastal ecosystems.

#### **Main Tools Used**

- C3.1: Improved Efficiency of Use
- C4.3: Information and transparency for raising awareness
- B2.2 Training to build capacity in water professionals
- C4.2: Communication with Stakeholders

## **Lessons Learned**

This project clearly demonstrated that environmental management and water conservation is cost effective as well as ecologically beneficial. Hotels participating in the project saw an average savings of US\$913 per room after implementing the recommended water and energy conservation measures. Demonstration and publicity of the early success of the project led to increased interest and participation from other hotels in the area, illustrating the importance of local data and case studies. The use of awards and recognition programs including the internationally recognized Green Globe Certification program also enhanced participation in the project and increased awareness of sustainable tourism in Jamaica.

## **MAIN TEXT**

### **1 Issues and Problems**

The Caribbean remains the world's most tourism-dependent region, with the sector accounting for a quarter of all export earnings, 31% of Gross Domestic Product and nearly a half million jobs. Energy and water costs tend to be higher than in the U.S. and other OECD countries, representing a significant expense to hoteliers. Solid waste is becoming an increasing issue for hotels due to the closure of dumps in favor of sanitary landfills and attempts to increase reuse and recycling. Finally, as most tourism development is located within sensitive coastal ecosystems, it is imperative for its own self-preservation that Jamaica's tourism industry addresses the impacts of its operations on the natural resources that sustain its business.

Recognizing this issue, in 1997, the Caribbean Hotel Association formed the Caribbean Alliance for Sustainable Tourism (CAST) to undertake collaborative environmental activities in the hotel and tourism sector, to promote effective management of natural resources, to provide access to expertise on sustainable tourism, and to assist hotel and tourism operations in the Caribbean region to achieve the goals of Agenda 21 for Sustainable Tourism. At the same time, environmental initiatives were underway in Jamaica, many of which continue today. Environmental nongovernmental organizations (NGOs) located in all of the major tourism areas and the Jamaica Hotel and Tourist Association (JHTA) pursued a variety of environmental initiatives. The JHTA published a book on environmentally conscious hotel practices. Additionally, there was a leader among the hotel industry that had received numerous Caribbean and international awards for its environmental stewardship.

### **2 Actions Taken**

With both regional and national-level organizational support in place, in 1997 USAID launched a new partnership with JHTA to fund the introduction of environmental management and best practices in small hotels (less than 100 rooms). Over three-quarters of all hotel properties in Jamaica, as elsewhere in the Caribbean, are small, locally-owned and operated properties. PA Government Services, Inc. was hired to implement the Environmental Audits for Sustainable Tourism (EAST) Project, which became a model for both small and large hotels in Jamaica as well as hotels elsewhere in the region. The EAST Project successfully demonstrated the importance of the following in order to regulate and minimize the impact of the hotel industry on the aquatic environment:

- Developing greater awareness and understanding of the benefits of environmental management systems and audits among hoteliers, restaurateurs, and allied tourism businesses;
- Upgrading the technical skills of Jamaicans who are expected to conduct audits and advise on environmental management systems;

- Assisting tourism-related establishments in carrying out environmental audits; and
- Systematic application of best environmental management practices among tourism and hospitality organizations.

The EAST Project began with a demonstration of audits and environmental management systems in small hotels in Negril, and was later expanded upon in Port Antonio, Montego Bay, Ocho Rios and the South Coast region. The program includes auditing of properties; training on environmental aspects of hotel operations, environmental impacts and management systems for hotel employees; training in auditing for local consultants; and awareness building for the hotel industry and the general public. EAST initiated environmental achievement awards for hotels and an international exchange program to promote environmental leadership. The approach to sustainable tourism through developing industry programs to comply with voluntary environmental standards pioneered by the EAST Project, now in its fifth year, has become a model for programs in the Caribbean and elsewhere around the world.

## **Environmental Management Systems (EMS)**

The primary mechanism used to promote sustainable tourism and instill environmental management in hotels in Jamaica is an Environmental Management System (EMS). An EMS is a systematic framework for integrating environmental management into an organization's activities, products and services. A critical step in any organization's adoption of an EMS is identifying those aspects of operations (e.g., irrigation of gardens and landscaping) and introducing changes in facilities and practices that minimize the impact of the operation on the natural and social environment. The EMS standard distinguishes itself from environmental performance standards in that it focuses on the organizational aspects and the process for determining appropriate levels of environmental performance, rather than prescribing specific technology criteria.

Two concepts that are important in understanding how an EMS works are 1) continuous improvement; and 2) best environmental management practices or "best practices". The concept of continuous improvement implies that the organization can begin at any level of environmental performance. Through an iterative cycle of setting policies, planning environmental objectives and targets, implementing specific actions, measuring the results, and reviewing the overall effectiveness of the program, the organization will optimize its environmental performance over time. Best practices represent the preferred actions, from an environmental perspective, to perform a given function or service. Because of the similar nature of hotel and resort operations, international organizations have published guidebooks assisting hotel owners and managers in determining the appropriate equipment, supplies and changes in staff activities that constitute "best practices". It is important to note that the combination of best practices will differ for properties of different size (small versus large), location (city versus beach), type (business versus leisure) and management (international chain versus independently owned and operated).

Many hotels and organizations that have implemented EMSs choose to pursue independent verification and certification of their EMS. This step provides an outsider's inspection of the system, which lends credibility and recognition to their efforts. In the hospitality industry, there are a number of different eco-rating schemes. The primary certification system that is used globally to certify environmental management in hotels is Green Globe 21 (U.K.), an affiliate of the World Travel and Tourism Council that combines the EMS attributes of ISO 14000 with the sustainable tourism principles of Agenda 21. The first four Green Globe certified hotels in the world are in Jamaica, three as a direct result of the EAST Project. Since then, nearly 100 other hotels around the world have become certified by Green Globe.

When the EAST Project began, there was some debate around which model and certification program would be used. ISO 14000, the EMS standard used worldwide by industry to model EMS and independently verify and certify environmental management, and the Ecotel program were considered along with the Green Globe program. The criteria used in the selection process includes a program that had 1) international recognition; 2) applicability to the hotel industry in

Jamaica and the wider Caribbean; 3) reasonable cost of certification (not including the cost of coming into compliance with the standard); and 4) access to local certifiers.

#### *EMS Implementation*

The process of EMS implementation is as follows:

- First, an environmental assessment is done to determine what improvements can be made, how much they cost, pay back periods, and what types of changes in consumption or waste generation can be expected. The assessment also establishes a baseline against which to measure change.
- Next, the hotel sets objectives, such as reducing the use of potable water for non-potable applications (i.e., irrigation, laundry) or using water more efficiently. Each objective is supported by a set of specific targets, such as introducing towel and linen reuse programs, or installing low-flow showerheads in guest rooms and staff locker rooms by a specific date.
- The hotel then prepares an action plan identifying the individuals or departments responsible for achieving the targets. It is important to recognize that significant improvements are made through changes in staff procedures, which normally have

While ISO 14000 was an established program, it was not specific to the tourism industry. Implementing ISO 14000, which was designed for more traditional industries, can be very cost intensive and more administratively burdensome for a small hotel. At the time, the Ecotel system was primarily used only in the United States. While the Green Globe program was in its infancy in 1997, the EAST Project chose it as its EMS program because it was designed along the same principles as ISO 14000, was tailored to the hospitality industry, and was internationally recognizable.

### **3 Outcome**

#### **Implementation Issues**

In the early phases of the EAST Project, hoteliers were skeptical about the concept of environmental management. From their perspective, environmental management was complicated and very expensive. After the first round of properties implemented their EMSs and started seeing dramatic cost savings as well as improved management and staff morale, it was much easier to sell the concept and benefits of environmental management to other hotels and organizations throughout Jamaica.

Two key factors determining the success of implementation are the support of senior-level management and the leadership abilities of the Environmental Officer. Those properties with strong and active support from the General Manager and other senior management tended to see more dramatic results more quickly than properties that lacked this support. Senior-level support allows a property to access the financial, time and training resources that are necessary to implement an effective EMS. A General Manager who can empower the Environmental Officer and their hotel staff to lead the property's efforts also is very important. The leadership and the management ability of the Environmental Officer is a determining factor in the success of a property's environmental program. These individuals become the "environmental champion" for their properties and are often required to take on additional responsibilities. Environmental Officers can be individuals from different departments in a hotel, but the character of the individual is as vital as their technical knowledge or rank in the hotel.

## **Financial and Resource Savings**

The EAST Project has contributed to IWRM in Jamaica by reducing demand for potable water, promoting water recycling and greywater reuse, providing guidance on proper handling and treatment of wastewater, reducing the amounts of chemicals, fertilizer and pesticides released into Jamaica's water bodies, training on best practices for beaches and water sports activities, as well as overall awareness raising and training on environmental management in coastal ecosystems. Water conservation technologies used in the project included low-flow showerheads and faucet aerators, submeters to aid in the detection and repair of water leaks, drip irrigation and low-pressure sprinkler systems, and trigger nozzles on water hoses.

Due to close collaboration with the private sector and local institutions in the planning phases of the EAST Project, the actual results were in line with expectations. Beyond Green Globe certification, hotels that have undertaken environmental management as part of the EAST Project have seen tremendous financial savings, dramatic decreases in water and energy consumption, decreases in solid waste generation, increased guest participation in environmental efforts, elevated staff morale and increased staff retention. One hotel in Negril saved more than US\$234,000 and reduced its water use per guest night by 50% in the first 18 months of its EMS. As another example, five of the properties implementing an EMS realized a total cost savings of US\$620,000 with an average return on investment of 352%. These five hotels together saw a total water savings of 41.4 million Imperial Gallons (IG), or 61,000 IG per room. This is enough water to cover an entire football field to a depth of 17 meters. The total electricity savings from these five properties alone is enough to provide power to over 7,000 Jamaican households for an entire year. This energy savings resulted in a reduction of carbon dioxide emissions by 2100 tons.

In addition to the financial and resource savings that have been generated as a result of the project, there have been other long-term institutional changes. The EAST Project has worked closely with CAST, the JHTA, and Jamaican governmental bodies strengthening their capabilities in environmental management. Local consultants from the Tourism Product Development Corporation have been trained in audit methodologies and techniques to continue to promote and conduct environmental audits after the EAST Project is completed.

## **Enhanced Awareness and Technical Competency**

One objective of the project was to develop greater awareness and understanding of the benefits of EMSs and audits among hoteliers, restaurateurs and allied tourism businesses. The EAST Project hosted the First Green Hotels Conference and exhibition in Montego Bay. Over 100 individuals and organizations attended the event, exceeding participation expectations. Attendees spent 2 days exploring how to integrate sustainability into educational curricula, and 2 days learning about leaders in the industry, the latest technologies, and networking with other Green hotels in Jamaica and throughout the Caribbean.

Another important project objective was to upgrade the technical skills of Jamaicans who are expected to conduct audits and advise on EMSs. In 1997 when the EAST Project began, most audits were conducted by international consultants. By 2002, the Project had trained and formed an expert team in Jamaica who carry out the majority of the technical assistance work. In addition to USAID's Jamaica-based team, the project has trained auditors from the Tourism Product Development Corporation in audit methodologies.

The project also had the objective of assisting a select representative number of tourism-related establishments in carrying out environmental audits. The EAST Project has provided over 40 hotel audits, 11 manufacturing audits and 6 attraction audits since 1997. These audits serve as the first step in implementing an EMS in these organizations. In addition to conducting the

audits, the staff of these audited facilities are trained in internal audit methodologies to ensure the continuation of the environmental management framework that was established.

## **Environmental Best Practices**

Another objective with a long-term focus was to encourage systematic application of best environmental management practices among tourism and hospitality organizations. Along with the adoption of EMSs in hotels throughout Jamaica, the EAST Project published a document, “Environmental Best Practices Reference Guide”. This guide is a comprehensive resource that clearly explains the rationale for the various best practices as well as step-by-step instructions for implementing each best practice. This guide is a partner with the audit questionnaire with recommendations attached to each of the audit questions. Since the release of the guide, hoteliers have found it an essential tool for improving their environmental performance.

## **Reduced Environmental Impact of the Tourism Industry**

Through the assistance of the EAST Project and hard work, participating hotels have seen great financial savings as a result of resource conservation and the implementation of best practices. In today’s volatile tourism industry these cost savings have allowed the assisted hotels to be more competitive. The communities in resort areas of Jamaica also have directly benefited from the project. With hotels consuming less water and energy there are more resources available to the surrounding community. Jamaicans unfortunately are often subjected to service interruptions in both water and electricity services, and by reducing the total demand, service to all consumers is improved. Finally and perhaps most importantly, the EAST Project has led to more sustainable use of the environmental resources of Jamaica. Through resource conservation and the implementation of environmental best practices, the overall impact of the tourism industry on Jamaica’s environment has been reduced. Fragile coastal ecosystems, including nesting beaches, coral reefs and mangroves, are receiving reduced quantities of pollutant discharges as well as minimal disturbance due to recreational activities as a result of implementing best environmental practices.

The EAST Project has successfully institutionalized environmental management into the hotel industry in Jamaica. Due to the competitive nature of the industry and the continual improvement philosophy inherent in EMS, the gains that have been made to date can be expected to continue well into the future. In addition to those hotels that received audit and environmental management assistance through the EAST Project, other hotels, have on their own begun such initiatives, demonstrating the acceptance and realization of the benefits of environmental management. The EAST Project has been viewed as very successful since its early phases. Due to the amount of interest in sustainable tourism that the project has generated in Jamaica, the EAST Project was extended twice. Recently, other countries in the Caribbean have developed projects based on the EAST Project model.

## **4 Lessons Learned**

The experience with the EAST Project in building momentum for environmental management in the tourism industry in Jamaica presents some important lessons learned for other countries interested in introducing environmental management in the hotel industry for sustainable tourism.

- **Create incentives for voluntary action.** EAST initially had difficulty identifying 15 volunteer properties because there was no clear incentive to participate. Introducing the Green Globe Certification created an incentive for continuous improvement. Annual recertification becomes an incentive to keep the EMS operating. Awards and other recognition programs encourage continuous improvement and unleash the creative instincts (and collective knowledge) of hotel staff. After the initial success of the project, momentum for environmental management in the hospitality industry in Jamaica grew.

Today there are over 40 hotels in Jamaica that have benefited from the environmental management services and training offered by the project.

- **Demonstrate the benefits locally.** There was little or no information on the environmental performance of Jamaican hotels prior to EAST. Using specific examples of audit findings and EMS results from nearby hotels was much more powerful and compelling than references to experiences in other countries or even destinations within another country.
- **Create environmental champions in industry.** The most effective spokespersons for improving environmental management are hoteliers that have gone through the process. Their testimonials are accorded great significance since they understand the attitudes and decision-making criteria of their peers in the industry. Environmental champions are needed at virtually all levels from owners to line staff to overcome barriers to change.
- **Publicize the results.** The hotel industry in Jamaica, as in other places, is very conscious about public relations. Coverage of the EAST Project, including documentary videos and national and international press coverage, has greatly raised awareness within the industry of the benefits of environmental management.
- **Institutionalize the programs.** Perhaps the most important lesson is to introduce environmental management as part of an industry-wide initiative. On-site technical assistance needs to be supported by awareness and training activities. Housing the program in a hotel association like JHTA provided an excellent way to expand membership services and help redefine the industry's reputation at home and abroad.

## Replicability

Transfer of the “Jamaican experience” is well underway. Other Jamaican hotels, including entire hotel groups, have made the commitment to adopt an EMS. USAID has extended its program to additional small hotels in Jamaica, and small hotels in the Eastern Caribbean. Governments of several countries (e.g., Bahamas, Cayman Islands and Mexico) have drawn up plans to sponsor their own EMS demonstration programs. For all intensive purposes, EMS has become a part of the Caribbean hoteliers permanent vocabulary.

As the number of Caribbean hotels with a certified EMS increases, new technical support is emerging. For example, several of the hotels profiled have already reached out to the hotels operating in their area to provide guidance in adopting “best practices”. Hotel training schools are now looking to “green” their curricula by integrating “best practices” into management and line staff training. A training course for “certified” environmental officers is scheduled, and an internship program with hotels in North America is being planned. There is a preliminary plan to establish a Green Hotel Fund that will extend financing for hotels to implement “best practices”.

As today's best practices become “common practices” in the Caribbean, the role of organizations like CAST becomes even more important in researching and analyzing new technologies, products and staff practices to feed the continuous improvement cycle. Combining the competitive nature of the industry that recognizes leaders and the cooperative spirit of hoteliers helping each other solve common problems in same tourism destination makes for powerful forces in optimizing the environmental performance of Caribbean hotels.

## **5 Links to Additional Information**

### **Organizations and People**

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