



List of Abbreviations

ADEQ -	Association for the Development of Environmental Quality
AIT -	Asian Institute of Technology
BEPTA -	Board of Environmental Promotion of Tourism Activities
CIDA -	Canadian International Development Agency
CUC -	Canadian Universities Consortium
DSM -	Demand Side Management
EGAT -	Electricity Generation Authority of Thailand
ESCAP -	Economic and Social Commission of Asia and the Pacific
GF -	Goa Foundation
GM -	General Manager
GTDC -	Goa Tourism Development Corporation
JGF -	Jagrut Goenkaranchi Fouz
MWA -	Metropolitain Waterworks Authority
NGO -	Non-Governmental Organization
NOC -	No Objection Certificate
PCB -	Pollution Control Board
PMC -	Panjim Municipal Council
PWD -	Public Works Department
sq.km. -	square kilometer
T&CP -	Department of Town and Country Planning
THA -	Thai Hotels Association
T&TA -	Travel and Tourism Association of Goa
TAT -	Tourism Authority of Thailand
UEM -	Urban Environmental Management
UNEP -	United Nations Environmental Program
US-AEP -	United States – Asia Environmental Partnership, through Asia Foundation

Abstract

Increasing numbers of tourists arriving at many destinations has encouraged a number of accommodation facilities to be built in and around the destinations. This activity has drawn attention the world over, particularly with respect to environmental sustainability. Environmental management programs for hotels are emerging in response to political and social pressure for sustainability. Some examples are Green Globe, Green Leaf Program, Blue Flag and individual efforts by hotel chains like ECOTAJ. The prime environmental issues in hotels are solid waste, water, and energy management, which are also pivotal urban issues. Thus, developing environmental management programs and ensuring participation of hotels in these programs is important in terms of urban environmental sustainability.

This paper puts forth the lessons drawn from successful experiments in environmental management of hotels and the major requirements of hotels of various categories to implement an environmental management program.

The suggested strategy addresses a range of issues at two levels. At the hotel level are training and awareness, floating staff, and target audience issues. At the stakeholder level, expected roles and co-ordination are discussed. The solutions to encourage hotels to participate in the program are sought through regulatory, incentive, or disincentive approaches.

Introduction

This paper is compiled from the research thesis written by Pallavi Mandke, in August 1999 for the Urban Environmental Management Program at the Asian Institute of Technology, Bangkok, under the supervision of Professor Walter Jamieson.

The paper outlines the context and the rationale of the study and highlights some of the major findings drawn from the research thesis. It outlines the lessons learned from existing environmental management programs of hotels and the requirements for developing a strategy to increase the participation of hotels in environmental management programs. These requirements are presented from the perspective of hotels. Finally, strategies to increase the participation of hotels in environmental management programs using a stakeholder interaction approach are suggested.

The study was carried out in Bangkok, Thailand, and Mumbai and Panjim, India. Information collection was conducted utilizing observations and site visits to all the sample hotels in Panjim and to 2 hotels implementing environmental management programs in Bangkok and Mumbai. Interviews were conducted with the hotel managers, hotel staff, person in charge of the environmental management in the hotels, officials of various institutions related to the environmental management program in Bangkok, and officials of various stakeholder institutions in Panjim.

Context

In the wake of an environmentally-conscious era, operations of the world's major industries have come under increasing scrutiny, with demands for more sustainable management of limited resources. Yet the truly global and growing industry – tourism – has been neglected in spite of the fact that tourism, perhaps more than any other activity, depends on the human and natural environments. As the industry engulfs the globe it poses several environmental threats, emphasizing the importance of protecting the environment for better tourism.

Hunter and Green have pointed out that tourism is considered to be a nebulous phenomenon, characterized by an amalgam of fragmented trades, organizations and activities. It has no clear boundaries or conceptual clarification, but the size, the spatial and temporal impacts and the movement of people with varying needs of shelter, sustenance, entertainment and travel show the variety of sectors involved in the tourism industry. Hotels constitute an important component (product) of tourism. Hotels satisfy the basic needs of travelers, namely food, water, and shelter. The development and growth of every destination depends on the supply of this basic complimentary product of tourism. In the course of time these basic products have become destinations in themselves, comprising several luxury hotels and resorts.

It should be noted that the most conspicuous campaigns to improve the environmental performance of tourism have been nurtured in the private sector (Edmunds Marian, 1998). A handful of major hotel companies have created environmental programs that successfully merge environmental responsibility with economic profitability. The environmental responsibility of hotels should be the conservation of natural resources by using them sparingly and not polluting them, and to preserve the ecosystems in which they exist. Some leaders taking up environmental responsibility are Hilton International, Inter-Continental, Taj Group, Aitken Spence Hotels, Dusit Hotels and Holiday- Inn.

Rationale

Urban areas attract tourists for various reasons. Hosting large numbers of tourists and providing them with a satisfactory experience places high demands and pressures on city infrastructure and basic services. (Figure 1 gives a diagrammatic representation of the rationale of why urban hotels need to implement environmental management practices). The high consumption of water and energy, generation of waste, utilization of transportation infrastructure and other services is becoming a matter of concern. However it must be recognized that tourism activities consume more resources compared to average standards. Hotels pamper their guests, with the belief that a large quantity of service is synonymous with good quality of service. However, the environmental movement is slowly changing this notion. Many hotel chains around the world are embarking on individual initiatives to become eco-efficient.

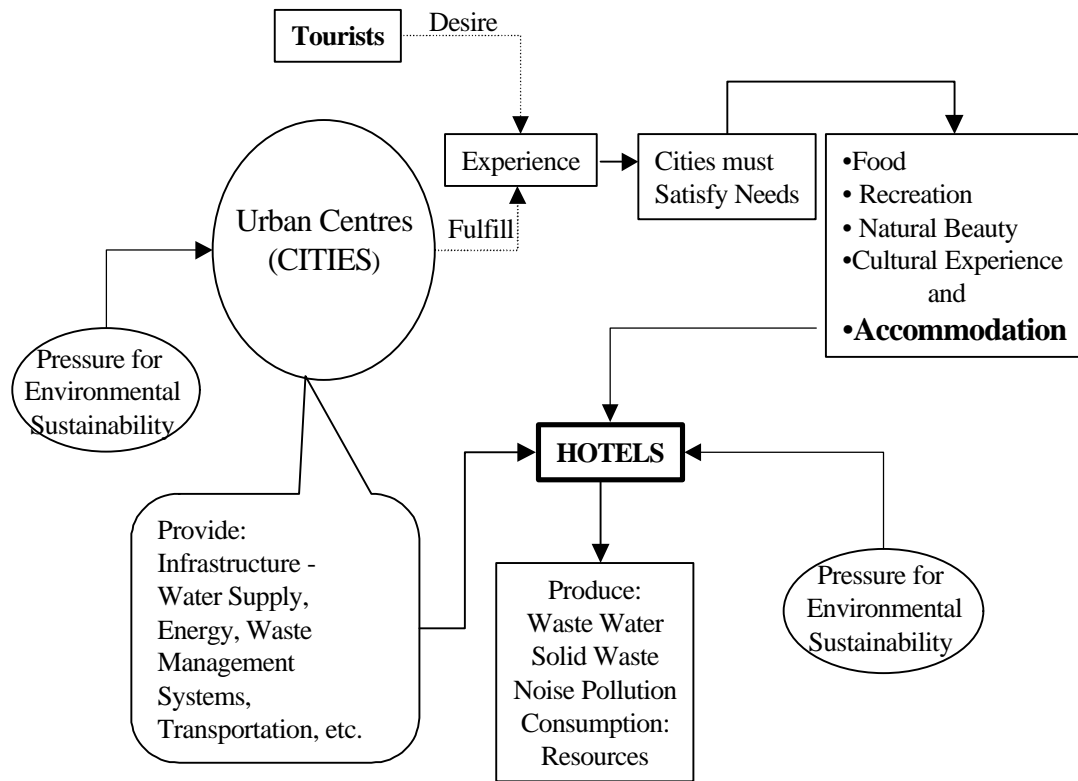


Figure 1
Diagrammatic Representation of the Rationale of the Study

The over-utilization of urban services such as water supply, fuel, transport services, waste collection and disposal, and the overall depletion of environmental quality by hotels is damaging not only to the local environment but is also incompatible with the long-term sustainability of the industry. Current efforts to make tourism, more specifically the hotel industry, environmentally friendly are noteworthy, but as indicated in the literature these efforts are area- (department within hotel) or hotel- chain specific or are limited to luxury hotels. The message and effort are yet to reach hotels of the lower categories.



Environment Friendly Waste Management Program of The TAJ Holiday Village in GOA (a 5 - star hotel), A view of the beach attached to the hotel.



Water treatment plant of
CIDADE - De - GOA (A locally
owned 5 - star hotel in GOA).

For a judgment of various categories of hotels Table 1 presents the classification of hotels as done by the Government of India. The table shows category and degree of services available in different classes of hotels.

Table 1
India

Hotel Classification Chart of

Category Services	DELUXE 5 Star	5 Star *****	4 Star ****	3 Star ***	2 Star **	1 Star *
Architecture of the Building	Out-standing	Out-standing	Out-standing	Good	Moderate	-
Adequate car parking space	✓	✓	✓	✓	-	-
Minimum No. of lettable rooms	25	25	25	20	10	40
Furniture:	Exclusive	Exclusive	Exclusive	Good	Good	Good
• Carpets	✓	✓	✓	✓	-	-
• Curtains	✓	✓	✓	✓	-	-
• Fittings	✓	✓	✓	✓	-	-
Air Conditioning Cooling/Heating	All private-public room	All private-public room	All private-public room	50% rooms	25% rooms	-
Lifts for more than 2 floors	✓	✓	✓	✓	-	-
24 hrs. reception/information counter	✓	✓	✓	✓	Only Reception	Only Reception
Travel Agency	✓	✓	✓	✓	-	-
Book Stall	✓	✓	✓	✓	-	-
Hair dressing saloon	✓	✓	-	-	-	-
Laundry service	✓	✓	✓	✓	✓	-
Swimming Pool	✓	✓	✓	-	-	-
Lobby	✓	✓	-	-	-	-
Cloak Rooms	✓	✓	✓	✓	-	-
Safe Deposits	✓	✓	✓	✓	-	-
Left Baggage room	✓	✓	✓	-	-	-
Telephone in each room	✓	✓	✓	✓	✓ o r	-
Floor	✓	✓	✓	✓	✓	-
Reception	✓	✓	✓	✓	✓	✓
Bathroom	Attached	Attached	Attached	Attached	75% Attached	1 for 4 rooms
Cold water	24hr	24hr	24hr	24hr	24hr	Enough
Hot water	24hr	24hr	24hr	24hr	24hr	Enough
Cold drinking water in Thermo flasks in each room	✓	✓	✓	✓	Plain Water	Plain water
Conference Facility	✓	✓	✓	-	-	-
Dinning Room/ Restaurant	✓	✓	✓	✓	✓	✓
National cuisine	✓	✓	✓	✓	✓	✓
International cuisine	✓	✓	✓	-	-	-
Continental cuisine	✓	✓	✓	✓	-	-
Bar Room	✓	✓	✓	✓	-	-
Restaurant for dancing and music	✓	✓	✓	-	-	-
Pantry	Exclusive	Exclusive	Exclusive	Good	Clean	Clean
Cold Storage	✓	✓	✓	-	-	-
Languages known to staff: Foreign	✓	✓	-	-	-	-
English	✓	✓	✓	Senior staff	Senior staff	Seniors

(Compiled from Sharma K.C., 1996)

Lessons Learned from Existing Environmental Management Programs

Three environmental management programs, namely, Green Leaf Program in Thailand, Ecotaj, and Orchids – Ecotel in India were studied (Appendix A, B and C give details of the programs). Some of the important lessons learned from these examples are listed below.

◆ Electricity, water and waste management are the prime issues to be addressed in environmental management programs for hotels.

◆ It is essential for the hotels to take the initiative in identifying the environment as an area of concern and take the necessary steps to reduce the environmental impacts of hotels.

◆ The Green Leaf Program is effective and efficient because of the institutional involvement in the program, the attractive incentives given by the program, and its structured auditing system.

◆ It was seen from the cases of Green Leaf Program and ECOTAJ, as measured against ECOTEL, that there is a need to set separate environmental standards for hotels already in operation and for those that are about to begin operation. The existing hotels should begin with lower standards and move to higher international standards, while the new hotels should begin with higher standards as they can incorporate environmental practices from the concept stage. The underlying rationale of this approach is that old hotels typically must undergo a long and slow process of restructuring and reorganization, while new hotels can avoid this process if environmental practices are incorporated from the beginning.

◆ Important factors to consider while implementing an environmental management program in hotels include:

- Recognition of the need to set different standards for new hotels and hotels already in operation.

- Implementation of environmental management programs should occur at the earliest possible stage in the hotel's development

- An institutional network including the local governing bodies is important for the success of the program and should be developed.

- Assessment questionnaires should be distributed after the environmental guidelines, assuming that the hotels are aware of the detailed changes to be made for achieving a better environmental performance.

- It is inappropriate to provide an audit questionnaire to hotels with expected answers in 'yes' or 'no' form as this prevents measurement of the degree of the hotel's environmental performance.

- The incentives given in the program should not target a specific group or category of hotels alone. Instead, they should encourage the involvement of all levels or categories of hotels in environmental management, with a variety of incentives or disincentives applicable to all.

Requirements for Increasing Participation of Hotels in Environmental Management Program in Panjim

This section brings to the forefront various issues and requirements for hotels to implement environmental management programs. These requirements are identified using the sample hotels studied in Panjim, Goa. The requirements can be categorized as follows:

a) Requirement for Awareness Generation

◆ Lack of awareness among the hotel management to implement environmental management program raises the need to provide hotels with a set of guidelines to introduce what environment management is and what are the desired actions to implement such a program.

◆ There is a need to clarify misconceptions about environmental practices (regarding, for example, their time and investment requirements) and give an elaborate definition of environment for the hoteliers as a means of broadening their perspective and understanding. This is in light of the fact that the environment is often interpreted as merely requiring the greening and cleaning of the hotel's surroundings.

◆ Hotels are willing to use environmentally-friendly products but are in fact not using them primarily because they are unaware of the suppliers of such products. It was also observed that hoteliers are unaware of the impact of several of the products they use on the environment.

◆ Floating staff in hotels is an obstacle to introducing environmental management programs for hotels in Panjim. Thus, hotel management should train the permanent staff first and then have on-the-job training for the floating staff.

b) Requirement for Incentives

◆ The hoteliers are willing to adopt environmental practices only if there are incentives for doing so. The most common incentive demanded by the hoteliers is the reduction in water and electricity taxes.

◆ The bigger hotels, i.e. hotels with 5, 4, and 3 stars, are more attracted by the image-building and publicity incentives (such as awards and inclusion in a green directory), than the 2-star hotels.



Exterior of a 5 - star hotel in Panjim, GOA.



View of the swimming pool and attached beach of a 5 - star hotel in Panjim, GOA.



Exterior of a 3 - star hotel located in the city centre in Panjim, GOA.

Lobby of a 3 - star hotel in Panjim, GOA.





Swimming pool of a 3 - star hotel in Panjim, GOA.

c) Requirement for Disincentives

◆ The 5, 4, and 3-star hotels are extremely conscious of negative publicity through media (newspapers). Thus, newspaper reporting could be used to keep the environmental activities of hotels in check.

◆ The 2-star hotels are not as conscious and concerned about their image as 5, 4 and 3-star hotels, hence incentives of image building and publicity are not incentives for them. At the same time, incentives of tax reduction as demanded by the hotels are not feasible with the concerned authority due to low cost recovery for services, and hence disincentives are more appropriate.



Exterior of a 2 - star hotel in Panjim, GOA.



Reception of a 2 - star hotel in Panjim, GOA.



Lobby of a 2 - star hotel in Panjim, GOA.

d) Requirement for Regulatory Changes

◆ In a voluntary program there is a need for a regulatory ‘stick’ to ensure functioning of the program. This regulatory need is a pre-condition in the strategy suggested in this paper.

e) Requirement for Institutional Support

◆ In establishing an environmental management program the most important feature is having an institutional network. The enabling forces of awareness among the hoteliers about the need for environmental management program and acceptance of a program of similar nature by the hoteliers in Panjim could be used to build on such a network.

◆ In waste management, the following activities are not practiced by most hotels: segregation of waste, promoting use of recyclable goods and less use of disposable items, sending food waste to composting plants or to animal feeds, and reuse of paper, cloth, and other items within the hotel. On the other hand, selling waste such as paper, glass, iron, and tin to scrap dealers is a traditional activity in India and is practiced in most of the hotels. There is a need to restructure and make optimum use of the traditional waste management system to solve some of the waste problems of hotels.

◆ Only the 5-star hotel that was surveyed treated wastewater and recycled it within the hotel. The other hotels do not do so for reasons such as lack of space for a treatment plant, monetary constraints to construct and maintain a treatment plant, lack of water treatment knowledge, and insufficient water for the operation of a treatment plant.

Target Groups for Promoting the Implementation of Environmental Management Programs in Hotels

To meet the above requirements it is essential to know who would fulfill them. This section gives insight into the roles of the stakeholders.

◆ Hotels receiving foreign guests are more willing to adopt environmental practices than others. Also, young professionals in hotels are more interested in adopting environmental practices than older managers or owners.

◆ Hotels are apprehensive about involving guests in water and energy conservation programs. Though some hotels have room cards requesting alternate-day change of bed covers and towels, the hotels have reported that the guests do not respond to such requests. A common argument given by guests is that they are paying for the facilities and have a right to all the luxuries and services. Thus, it is essential to motivate hoteliers themselves to take necessary precautions as changing guest attitudes is an extremely slow process.

◆ There is a need to establish or strengthen relations between all stakeholders to establish and maintain an environmental management program in Panjim. Table 2 shows a comprehensive list of stakeholders, their existing roles, and their expected roles.

Table 2 Role of the Stakeholders

Stakeholders	Role	Potential Importance	Required Condition	Comments
Government Institutions				
Goa State Pollution Control Board (PCB)	Passive	5	Need to establish links	Has no role in setting standards and monitoring the environment of hotels as they do in all other industries. Has a very high importance if necessary standard regulations are to be established.
Department of Town and Country Planning (DTCP)	Active	4	Need Improvement	Poor implementation of the CZR: all 3 beachside hotels in the sample had violated the CZR. DTCP is a highly important regulatory body for construction activities and, therefore, the organization must improve its implementation of the CZR.
Panjim Municipal Council (PMC)	Active	4	Need Improvement	The PMC is the prime body responsible for handling waste in the city, and majority of the hotels give their waste to the PMC. There are some problems in the way the waste is managed by the PMC. PMC's role is important in improving the city's waste management system.
Department of Tourism	Passive	5	Need to establish links	Environment is low on the agenda of this department and it does not consider managing hotels as a part of its responsibilities. But as hotels are the backbone of the tourism industry, and as the department registers and classifies hotels and markets them through various publications, it is considered a potentially very important body to promote environmental management in hotels.
PWD	Passive	4	Need to establish links	PWD has no conservation program, but would be effective if they limited the consumption of water by hotels.
Goa State Electricity Board	Passive	4	Need to establish links	Has no conservation program, but would be effective if they limited the consumption of water by hotels.

Key:

Very important -5

Fairly important - 4

Neutral - 3

Not so important -2

Not at all important -1

Table 2 (continued)

Stakeholders	Role	Potential Importance	Required Condition	Comments
Private Bodies				
Private Contractors for waste collection	Active	3	Satisfactory	They do what is expected of them
Chartered Travel Agents	Active	2	Need Improvement	They lay conditions primarily for better hygienic conditions not so much for the environment. Although they can help bring about change it is difficult to regulate as they operate in the free market.
Travel and Tourism Association of Goa	Passive	4	Need to establish links	They are an existing forum of the hotels and could be used positively to make the hotel management aware and conscious of the environmental issues and practices.
Institute of Hotel Management, Goa	Passive	2	Need to establish links	Most of the young professionals in the hotels take formal training within this institute in Goa and hence it would be effective to introduce formal environmental training as part of the institute's curriculum.
Suppliers of Bio-degradable products	Passive	3	Need to establish links	Most of the suppliers are in Mumbai and rarely cater to Goa, but as they could play an important role in changing the trends in the hotels it is necessary to establish links with them.
People/Groups				
Chartered Tourists (Foreign Guests in the hotels)	Active	4	Need Improvement	They are a powerful pressure group and demand environmentally-friendly behaviour from hotels.
Indian Tourists	Passive	2	Need to establish links	Indian tourists are not at all environmentally conscious.
JGF (Jagrut Goenkaranchi Fouz)	Active	4	Need Improvement	They are an active people's group ready to handle issues that would involve them as an important pressure group over hotels to implement environmental management programs. However, they need to be directed to take up the issue of hotels.
Goa Foundation	Active	4	Need Improvement	They file petitions against offences committed by hotels and have designed and piloted a Green Hotels' Program of their own. They could be encouraged for creating an incentive based labeling program for hotels such as the Green Leaf Program.

Table 2 (Continued)

Stakeholders	Role	Potential Importance	Required Condition	Comments
People/Groups				
Local Community	Passive	3	Need to establish links	The local community is not motivated and is poorly organized to act as a pressure group over the hotels. But if well organized with the help of JGF the community can be activated to push the hotels to implement environmental management programs.
Hotel Staff	Passive	4	Need to establish links	The hotel staff is not environmentally conscious as the management does not think it necessary to invest in the floating staff. But as the staff is the implementing hand of the environmental practices they are potentially very important.
Hotel Management	Active	5	Need Improvement	They are partially aware and are partially implementing environmental practices, but to attain effective management there is a need to improve the role of the management, and as it all begins with their commitment to the cause they are the most important stakeholders.
Informal Sector	Active	4	Need Improvement	They do not cater to all areas of the city, but are important actors in the operation of the traditional methods of recycling waste.
Media				
Newspapers	Active	5	Need Improvement	The local newspapers have been vigilant about the environmental pollution caused by the hotels. As such, media portrayal of the hotel is a very effective tool to make hotels environmentally conscious.

(Source: Mandke Pallavi, 1999)

Key:

Very important - 5
Not so important - 2

Fairly important - 4
Not at all important - 1

Neutral - 3

The Suggested Strategy

Introduction

This strategy is based on the success of the Green Leaf Program and the lessons learned from the existing environmental management programs that were studied in the research. The highlights of the strategy include: required regulatory changes; various components of the program such as the institutional setup, incentives and disincentives that can be offered; the auditing system; recognition to the program and other techniques that can be used to increase participation of hotels in the program; and finally, guidelines to set standards for water and electricity consumption and guidelines for better environmental management in hotels.

The components of the program are presented in 3 sections: the first section makes a generalized comment on the principle used in the section and the second section states specific illustrations based on Panjim.

Pre-Conditions

Although voluntary acceptance of the environmental management program is ideal it is often impossible to continue with voluntary action without a regulatory stick.

Required Regulatory Changes - Get hotels under the jurisdiction of PCB: Before applying for the Green Leaf Program, there is a need for some regulatory changes in Goa. Currently, hotels do not come under the jurisdiction of PCB, but it is necessary for them to do so as it is the PCB that can perform functions of setting environmental standards for hotels and regulate hotels to abide by them. This change is possible at the state level without consent or amendment from central level PCB, as the state level PCB has authority to add a particular industry under its jurisdiction. The PCB should be a body involved in the licensing process of hotels making it mandatory for hotels to procure a NOC (No Objection Certificate) from PCB.

Role of PCB: The PCB will play a significant role in the licensing procedure of hotels, where the board will be involved in setting individual standards or benchmarks for each hotel for consumption of water and electricity and they will have to abide by it. This would have a direct implication on the licensing of hotels, as PCB will be involved in giving NOC to hotel every two years during license renewal of the hotels. Also, every second year the standards should be revised for each hotel against which its environmental performance for water and electricity will be measured.

Institutional Setup

General Principle: From examples studied it can be inferred that initiation of an environmental management program should come from hotels themselves. Only if hoteliers in a united forum are interested can the program attract support from other important stakeholders.

Example of Application in Panjim: In the case of Goa the initiative will have to be taken by the Travel and Tourism Association of Goa (T&TA) and the hoteliers themselves, as they have already established their interest and identified the need for environmental management in hotels. To seek necessary government support, the T&TA should hold talks with the Department of Tourism to convince them and generate their interest in the program and persuade them to liaison with other required government institutions, such as the

Pollution Control Board (PCB), Panjim Municipal Council (PMC), Public Works Department (PWD) and the State Electricity Board. Working together with PWD and PMC will not be a new experience for the Department of Tourism as they have worked together previously on other projects. The PCB will play a regulatory role and monitoring can be done by Goa Foundation. It would primarily be the duty of the Department of Tourism to invite other organizations to join in the program. Once these parties have expressed interest in the program, a joint group in line with the Board of Environmental Promotion of Tourism Activities (BEPTA), as in the Green Leaf Program, can be formed to give authenticity and an administrative base to the program. Other partners of the group will be people’s groups and travel agents. Figure 2 illustrates the initial line of communication to be followed for the formation of the institutional framework as discussed above.

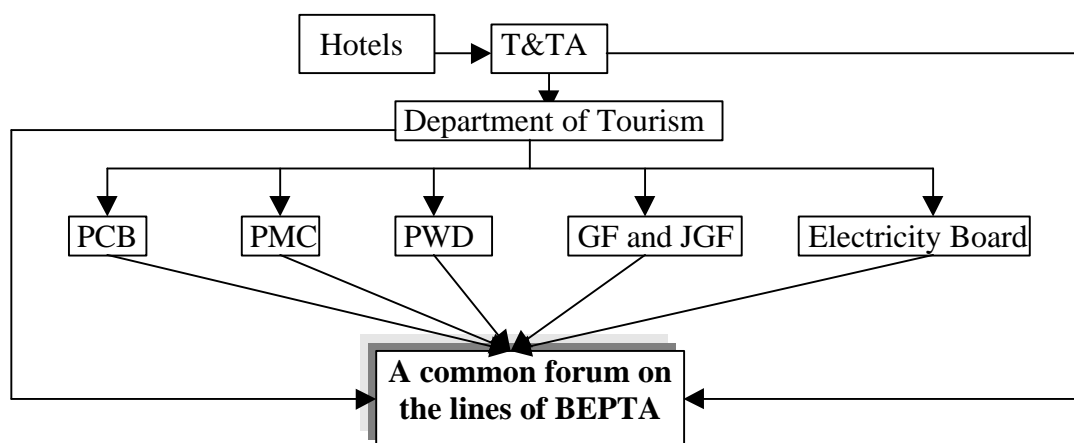


Figure 2
Initial Line of Communication to Develop the Institutional Framework of the Environmental Management Program in Panjim, Goa

Incentives and Disincentives for Hotels to Join the Program

Primarily a disincentive approach has been taken in this study. This is because disincentives have a negative effect on the performance of the organization for which they are designed and hence become forceful and more effective.

General Principle: Larger image-building incentives such as green awards and publishing of green hotels directory are of interest only to 5, 4 and 3-star hotels. Other hotels are not motivated by these incentives and, hence, other incentives or disincentives should be used for them.

Example of Application in Panjim: For large hotels, green awards and green hotel directories can be established in Panjim. The Green Hotels Directory can be easily done as the Department of Tourism publishes a directory of hotels classified by stars and class as decided by the department. This existing directory could be modified to list hotels according to their environmental management performance. Also the award of ‘Green Leaves’ is important to hotels and their image as an environmentally friendly hotel and it must be adopted from the Green Leaf Program. Though these image-building awards do not encourage the lower classes of hotels, they could be introduced, as they would become of importance to all the hotels through regulations and disincentives.

Some examples of disincentives

a) Waste Management

Reuse and recycling of paper, metal, glass and plastic are traditionally and systematically carried out in India and hence should be kept voluntary. But to ensure participation of all hotels in these voluntary activities some incentives and disincentives should be used.

- Disincentives:

Higher user fees should be collected from the hotels for waste collection service provided by the local government if large amounts of recyclables are put into the waste. This would encourage source separation of waste, compelling hotels to separate waste and give it to the scrap dealers or reduce consumption of such items. Involving the informal sector to collect waste from the hotels would support the local economy and reduce the volume of waste for the local government to collect, transport, and dispose.

b) Water Management

- Regulations:

- Standards should be set by the PWD with the help of PCB for average consumption of water per hotel as per the sizes of hotel. (Refer to the section on guidelines to make standards).

- Effluent and ambient standards for water discharge from hotels should be set by the PCB (as it does in other industries). The effluent discharge standards should be uniform for all hotels. To monitor the application of standards a system of 'tradable permits' can be set. Where each hotel would be given a permit for some standard discharge, hotels exceeding the standards could buy the permits from hotels under-utilizing their permits. The trade of permits could take place under the supervision of trained staff of the PCB.

- Disincentives:

Hotels consuming water over and above this set level should be penalized with an extra charge by the PWD. This would force the hotels to consume within limits. The guidelines prepared for hotels would help hotels to learn about various methods of reducing the consumption of water.

- Facilities and cost sharing:

It was noted that there is a lack of water treatment facility for hotels, as hotels cannot afford to set up their own treatment plant due to economic unfeasibility and several other reasons as pointed out earlier. For such hotels, especially in cities like Panjim, a common treatment plant can be set. This is feasible in Panjim as the city is small with a high density of hotels in and around the city center. This physical proximity would allow hotels to connect to the central treatment facility. The local government can provide space for the location of the facility and the infrastructure, while the hotels should pay for the maintenance and their connection to the facility.

c) Electricity Management

- Regulations:

Standards should be set by the state electricity board for the average consumption of electricity per hotel as per the sizes and needs of the hotel. Refer to the section on guidelines to make standards.

- Disincentives:

Some disincentives already exist for hotels:

- The large hotels i.e. 5- and 3-star hotels are charged by the 'peak rate' for the whole billing period. This means that they are charged for the whole billing period of 2 months at the rate of the highest unit consumed during the period.
- They are also charged at a commercial rate of the higher bracket.

All the hotels should be charged by the peak demand, this will force hotels to keep their peak demand low and should be charged extra if hotels exceed the average monthly standard.

But these disincentives have given rise to the rampant use of diesel run generator sets among hotels to shed the load from the state board's electricity intake. To counter this behaviour some incentives can be recommended.

- Incentives:

The board should give free consultancy to hotels to reduced consumption of electricity without the use of generator sets. The consultancy could be in the form of guidelines that are either distributed separately or as a part of the general guidelines prepared for a complete environmental management program to be implemented in Panjim.

Auditing System

General Principles: To evaluate hotels for their environmental performance it is important to design an auditing system. Working out blanket environmental standards for a wide range of hotels (no star to 5-star hotels) is not the solution as hotels have varying needs and various resources. Hence the auditing system should measure against individual standards set for each hotel. Also hotels should be provided with a set of guidelines to be followed in order to implement an environmental management program. Although the standards are set individually for each hotel there should be a difference in the set of standards first prescribed to new hotels and to old hotels. Elaboration of these arguments is provided below:

- Universal Standards vs. Individual Standards:

In dealing with a range of hotels from different categories it will be difficult to set uniform standards for all hotels for consumption of water and electricity. It would be appropriate to help each hotel set its own benchmark and follow it. Setting standards based on the number of rooms will be difficult as hotels in the same range of room have different facilities. For example, there are hotels within a room range of 20 to 30 but some have swimming pools and gardens while others have none of these due to their location in the city's center. Thus standardizing water consumption for these hotels would not be possible. Instead, each hotel should be assisted by PCB, PWD and the electricity board to set an upper limit of consumption for water and electricity and the hotels should abide by it.

- **Questionnaires vs. Guidelines:**

For the environmental management program in Goa, guidelines should be sent before the questionnaires, unlike in the Green Leaf Program. The Green Leaf Program has a questionnaire approach, whereby hotels receive a lengthy questionnaire and must answer questions with either a YES or NO. However, such questionnaires should be preceded by a set of guidelines explaining what hotels should do in order to adopt an environmental management program. Amongst a willing but unaware population of hotels in Panjim, a set of guidelines is more important. Once hotels know what to do it will be easier to garner their participation in the program. Appendix I provides examples of the components of guidelines that are to be followed by hotels for environmental management in areas of waste, water, and electricity.

- **A Separate Set of Standards for New Hotels:**

As per the standards set by Green Leaf Program, the program becomes workable only for hotels in operation. The program makes no provision for the new hotels such that they could prevent the phases of reorganization and restructuring that are required in older hotels. To reduce the environmental impacts of new hotels it is important to set higher, though achievable standards for hotels as they can incorporate the necessary changes in their hotels as against the conventionally followed hardware¹ and software² systems.

On the other hand, guidelines used for new hotels could be the same as those for the old hotels, as the guidelines would only direct hotels to the final goal of environmental management and this goal is the same for both categories of hotels.

Recognition for the Program

General Principle: Recognition is an important criterion for hotels to join the program. Media coverage for environmental management programs and participation of relevant government institutions provide the program with positive recognition.

Example of Application in Panjim: Involving chartered travel agents in the planning, monitoring and implementation of the program will provide the program with international recognition.

Other Techniques Used to Encourage Participation of Hotels in Environmental Management Programs

As incentives to maintain a better image are not attractive enough for lower-level hotels, it is important to establish other options to increase their participation in the environmental management program. Therefore it is important to convince the hotels that environmental management pays economic returns, e.g., by saving on the consumption of electricity and water. Also, waste management provides economic returns to hotels if hotels carefully separate waste and sell it to scrap dealers (examples may be shown from successful cases from the Green Leaf Program or by creating demonstration projects within Panjim or site visits outside Panjim).

¹ Implying the physical aspects of environmental management such as the construction of the building, electric and water fixtures, furniture, waste bins, etc.

² This implies the softer side of management such as the attitude of staff, guests or the management, change in habits, behaviour, etc.

- Awareness Creation:

Techniques for creating awareness serve a major purpose in generating awareness and consciousness among hoteliers. These guidelines for awareness creation must be directed towards the hoteliers as they must initiate environmental management program.

Initiate with the Travel and Tourism Association of Goa – Harness the concept of Eco-Efficiency through meetings

- Define “environment” and environmental issues for hotels
- Show linkage between environmental excellence and business excellence
- Clarify misconceptions that environmental practices in hotels are time consuming and require high investment
- Target young managers or owners for response
- Introduce environmental management in the curriculum of the Institute of Hotel Management in Goa, which trains the future managers of the hotels
- Educate hotel managers through seminars and conferences
- Distribute guidelines.

- Use of Media:

The newspapers could be used to cover the environmentally sensitive and insensitive actions of hotels. All businesses including hotels are conscious of their media image. Accordingly, this concern could act as an impetus for hotels to follow environmental guidelines.

- Demonstration Sites:

Demonstration sites could be used as examples for the hotels to follow. Some of those hotels most willing to undertake environmental management programs could be initially given all the necessary support of providing guidelines, incentives and disincentives as mentioned above. After a noticeable change is made in their environmental performance enabling the hotel to achieve eco-efficiency, these hotels can then serve as demonstration sites for other hotels. This could help increase the participation of hotels in environmental management programs. Otherwise, examples from other cities in India or countries like Indonesia³ (the Eco-efficiency program for hotels) can be utilized as demonstrations for hotels in Panjim.

Guidelines for Developing Standards

The aim of environmental management in hotels regarding water and electricity is primarily to reduce the water and energy consumption by hotels. To control this consumption, some standards need to be set to derive the average consumption relative to the particular size of a given hotel. The criteria to set standards should be elaborate and should consider a range of items:

For water consumption:

- Number of rooms
- Average Occupancy

³ This program has been started in Bali by the WISNU Foundation, that has been working on tourism and environment related issues. In hotels’ environmental management its focus is on integrated solid waste management and water management.

- Activities in the hotel: Laundry
Size of garden
Number of restaurants
Swimming pool

For electricity Consumption:

- Number of Rooms
- Number of electrical gadgets in the rooms and their average energy consumption
- Average consumption of kitchen appliances
- Laundry
- Pumping of water
- Water purification plant
- Water treatment facility
- Cold storage
- Air conditioning and lighting

Setting average standards has to be very specific for each hotel as they have differing setups and requirements. The PCB, with assistance from the State Electricity Board and the PWD, can set these standards - particularly given that they have done this for other industries and have qualified personnel. There is a need to clarify the status of the hotels among these institutions, as PWD and the Electricity Board consider hotels as part of the Commercial sector while the PCB considers them as part of the Industrial sector.

Scope for Further Work

An important area for work within the sphere of environmental management of hotels is on the cumulative impact of hotels in urban areas and measures to mitigate these impacts. For example, Panjim is a small city with an area of approximately 9 sq. km. and 215 registered hotels and with plans for additional hotels sanctioned by the Department of Town and Country Planning for the coming year. With such a high density of hotels per sq.km, it is important to assess and manage the environmental impacts of all the hotels collectively rather than each hotel individually. An example of such a project is the Training and Technology Transfer Program (TTTP) of CUC-AIT in Cambodia.

Another topic this paper identifies is the implementation of environmental management program, i.e., its enforcement involving training for the staff of various institutions and the financial sustainability of such programs.



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Appendix A

The Green Leaf Program

Introduction to the Green Leaf Program

The Green Leaf Program is a collaborative effort of several bodies towards a common environmental goal. It is designed to encourage greater environmental activities among hotels throughout Thailand and eventually in other countries in Asia and the Pacific. This program was initiated in 1994 by the Thai Hotels Association when the members felt an increasing need for environmentally conscious behaviour and finding alliances who specialized in the fields of electricity, water, waste management, etc. The nature of the program is voluntary and is currently a pilot scale experiment in Thailand. The objectives of the program are to:

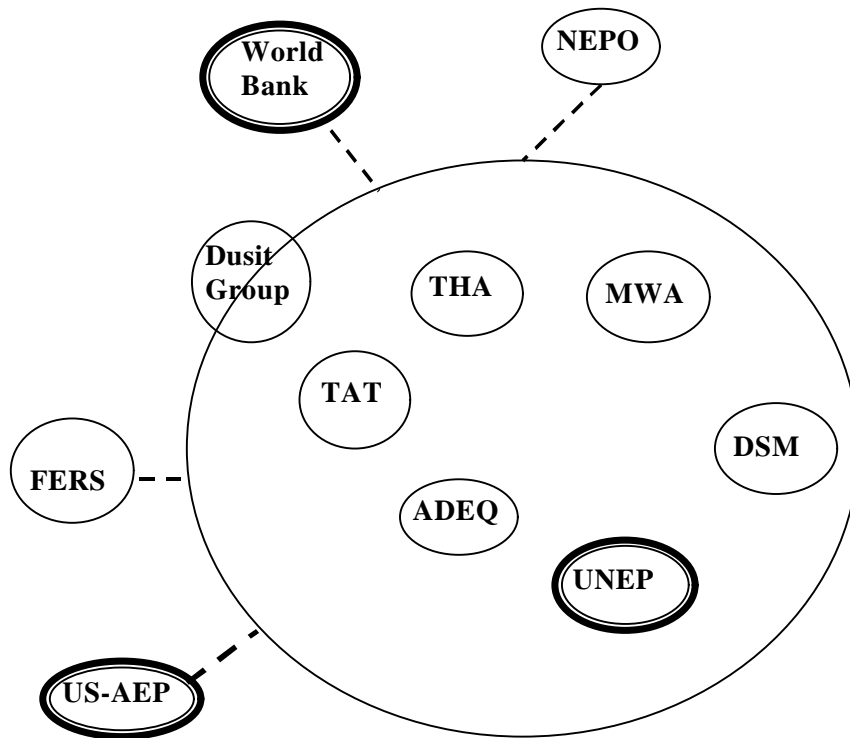
- Encourage and improve the efficiency of the hotels and related businesses in the tourism industry to respond to environmental development and protection.
- Establish a nationwide classification of environmental standards in Thai Hotels in accordance with the needs of customers and develop technological efficiency in hotels.
- Raise awareness and role of the Thai tourism industry in environmental protection.
- Create a positive image and competitive advantage for Thailand among consumers and trade worldwide.

(Source: Profile: Green Leaf Program, a brochure)

Institutional Setup of the Program

The program is a collaborative effort of an interactive working committee named the Board of Environmental Promotion of Tourism Activities (BEPTA). The core group of BEPTA consists of the Tourism Authority of Thailand (TAT), Thai Hotels Association (THA), UNEP, Association for the Development of Environmental Quality (ADEQ), Demand Side Management of the Electricity Generating Authority of Thailand (DSM of EGAT) and Metropolitan Waterworks Authority (MWA). There are several external supporters of the program as well. The role of the members of the core group is well defined: the TAT and THA are responsible for the sustainability of the program, while UNEP is responsible for raising the program's profile in Asia and the Pacific and attracting funds from the World Bank. The ADEQ carries out the environmental audits and sets benchmarks for the hotels, and the DSM of EGAT and MWA are to provide training to the hotels and make the program compatible to its own objectives for conservation and vice versa. This interactive relationship of the members has made the program conducive for hotels to adopt.

The drawback of the institutional setup of the program is that it does not involve the local government. So far it is only the national level and international level institutions participating in the program.



Key:
ADEQ- Association of Development of Environmental Quality
DSM- Demand Side Management Program
FERS- Faculty of Environment and Resource Studies, Mahidol University
MWA- Metropolitan Waterworks Authority
NEPO- National Energy Policy Office
TAT- Tourism Authority of Thailand
THA- Thai Hotels Association
UNEP- United Nations Environmental Program
US-AEP- United States- Asia Environmental Partnership

— National Institutions
 = International Institutions

Figure 3
Institutional Interaction in the Green Leaf Program

Recognition to the Program

As the program is being managed in partnership by TAT and THA the program draws considerable attention from the Royal Thai Government, and the THA thereby attracts hotels to participate in the program. The involvement of the other government departments gives the program nationwide recognition. UNEP (ESCAP), Asia Foundation, British Embassy and hotels from the international chains such as Hilton International are involved in marketing the program outside the country, promoting it as a standard required for all hotels in the Asia and the Pacific region. More than 1000 hotels in 5 regions of Thailand are a part of the program.

Incentives Attached with the Program

The incentives envisage an award of up to five Green Leaves based on the audit results, reflecting the hotel's environmental achievements in management and resource efficiency and, in turn, helping the hotel gain a competitive edge over other hotels. This award also lists the hotels in a Green Hotels Directory, which is distributed to travel agents around the world. The supporting embassies promote the hotels in their own countries to tourists who wish to visit Thailand. The participant hotels can also avail themselves of free consultancy from the DSM program of EGAT to save on the consumption of electricity. The Hilton International in Bangkok can boast of 16% reduction in its consumption of electricity after such help from the DSM.

Auditing System of the Program

The Program has a well-developed auditing system. The Environmental Audit is conducted and re-assessed every 2 years in the hotels. It is organized by sections of the hotel such as the front office, guestrooms, kitchen, restaurants, and other areas including all departments of hotel operations such as food and bakery, engineering, purchasing, training, marketing and management. The contents of the audit cover the following areas: water conservation, waste management, environmental products purchasing, air quality, community relations, communications, management support, and training and energy conservation. The standards are indigenously developed by drawing an average mean from the selected 'Reference Hotels,' which are upgraded every 2 years by selecting a set of new reference hotels from among the participant hotels. The hotels have to pass a set of three rigorous and comprehensive questionnaires, which are self-administered by the hotel. A team of experts from the ADEQ then verifies the results of the final Grading Questionnaire, awarding the first leaf on a total score of 44 percent, the second leaf at a score of 44 percent plus 1 standard deviation and so on.

The auditing system is a system designed to satisfy the local or country-specific hotel conditions. Even though other countries would adopt the program, they would have to indigenously develop their own standards and gradually move towards adopting international standards. Such a system, because of its achievable standards, gradually cultivates interest among hotels to initiate environmental practices, and the competition for earning maximum leaves and maintaining this status motivates them to pursue the program.



Weakness of the system:

- This auditing system sets standards and is designed only for the hotels already in operation, it does not address the new hotels that are still in the concept phase and well-positioned to implement better and higher standards.
- The system relies on a questionnaire that is to be answered by the hotels in a 'yes/no' fashion. Consequently, it does not have any scope to identify a certain degree of achievements if the hotels have any.
- The actual standards set for the program are not made available to the hotels or, indeed, any other organization or individual. This leaves the hotels with an incomplete knowledge of a system that they are expected to follow and targets they are expected to achieve.

Management System of the Program

The implementation of the program is monitored and the standards are set by the ADEQ, but the hotels are contacted through the THA on behalf of the program. Within the hotels it is the upper-management that transfers responsibility to the Personal Manager and the Chief Engineer. Each department head is involved in identifying issues in the department and staff training requirements for implementing the program. The Chief Engineer is responsible for the necessary technical changes. The budget for the required changes has to be mobilized from within the hotel. See Figure 4 for a graphic representation of the management structure of the Green Leaf Program.

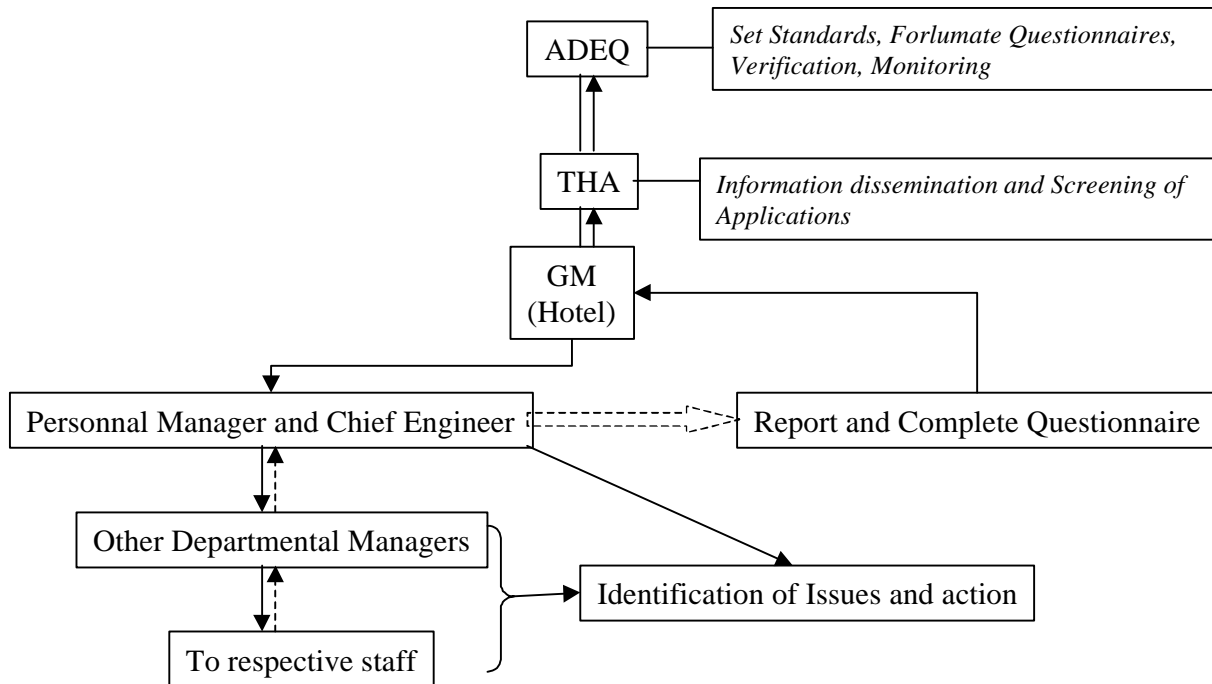
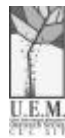


Figure 4
Management Structure of Green Leaf Program

The core group of the program, BEPTA, is very committed as was the top management of the two participant hotels that were studied. Also the program offers the provision of external audits by a team of experts and surprise checks and visits to the hotels. The core group of the program also ensures that the program is upgraded and revised every two years until it reaches international standards of approval.

Communicating Environmental Practices

On adoption of the program each individual hotel is instructed on the expected environmental behaviour. It is then the responsibility of the hotel to convey this information to hotel staff. In the two hotels studied, the staff were aware of the environmental goals of the hotel through training received from the chief engineer on two occasions over approximately 18 months. The management structure chart shows that there is two-way communication at all levels of the hotel, which was verified by the personnel managers and the chief engineers of the hotels.



Appendix B

The ECOTAJ

Introduction to ECOTAJ

ECOTAJ is an environmental initiative of the Taj Group of Hotels to promote conservation of the environment. To enhance awareness and standardize 'eco-friendly' activities across the chain, the Group has established an environmental division that implements activities such as Energy and Water Conservation, Waste Reduction, Reuse and Recycling, and Improvement of Water Quality. The Group began its march towards eco-friendly activities since 1995 after it became a member of the International Hotels Environmental Initiative (IHEI). It has systematically mapped out environmental policy and goals implemented in 45 hotels in 35 cities of India and 15 hotels in 9 other countries. Its environmental goals are:

- Develop the Taj Group as India's leader in Sustainable Tourism
- Create economic opportunities and increased competitiveness through conservation.
- Motivate employees to provide input into new and improved environmental practices.
- Provide a sound environmental image for the Taj Group when exploring new markets.

(Source: ECOTAJ Brochure)

Institutional Setup of the Program

The Program is designed and managed by the company alone. The only external support it receives is from the IHEI in terms of guidelines for environmental consciousness.

Recognition to the Program

The Environmental Initiative of Taj Group was given two Tourism for Tomorrow Awards - Longhaul Special and Southern Region in 1997 by British Airways. The program does have some coverage in international journals, but because of its poor networking with government and non-government organizations or other hotel chains the program is not well recognized in the country or region. Other factors that contribute to this are that the initiative is very recent and a lot remains to be done, as the hotels of the chain are old and well established and not easily amenable to change.

Incentives Attached with the Program

So far there are no incentives the program can avail itself of. The program has its limitations, as it is an isolated effort in the field of environmental management in India. Also the chain does not use its environmental initiative as an agenda for marketing.

Auditing System of the Program

The program has not yet developed an auditing system. This is because the environmental efforts are recent and are carried out only in parts in the various hotels. Though the group plans to develop a central auditing system soon, currently activities such as product purchasing are being centrally controlled and are slowly changing trends towards more environmentally friendly products.

Management System of the Program

The Board of Directors has appointed an Environmental Co-ordinator to develop systems and promote them through the chain. The Environmental Co-ordinator responds to the needs and requests put forth by the GMs of the various hotels and the Eco-Champ. The GMs and the Eco-Champ are responsible for communicating with the other department heads and staff.

Communicating Environmental Practices

The central office, i.e., the environmental co-ordinator of ECOTAJ, conveyed the program to the GMs and housekeepers of the hotels and it was through the help of these that other hotel staffs were educated about the program.

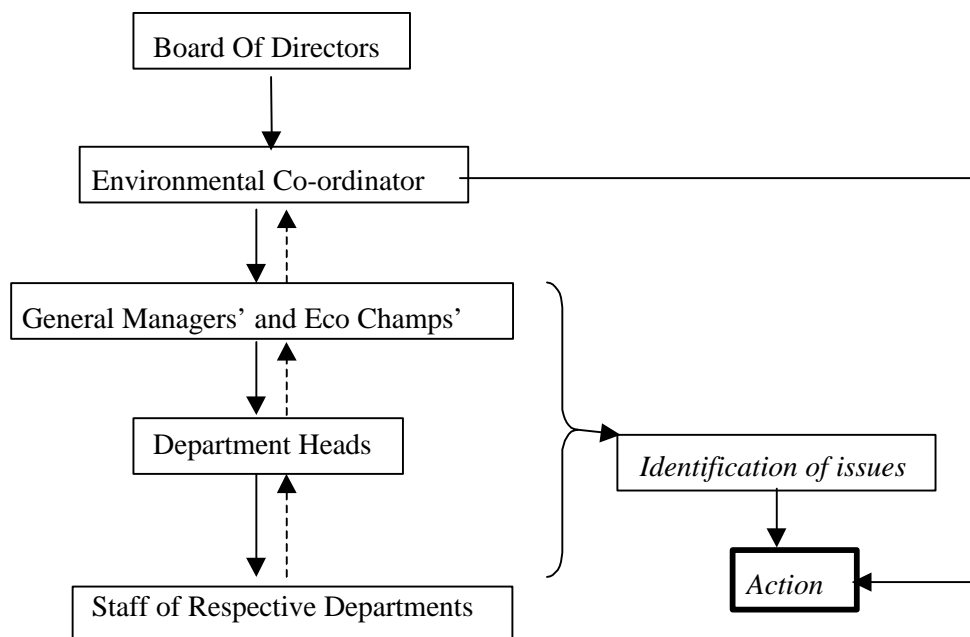


Figure 5
Management Structure of ECOTAJ



Appendix C

The Case of Orchids – ECOTEL in India

ORCHIDS was inaugurated as India's first certified eco-friendly 5-star hotel in 1997 by the prestigious ECOTEL certification. The hotel claims to incorporate the 'world's best environment practices and technologies,' through consultation with the US environment organization, HVS Eco Services. Environmental considerations were made from the construction and design of the building to the purchase and disposal of items during operation.



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