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**A STUDY OF TRAINING AND AWARENESS PROGRAMMES  
OF IMPLEMENTING AN ISO-BASED ENVIRONMENTAL  
MANAGEMENT SYSTEM : A CASE STUDY OF  
THE RIVER SIDE BANGKOK HOTEL**

**APICHART PATCHARAPINYOPONG**

**With compliments  
of**

**บัณฑิตวิทยาลัย มหาวิทยาลัยมหิดล**

**A THESIS SUBMITTED IN PARTIAL FULFILLMENT  
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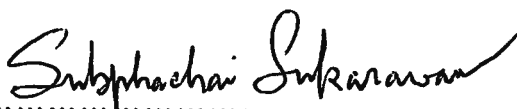
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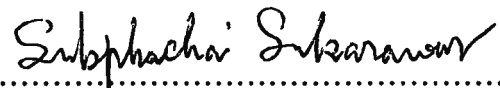
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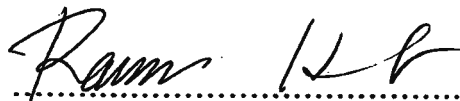
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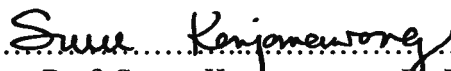


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**4038413 SHEM/M : MAJOR: EDUCATIONAL MANAGEMENT; M.Ed.  
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**KEY WORDS : TRAINING / AWARENESS MODEL /  
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**APICHART PATCHARAPINYOPONG : A STUDY OF  
TRAINING AND AWARENESS PROGRAMMES OF IMPLEMENTING  
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STUDY OF THE RIVER SIDE BANGKOK HOTEL. THESIS ADVISORS :  
DALAPAT YOSSATORN, Ph.D., SIRICHAJ CHINATANGKUL, Ph.D.,  
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Nowadays, the development of environmental management systems (EMSs) is to provide a framework for organizations and the ISO 14001 is a standard for EMSs. One requirement of the EMS standard is the training of employees in areas related to environmental awareness. Thus the purposes of this study were to evaluate training and awareness programmes associated with the implementation of an EMS based on the ISO 14001 standard. A case study of The River Side Bangkok Hotel was used.

The case study examines training and awareness aspects of the Air Quality Management Programme (AQMP) and its Environmental Management Plan (EMP), through interviewing staffs. A database of notes and documents was used to increase the reliability of this study. Interviews involved the use of a semistructured questionnaire about employee awareness of corporate policies, individual responsibilities, and training programmes. Data was collected from 17 respondents who were members of the environmental department and management level employees of other departments in the hotel.

The findings were as follows :

1. The employees from different department needed improved Environmental training, awareness, and communication programmes.
2. 84.6 % of respondents responded that they would like to receive more training about the hotel's environmental commitments and programmes.
3. 61.5 % of respondents responded that employees were aware of the hotel's environmental programmes.
4. The interview results indicated that there needed to be stronger links between operating procedures and environmental policies. This supports the communication operating responsibilities identified in management programmes.

According to this research finding, it is necessary to further develop the hotel's environmental management plan and cope with the awareness-based model for the environmental improvement.

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อภิชาติ พัชรภิญโญพงศ์ : การศึกษาโครงการการฝึกอบรมและการตระหนักรู้ถึงการ  
ระบบการจัดการด้านสิ่งแวดล้อมตามมาตรฐานไอ เอส โอ : กรณีศึกษาโรงแรมริเวอร์ไซด์ กรุงเทพมหานคร  
( **A STUDY OF TRAINING AND AWARENESS PROGRAMMES OF  
IMPLEMENTING AN ISO-BASED ENVIRONMENTAL MANAGEMENT  
SYSTEM : A CASE STUDY OF THE RIVER SIDE BANGKOK HOTEL** )

คณะกรรมการควบคุมวิทยานิพนธ์ : ดลพัฒน์ ยศธร, ก.ค., ศิริชัย ชินะตั้งกูร, ก.ค., สุภชัย สุภวรรณ  
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ปัจจุบันระบบการจัดการด้านสิ่งแวดล้อมตามมาตรฐาน ISO 14001 ได้รับความสนใจจากหลาย  
องค์กรมากขึ้น ซึ่งองค์ประกอบที่สำคัญประการหนึ่งของระบบนี้ก็คือ การฝึกอบรมและตระหนักรู้เรื่อง  
สิ่งแวดล้อมของพนักงานในองค์กรนั้นๆ วัตถุประสงค์ของการศึกษาค้นคว้าครั้งนี้ เป็นการประเมินผลของโครงการ  
ฝึกอบรมและตระหนักรู้ถึงการนำระบบการจัดการด้านสิ่งแวดล้อมตามมาตรฐาน ISO 14001 โดยใช้กรณี  
ศึกษาโรงแรมริเวอร์ไซด์ กรุงเทพมหานคร

การศึกษานี้ ศึกษากรณีการฝึกอบรมและการตระหนักรู้เกี่ยวกับโครงการด้านการจัดการคุณภาพ  
อากาศและการวางแผนการจัดการด้านสิ่งแวดล้อมของโรงแรมริเวอร์ไซด์ กรุงเทพมหานคร ซึ่งวิธีการใน  
การดำเนินการ ใช้วิธีการศึกษาจากเอกสารด้านการจัดการสิ่งแวดล้อม และใช้วิธีสัมภาษณ์จากกลุ่มตัวอย่าง  
เป้าหมายที่เป็นพนักงานในแผนกสิ่งแวดล้อม พนักงานระดับบริหารขั้นต้น และผู้จัดการแผนกต่าง ๆ รวมทั้ง  
สิ้น 17 คน ในการสัมภาษณ์ใช้แบบสอบถามที่มีโครงสร้างแบบปลายเปิดเพื่อทดสอบความตระหนักรู้ของ  
พนักงานเกี่ยวกับนโยบายขององค์กร ความรับผิดชอบส่วนตัว และโปรแกรมการฝึกอบรม ตามโครงการที่  
โรงแรมเคยดำเนินการฝึกอบรมไปแล้ว

ผลการวิจัยพบว่า

1. พนักงานกลุ่มตัวอย่างในแผนกต่าง ๆ ของโรงแรมต้องการให้โรงแรมปรับปรุงด้านการฝึกอบรม  
การตระหนักรู้ และการสื่อสารต่าง ๆ ด้านสิ่งแวดล้อมมากขึ้น
2. พนักงานที่เป็นกลุ่มตัวอย่าง (84.6 %) ยังมีความต้องการที่จะรับการฝึกอบรมเกี่ยวกับโปรแกรม  
ด้านสิ่งแวดล้อมมากขึ้นกว่าเดิม
3. พนักงานที่เป็นกลุ่มตัวอย่าง (61.5%) มีความตระหนักรู้ถึงโครงการต่าง ๆ ด้านสิ่งแวดล้อมที่  
โรงแรมจัดให้
4. ผลการสัมภาษณ์พนักงานสรุปได้ว่า พนักงานของโรงแรมยังมีความต้องการให้มีการเชื่อมโยง  
กันระหว่างขั้นตอนการปฏิบัติงานและนโยบายด้านสิ่งแวดล้อมของโรงแรม ซึ่งหมายความว่าควรสนับสนุน  
ให้ระบบการจัดการด้านสิ่งแวดล้อมมีการสื่อสารระหว่างกันมากขึ้น

ข้อเสนอแนะที่ได้จากการศึกษาค้นคว้าครั้งนี้ โรงแรมควรให้ความสำคัญในการพัฒนาการวางแผน  
การจัดการด้านสิ่งแวดล้อมและฝึกอบรม เพื่อให้บุคลากรเกิดความตระหนักรู้เรื่องสิ่งแวดล้อมให้มากขึ้น

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# **CHAPTER I**

## **INTRODUCTION**

### **1.1 Background of the Study**

In recent years the development of environmental management systems (EMSs) design to provide a framework for organizations that were trying to incorporate environmental objectives into their decision making (Green and LaFontaine, 1996, Porter and Van der Linde, 1995). The ISO 14001 is a standard for EMSs that has attracted global attention since its introduction in 1996. However, the decision makers in environmental management lack practical guidelines on the most effective ways of implementing the ISO 14001 standard. If the gap between the EMS theory and practice can be bridged and the ISO 14001 becomes widely implemented, the standard could have a substantial impact on reducing the rate of environmental damage.

The ISO 14001 is a voluntary standard that can be considered the carrot to go along with the stick of command and control environmental regulation. One requirement of the EMS standard is for the training of employees in areas related to environmental awareness, and environmental competence. Educating employees about environmental issues is one of the most promising contributions that the ISO 14001 can make to the future of environmentally sustainable management practices. A key advisor in the development of the standard felt that (command and control) ultimate failure is that employees don't think of the environmental as their responsibility. Training and awareness programmes are key strategies in the implementation of an

integrated EMS and hence in improving corporate environmental performance (Ecotec, 1992, Kirkland and Thompson, 1997).

However, the hotel industry in Thailand has not seen heightened environmental scrutiny and regulation to the same degree that many other industries have experienced. This is due to a number of reasons, including : critical safety issues ; the expense of equipment technology and the complexity of the global hotel industry, especially as related to the control of regulations. It may also be due to a general reluctance to burden the industry with expensive and time consuming environmental programmes. Then, a factor relating to the regulation of air quality management, a focus of this research, is that the effects of hotel operations on the environment tend to be cumulative. For instance, if hotel's aggregate emissions were released from smokestacks, many hotels would be found to generate greater volumes of toxic pollutants, such as benzene and formaldehyde, than do manufacturing industries.

At the same time, the hotels have considerable effects on the natural environment and large numbers of people live in close proximity to hotels. The hotel operations can adversely affect their neighbouring communities with the generation of noise and air pollution as well as through water contamination. Most large hotels show some commitment to environmental management and also have some environmental experts staff. Then hotel managers have been considering whether to implement the EMSs that would satisfy the specifications of ISO 14001. This may be due to the increased presence of standards like ISO 14001 and the increased public and regulatory scrutiny that hotels are beginning to receive.

Furthermore, the component of training, awareness and competence may be the single requirement of ISO 14001 that goes farthest in separating an ISO 14001 EMS from any generic form of environmental management. It is relatively straight-forward for an organization to write an environmental policy, thereby having a document said to represent an EMS. Therefore, meeting the requirement for training, awareness, and competence requires that an organization extend environmental awareness and responsibility beyond the management and staff of its environment department to all its employees. Such an extension of environmental awareness and responsibility can be accomplished by implementing training, awareness, and communication initiatives that relate to environmental management issues.

## **1.2 Objectives of the Study**

This study has two goals in the following :

- 1.) Identify challenges and strategies associated with the training and awareness components of implementing an ISO 14001 EMS.
- 2.) Propose the content and structure of environmental training and awareness programmes that the hotel could use in implementing its EMS.

This research will provide managers with some of the practical tools needed to guide the training and awareness aspects of implementing an EMS. So the specific objectives relating to the goals of this research are :

- provide a comprehensive review of current EMS theory in the context of the evolution of corporate environmental responsibility and environmentally sustainable development

- provide environment managers with recommendations for training and awareness components of an EMS that can help improve corporate environmental performance
- further understanding of the relationships between organizations' motivations, opportunities, resources, and management processes and their roles in improving environmental performance
- further understanding of the relationships between environmental awareness at different operational levels within an organization and the implications of these relationships to implementing an integrated EMS
- raise awareness of the EMS approach to environmental management

### **1.3 Research Assumptions**

- 1.) A basic assumption in this research is that training and awareness are important components of an ISO-based EMS. They are the key tools for implementing a system that will help an organization improve its environmental performance.
- 2.) The organizations are interested in achieving business practices that are more environmentally sustainable. Then the recommendations and conclusions of this research apply to organizations that are so inclined.

## **1.4 Research Questions**

The questions this research strives to answer are :

- 1.) In relation to the challenges and strategies associated with implementing the ISO 14001 standard for EMSs, what are the roles of environmental training and awareness programmes ?
- 2.) What are the preferred approaches to training and awareness that the Authority could use to support its environmental policies, strengthen its EMS and extend environmental awareness throughout the organization ?

## **1.5 Scope of the Study**

The benefits, challenges and strategies associated with implementing an integrated EMS is identified through a review of literature on environmental management. Bodies of literature reviewed in this context included : environmental law, total quality management (TQM), organizational change, strategic planning, environmental education, and the environmental impacts of hotel. This literature review provided the context for reviewing the utility of EMS and ISO 14001 in the evolution of corporate environmental management. The review described the development of EMS and critiqued the ISO 14001 standard, identifying strengths, limitations, barriers, challenges, and implementation strategies.

In addition to the literature review on the ISO 14001 and corporate environmental awareness and responsibility, the research included a case study. Founded on environmental management issuers identified in the literature, the case study of River Side Bangkok Hotel practices focused on the role of awareness

programmes as a key strategy for implementing an ISO-compatible EMS. The case study involved the following research components : personal observation during a period of employment with the Safety and Environment Department ; a content analysis of the hotel's EMS ; and follow-up interviews with employees of the hotel, in order to ground-truth the observed and documented findings. This case study was designed to inform environment managers about effective training and awareness tools for implementing an EMS based on the ISO 14001.

### **1.6 Agreements of Research**

This study is to provide practical evaluations about the implementation of an EMS. The literature review describes ISO 14001 not only from a structural perspective, detailing its elements and components ; but also from an operational perspective, including elements of organizational dynamics like change management and training programmes. Then it includes the detailed treatment of these themes in order to give environment managers understanding of ISO 14001 and the roles of environmental training and awareness initiatives in EMS implementation. This research assumes that an organization must have a complete understanding of the context of EMS and corporate environmental responsibility in order to achieve optimum environmental and economic performance.

## 1.7 Value of the Study

The rationale for this research are :

- 1.) Improving the environmental performance of corporations, the negative environmental effects of modern society can be reduced.
- 2.) To achieve more environmentally friendly business practices, organizations must develop internal management processes that integrate environmental objectives into their day-to-day operations.
- 3.) This research focuses on environmental training, awareness, and communication processes as tools for achieving improved corporate environmental performance.
- 4.) This research can be a management guideline of combination of environmental education and business institution, then useful for later the researchers or interested one.

## 1.8 Organization of the Report

The tentative number of chapter including briefly elaborate what will be discussed in each chapter is going to be proposed like ;

**Chapter I :** Introduction of the study, Objectives, Research questions, Research assumptions, Scope of the study, Agreements of research and Value of the study, and Organization of report

**Chapter II :** Literature review which discusses EMS and ISO 14001 in the context of corporate environmental responsibility

**Chapter III** : The research design of this case study including discussion of validity reliability, and collection of evidence such as interviews with hotel employees

**Chapter IV** : Presents the case study ; a background section, the specific initiatives of system of environmental quality management programme and the evaluation of environmental management plan in training, awareness, and communication programmes including the results of employee interviews

**Chapter V** : Discusses management implications of this research ; to recommend management actions that may overcome implementation challenges associated with implementing an ISO 14001 EMS

**Chapter VI** : Conclusion ; summary and recommendations

## **CHAPTER II**

### **REVIEW OF THE LITERATURE**

#### **2.1 Overview**

There is a shortage of industrial and academic literature that critiques ISO 14001 or provides practical evaluations about the implementation of an EMS. Much of the existing literature on the ISO standard is of a descriptive nature. In their discussion of gap between EMS theory and practice, Kirkland and Thomson (1997, 2) likened the ISO literature to address this problem.

The review begins with an introduction to EMS concepts, corporate environmental awareness and responsibility, defines sustainable development, introduces the concept of a model of prerequisite conditions for improving environmental performance. Environmental law section, as it relates to EMS and environmental training, and this section focuses on the legal defence of reasonable care in environmental offences and highlights the place of environmental training programmes in the jurisprudence. It is followed by two sections which each present a model of EMS development. These segments address due diligence, and total quality management (TQM), respectively. Then the influences that have contributed to the development of EMS and ISO 14001 is provided.

At the same time, the development and theory of ISO 14001, and their relevance to this research are described implementation barriers and pitfalls and presents strategies for overcoming these challenges. The role of training and awareness

programmes is highlighted at this stage of the literature review. Therefore, the applications of environmental training and awareness in the implementation of an EMS are discussed and improved for the hotel.

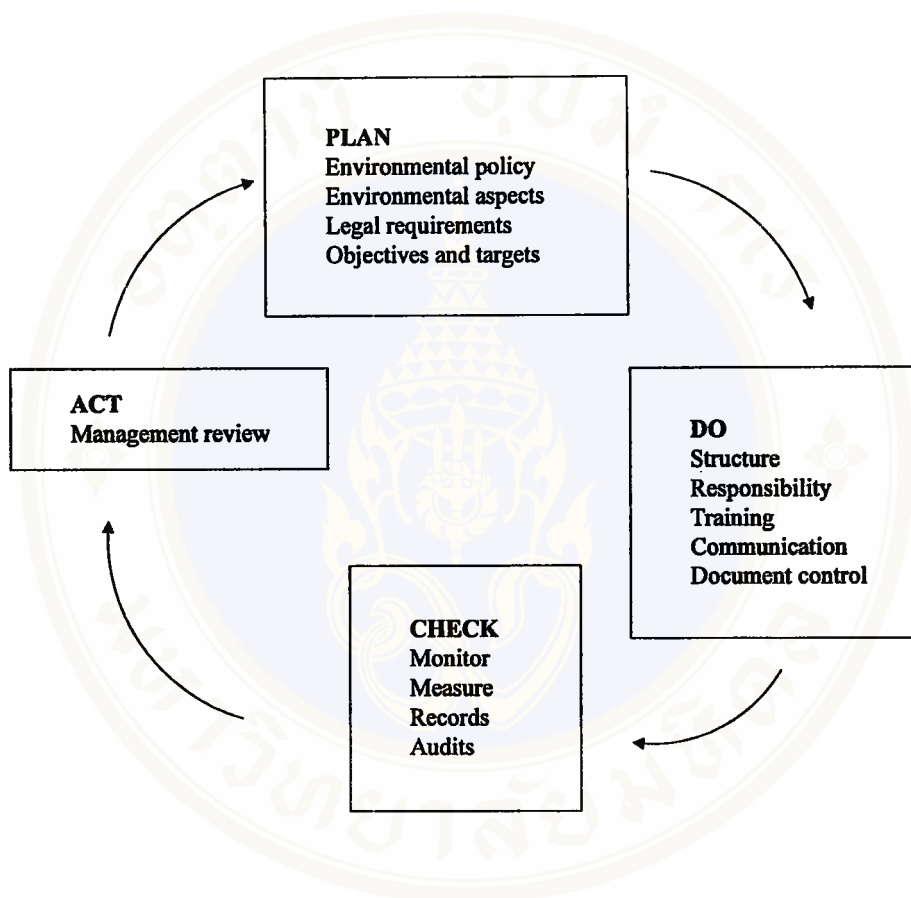
## **2.2 EMS Concepts**

The concept of an EMS and the summarized several different definitions that have been used to describe EMSs. They are :

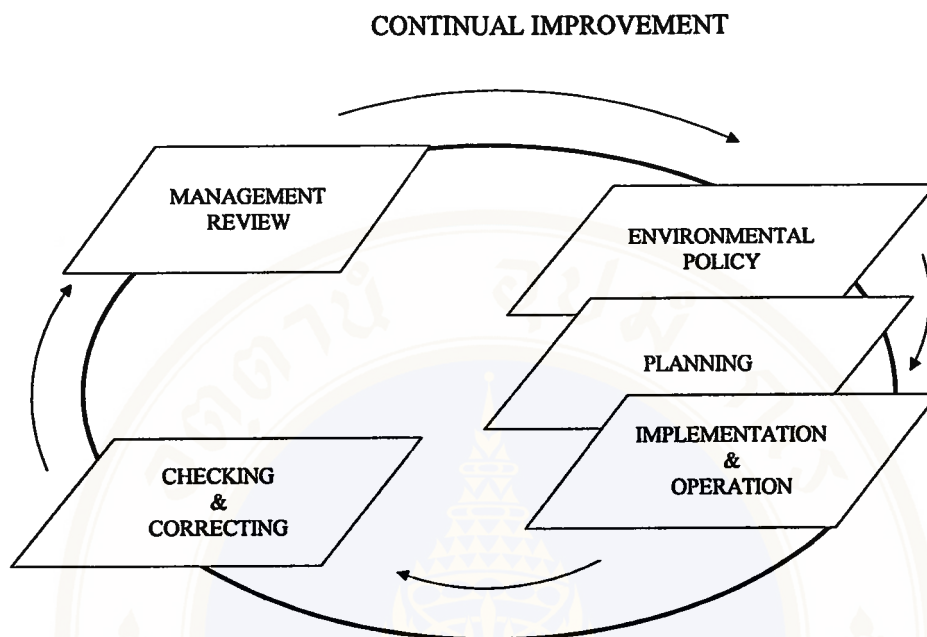
- an organizational rather than a technical approach to environmental management
- a complement to government regulations
- part of the larger management system of an organization
- formally structured and rigorous
- the environmental management of individual organizations
- an ongoing attempt to consistently achieve high standards of environmental performance and to improve upon them

The conceptual framework of an EMS is summarized by managers and consultants. Then the successful management needed to follow a system that involved these principles : plan, organize, command, coordinate, and control(Boiral and Sala, 1998, 61). A better-known model of management systems is called the Plan-Do-Check-Act Cycle developed in the 1930s by Dr. Walter Shewhart and sometimes referred to as the Demming Cycle since its reintroduction in the 1950s (Sasseville et al, 1997, 64, Welford, 1996). The framework of ISO 14001 provides organizations some

guidance, preventing them from feeling they have to reinvent the wheel (Green and LaFontaine, 1996). However, the contents of ISO 14001, presenting the five cores element and all the required components of the specification standard is in table 1.



**Figure 1.** The Plan-Do-Check-Act cycle of management systems.



**Figure 2.** Continual improvement cycle of the 5 core elements of ISO 14001

### 2.3 Corporate Environmental Awareness

Traditional corporate law discourages businesses from protecting the commons or the natural environment. The duty to maximize profits for shareholders implies a duty on corporation to maximize their use of common resources such as air and water. However, the ISO 14001 is a tool that can help companies that have a desire to practice proactive environmental management (Paul, 1996). The extension of environmental awareness and responsibility to all employees is an important step for organizations that wish to become leaders in environmentally sustainable management practices.

**Table 1. Contents of the ISO 14001 specification standard for EMS.**

<p><b>ENVIRONMENTAL POLICY</b></p> <p><b>PLANNING</b></p> <p>Environmental aspects  Legal and other requirements  Objectives and targets  Environmental management programme(s)</p> <p><b>IMPLEMENTATION AND OPERATION</b></p> <p>Structure and responsibility  Training, awareness, and competence  Communication  EMS documentation  Document control  Operational control  Emergency preparedness and response</p> <p><b>CHECKING AND CORRECTIVE ACTION</b></p> <p>Monitoring and measurement  Nonconformance and corrective and preventive action  Records  EMS audit</p> <p><b>MANAGEMENT REVIEW</b></p>
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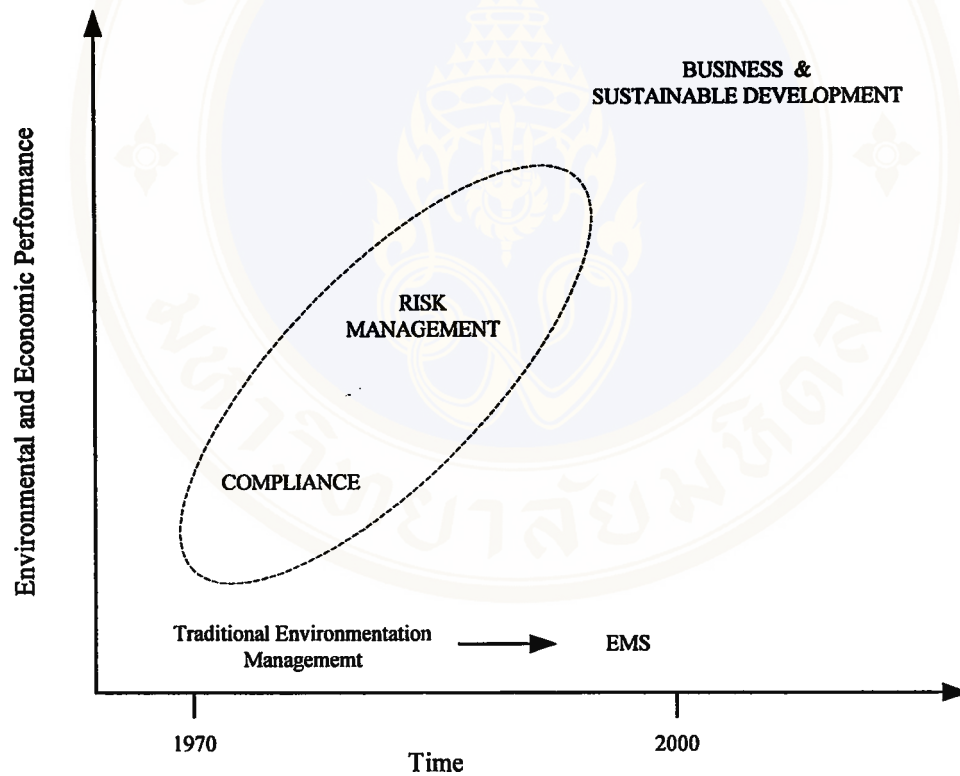
There are internal and external pressures for improving environmental performance, including : consumer demand, cost savings, legislation, and ethics (Welford, 1996). Then business has traditionally reacted to such changes, but there is growing awareness in the corporate community that it is in their best interest to be forward-looking when it comes to environmental issues (Elkington, 1994). Pressures that influence an organization desire to implement an ISO 14001 EMS can be summarized into the following :

- competitive pressures, like access to markets
- increased pressures from stakeholders such as consumers, investors, financial agencies, local communities, and employees
- environmental regulations and the consequent potential for liabilities
- the recognition that environmental management can be implemented in an economically viable manner (Jose, 1996)

Since the 1960s, interest in the environment, or at least the damage that has been caused to it, has been growing in Europe and the United States (Welford, 1996). After that, the early 1970s marked a shift in corporate environmental management from a compliance-based approach to one based on internal policies for reducing environmental risks (Elkington, 1994, Galimberti, 1998). More recently, statutes have extended enforcement opportunities in environmental offences by explicitly lifting the corporate veil. These changes introduced the liability of directors, officers, and employees, and substantially increased fines for environmental offences. In combination, these statutes have pointed the way toward increasing awareness of environmental responsibilities at all levels of corporations (Puri, 1996).

However, some environmental policy analysis suggest that society is shifting from a resource and environmental management paradigm of resource management, characterized by static environmental impact assessments to one of sustainable development that integrates environmental and social issues into business decisions. Then this trend is reflected in the chairperson statement in its new Environmental Management Plan (EMP). He stated that business excellence and environmental stewardship are inseparable and this concept is a fundamental priority for the corporate (Rowan, 1997). Therefore, the evolution of corporate

environmental management can be thought of in terms of environmental and economic performance and sustainability. Environmental management has progressed through several stages over time. Then continuance of this progression depends on the integration of environmental stewardship into day-to-day operations and the commitment of all employees (Boiral and Sala, 1998, Elkington, 1994, Lawrence and Morell, 1995).



**Figure 3.** Business, environmental performance, and sustainability

### **2.3.1 Environmental Performance and Development**

ISO 14001 provides corporations with one way of improving their commitment to environmental issues and hopefully, achieving higher levels of environmental performance (Galimberti, 1998). As intense polluters, corporations have vast potential to resolve ecological problems (Shrivastava, 1995). In contrast to the anti-industry, anti-profit and anti-growth orientation of early environmentalism, it has become increasingly clear that business must play a central role in achieving the goals of sustainable development strategies (Elkington, 1994). As world population and standard of living continue to increase, society must continually improve its environmental performance in order to limit the amount of ecological damage. Green and LaFontaine (1996) presented the following equation to express this relationship :

$$\text{Harm to nature} = (\text{population} \times \text{consumption}) / \text{environmental performance}$$

The ISO 14001 framework may help raise environmental awareness among businesses and aid the shift towards more environmentally sustainable forms of management. The EMSs alone can not solve our environmental problems. Then Welford (1996) said that we must of course remember that corporate environmental management is a necessary but not a sufficient condition for sustainable development. At the same time, companies have evolved through stages of environmental management from grudging compliance and resistant adaptation toward more environmentally sustainable management practices (Elkington, 1994, Fischer and Schot, 1993, Galimberti, 1998, Lawrence and Morell, 1995).

However, several recent surveys suggested that many companies have gone through the first steps of change by putting in place an environmental management function, often together with health and safety. Environmental managers are beginning

to recognize that most companies are struggling with a process problem. All companies are experimenting with ways they can change their structure so that the environmental is a regular part of their decision-making. Today, processes are needed to integrate environmental performance into business operations (Lawrence and Morell, 1995).

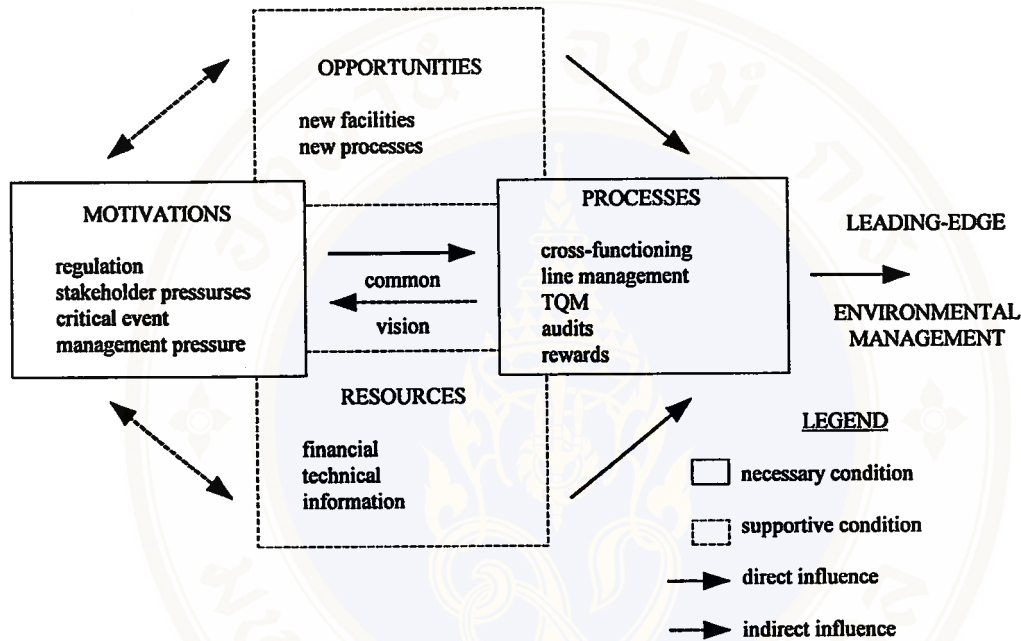
As a result of this need for the extension of environmental awareness and responsibility throughout an organization, environment managers are paying greater attention to new management approaches that focus on employee self-reliance, involvement, and participation (Boiral and Sala, 1998). Training and awareness programmes have an important role to play in introducing behavioural change and decentralized measures for population prevention (Ecotec, 1992).

### **2.3.2 The Leading-edge Environmental Management**

While the developmental stages of companies as they address environmental issues and strive to improve their environmental performance are well-defined, less is known about firms motivations to achieve environmental excellence, or the actual methods they use to achieve it. Lawrence and Morell (1995) developed a model of crucial determinants for leading-edge environmental management. The model which they called the MORP model, consisted of the following four determinants : motivation, opportunity, resources, and processes. These determinants can be assessed by an organization in order to define, design, and deliver its environmental training and awareness programmes.

Motivation was found to be a necessary condition for achieving excellent environmental performance. Companies were motivated by external and internal

pressures. External motivating factors included government regulation, competitive advantage, and stakeholder pressures. Internal motivators were critical events and top management pressure (Lawrence and Morell, 1995).



**Figure 4.** The leading-edge environmental management

These events provided managers with the chance to initiate environmental improvements. Opportunity was not evident at all of the firms in the study and was described as a supportive condition for leading-edge environmental management. Resources were required to implement advanced environmental management practices. Financial and resources have been widely recognized as barriers to implementing a progressive EMS (Kirkland and Thomson, 1997, Lamprecht, 1997, Wilson, 1997). Information about relevant laws, technical information, and

information about the actions of other firms was another key element in promoting leading-edge environmental management (Lawrence and Morell, 1995). Resources like opportunities were a supportive condition for environmental leadership.

Generally, companies regardless of how motivated they were or their level of opportunities or resources, needed internal management processes to achieve environmental excellence. Processes like motivations were found to be a necessary condition for a high level of achievement in environmental performance. Then these processes require a high level of environmental awareness beyond the environment department. The processes also help define the need for environmental training and awareness programmes. In addition, ISO framework may help motivated firms introduce the behavioural change and preventive measures that will allow them to overcome process problems (Boiral and Sala, 1998, Green and LaFontaine, 1996).

## **2.4 Environmental Law**

The principles of environmental law as they relate to the complexity of environmental offences, the implications of specific legal decisions to the development of EMSs, and the influence of environmental regulations on environmental training and awareness programmes. However, a recent survey of the large business companies suggested that legal compliance is the leading driver in the decision of whether or not to implement an EMS. This factor was cited well ahead of improved business performance. It appears that more companies will have a generic, ISO-based EMS in order to reduce environmental liability. Environmental regulation, and hence liability, also have a strong influence on the content and scope of training and awareness programmes in corporate environmental management (Ecotec, 1992).

#### **2.4.1 Environmental Statutes and Offences**

Environmental law is comprised of a body of statutory and common law. Over time, legislative law has enacted environmental statutes that effectively replace common law rights to protect property. Typically, environmental statutes establish a regulatory regime consisting of a system of permits or licenses. Permits set out terms and conditions for operation with which a corporation must comply and they are supported by administrative powers in the regulations that allow for enforcement of the terms and conditions. Environmental statutes are public welfare laws, and offences are considered regulatory or quasicriminal offences (Cameron, 1993). In order to get a conviction, the prosecution needs only to prove that an accused committed the acts that were alleged.

#### **2.4.2 The Liability and Due Diligence**

In liability offences, a defendant may be pardoned if it can be proven on the balance of probabilities, that all reasonable care was taken to prevent acts that constitute an offence. Reasonable care is one defence, including legislative authority, sabotage, plaintiff's consent. The standard of care referred to borrow from the common law concept of a reasonable person in a negligence tort. It could be expected of a reasonable person is known as the defence of due diligence. Due diligence is the single most important defence available to any person (or corporation) charged with most environmental offences.

An EMS that provides environmental training and promotes environmental awareness has been identified in case law as an important way of providing reasonable care. The following cases have been critical in defining the need for training and

awareness programmes. Italicized points identify those elements of existing legal cases which support the need for training and awareness programmes in EMSs.

In 1992, Beta became the first case in Canada to define the standard of care that would apply to a system in the defence of due diligence. The Beta case is also, and not coincidentally a significant case dealing with director and officer liability (Cameron 1993). Beta's president and member of the board of directors, chief executive officer and the general manager of the plant were all charged under the Ontario Water Resources Act with permitting barrels and pails of toxic wastes to deteriorate and leak their contents, causing environmental damage.

Judge Ormston, relying on the standard of care in evidence at a neighbouring industry, determined that a business should have an environmental policy that addresses the prevention of pollution and that there should be a system in place to ensure compliance with the policy. Judge Ormston wrote that one would hope to find remedial and contingency plans for spills, a system of ongoing environmental audit, training programmes, sufficient authority to act and other indices of a proactive environmental policy (Cameron, 1993).

Later case, Courtlands was charged with a chemical spill into the St. Lawrence River and despite having a plant that was so old that spills were almost inevitable, they were able to prove due diligence based on a system of environmental management (Cameron, 1993). This case provided meaningful guidance for what was necessary in an EMS to meet the due diligence standard of all reasonable care. The following elements were deemed significant :

- efforts to train staff
- work at improving environmental management at the plant

- the appointment of a highly experienced environmental manager
- seminars on environmental compliance by an experienced environmental lawyer
- the installation of spill alarms on storage tanks
- preparation of the plan for further environmental improvements and lobbying of the head office for the provision of resources for improvements
- a cooperative relationship with the environment ministry

The result of this case was that the standard of care to prove due diligence appeared to be more attainable than it had previously. Benefits to a company from providing training and awareness programmes, involving environmental experts and communication between departments were defined more clearly.

Also in 1992, Commander Business Furniture was convicted of a discharge offence despite four years of abatement activities and negotiations with the environment agency (Cameron, 1993). However, the Commander case considered many issues relevant to the make up of an EMS, including several that further engrained the importance of training, awareness and competence, such as

- legislative or regulatory compliance
- foreseeability of the offence
- industry standards
- character of the neighbourhood
- efforts to address the problem
- promptness of response and duration of attention to the problem
- matters beyond the control of the defendant

- expected skill level
- preventative systems

The above cases do not make the point that ISO 14001 or any EMS, would necessarily satisfy the standard of all reasonable care. The courts were not looking for EMSs, but for specific management procedures that were in place to prevent the commission of the relevant offending act. Frequently, environmental training and awareness programmes were cited as important parts of those management procedures.

Case law suggests that the use of a recognized EMS will be judged favourably by the courts, especially if the system could be considered to establish a benchmark as an industry standard and includes a relevant training component (Sasseville et al, 1997, 208). The assumption of ISO 14001 proponents is that a properly designed, implemented and maintained EMS will identify the subject risk and ensure that appropriate preventive measures are in place and functioning.

#### **2.4.3 The Requirements of ISO 14001**

ISO 14001 is voluntary standard and it is a conformance standard, not a performance standard. The requirements reviewed here represent basic components of ISO 14001 that Should be included in programmes for environmental training, awareness and communication. At the same time, compliance with relevant legislation is the most fundamental requirement of ISO 14001. The environmental policy must include a commitment to comply with relevant environmental legislation and regulations, and other requirements to which the organization subscribes. Therefore, this requirement makes organizations responsible for being informed on regulatory

issues, including industry standards. Staying informed about environmental regulations requires management processes that maintain high levels of awareness and communication (Tibor and Feldman, 1996).

Under the heading of “ Implementation and operation ” , components of the standard that have legal implications include training and communication. These requirements impose a duty on a company that has committed to ISO 14001 to ensure that employees whose work may affect the environment have the appropriate skills to avoid environmental damage. Employees involved in environmental matters must be made aware of the following four things :

- the importance of conformance with the environmental policy and procedures and with the requirements of the EMS
  - actual or potential impacts of their duties
  - their role and responsibility in abiding by EMS procedures
  - potential consequences of departing from specified operation procedures
- (Voorhees and Woellner, 1998, 37)

Still under the heading of “ Implementation and operation ”, the components addressing documentation and document control are also likely to play a role in any environmental prosecution of a corporation. Therefore, such requirements of an EMS should be thoroughly understood by the organization and all of its employees. The document control component requires a procedure to establish how documents are controlled and the system must allow for the following :

- review and revision as necessary and by approved personnel
- identification of the distribution of all up-to-date documents
- removal of obsolete documents from all points of issue

- the identification of any obsolete documents retained for legal purposes or knowledge preservation (Lamprecht, 1997, 59)

The “ checking and corrective action ” element includes several sections that have legal implications. These sections of ISO 14001 address monitoring and measurement, nonconformance and corrective and preventive action, record keeping, and EMS audits. These procedural requirements demand that an organization track measurable environmental performance targets, investigate nonconformances and implement changes, maintain legible records and assess the effectiveness of the system. The requirements for training and documentation apply to all these procedures.

#### **2.4.4 Disclosure Issues**

Companies trying to improve their environmental performance by implementing ISO 14001 want the ability to keep the information they collect confidential and unobtainable (Sasseville et al, 1997, 211). Most information collected for an ISO 14001 EMS is not intended for the purpose of obtaining legal advice, but for disseminating information within the company. Also, at least some external auditing of an EMS is normally conducted. In many jurisdictions, collecting environmental records, when not done to obtain legal advice or in anticipation of litigation, and when not done confidentially and under the direction of an attorney, may expose an organization to liability. Therefore, disclosure issues may be a disincentive to organizations that are considering environmental training programmes. ISO 14001 has no legal authority and does not require compliance beyond applicable regulations. ISO 14001 procedures are left flexible to account for different scales of operation and different environmental issues.

A significant practical difference, however, is that an organization using ISO 14001 has an explicit commitment that recognizes the importance of environmental issues. Training and awareness programmes that support an organization's environmental policy are critical components of that commitment. The general premise of ISO 14001 with respect to legal issues is that it is a risk management tool that will decrease the overall risk of noncompliance costs to an organization that properly designs, implements and maintains its EMS. This role of an EMS and of training and awareness programmes in particular has been defined in jurisprudence by cases such as Balta (1998).

The due diligence model of EMS evolves as lawyers and consultants interpret legal decisions that involve environmental offences. The concept is that an organization design a system of environmental management that ensures it will be in compliance with applicable environmental regulations. Since the proliferation of environmental regulations in the 1970s, the increase in the severity of fines in the 1980s, the emergence of director and officer liability in the 1990s, and public image problems that result from noncompliance, business has become increasingly concerned with environmental liability (Lawrence and Morell, 1995).

Furthermore, an EMS designed for due diligence should cover aspects of environmental management, like training and document control, that will help a company prepare a defence if it is charged with an environmental offence, such as a spill. The due diligence model has led to training programmes being adopted as an integral part of a complete system of environmental management. The employment of environmental experts, especially as managers or educators, helped organizations to meet the reserved burden of proof and demonstrate an acceptable standard of care. In

essence, the jurisprudence on environmental offences has allowed lawyers, consultants, and environment managers to compile checklists of what organizations should include in the structure of an EMS.

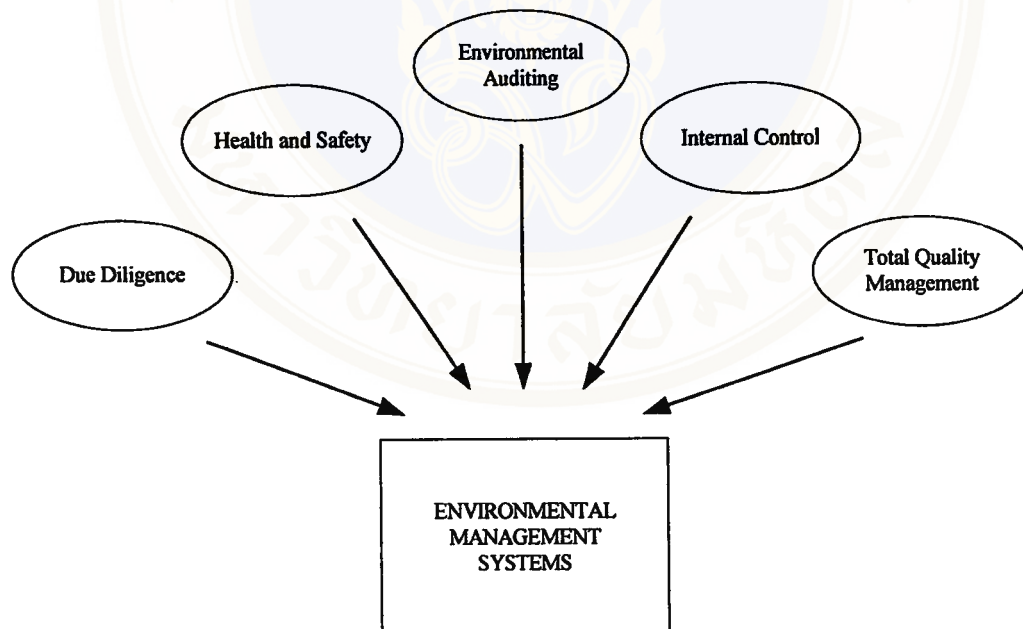
## **2.5 Total Quality Management Model**

The TQM model of EMS differs from the due diligence model in that it is less of a checklist and more of a process. The systems approach to EMS is based on TQM principles. TQM is a management philosophy that is geared to customer satisfaction. An important factor in TQM is that the term “ customer ” is not used in its conventional sense, but is defined more broadly to include judges, regulators, clients, neighbours, lenders, and other stakeholders, including employees and the general public. In environmental literature, the term “ stakeholder ” is more commonly used than “ customer ”, but should also carry the broadest possible definition. It has been suggested that the physical environment itself be considered a customer, or stakeholder.

The TQM model has provided the change management focus of an EMS that includes processes like training and awareness programmes (Schonberger, 1994). Quality is about how well goods and services meet customer expectations ; in total quality environmental management or TQEM, society at large is the stakeholder that defines the needs and expectations of an EMS (Wenmonth, 1994, 15). In this sense, stakeholder satisfaction, including employees is a key to understanding ISO 14001. Applied to environmental training and awareness programmes, employees should know what motivations underlay the environmental procedures that they follow. Also,

employees should have the opportunity to offer input on the system and its processes. Stakeholders should feel their environmental concerns are taken seriously.

Many fields of expertise contributed to the development of ISO 14001 and these different areas will continue to influence its development and use (figure 5). Though the development of ISO 14001 is sometimes credited to either due diligence or TQM, such a distinction is not necessary. The content-oriented due diligence model offers certain features and the process-oriented TQM (market driven) model provides other attributes. Both models support the inclusion of training and awareness programmes in EMS.



**Figure 5.** Influences on the development of EMS

The significance of these factors coming together in the development of EMSs and ISO 14001 is that organizations that are environmentally aware now have a framework to help them integrate environment into their business operations (Green and LaFontaine, 1996). With improved corporate environmental performance, society can begin to reduce the rate of environmental damage that it causes. In order to improve environmental performance, companies need to be motivated by regulations, among other factors, and need internal management processes, such as environmental awareness training (Lawrence and Morell, 1995).

## **2.6 ISO 14001 Standard**

### **2.6.1 Background of ISO 14001**

The ISO 14001 international standard was designed for international use and to be applicable to all types and sizes of organizations and to accommodate diverse geographical, cultural and social conditions. One of the main goals of creating ISO 14001 was to standardize the many national frameworks that were emerging, in order to prevent the introduction of nontariff trade barriers. This issue was addressed at the Uruguay Round of negotiations on the General Agreement of Tariffs and Trade (GATT) in 1986 and at the Rio Earth Summit in 1992 (Boiral and Sala, 1998,58). Understanding the origins and development of ISO 14001 will foster appropriate expectations of an EMS and facilitate a common vision between corporate decision makers, line employees and all stakeholders. An organization can use this understanding about its EMS as a building block for its environmental training and awareness programmes.

Although no standardized framework has existed with respect to hotels, neither EMSs nor training programmes are new phenomena. Indeed, many companies have EMSs in place which may already meet or exceed ISO 14001 (Lamprecht, 1997, 81). ISO 14001 is one example of an EMS framework. It has been preceded by other national and regional standards. The best-known of these include the British Standards Association BS 7750 : 1992, the first EMS standard and the European Union Eco-management and Audit Scheme (EMAS). Produced in 1993, EMAS is arguably the best model from an environmental performance perspective because of its reporting requirements. Reporting requirements contribute to environmental awareness and make organizations more accountable to their stakeholders.

#### **2.6.2 International Organization for Standardization**

The mission of ISO is to improve efficiency and reduce barriers to trade by harmonizing standards for manufacturing, communication, trade and management systems. These voluntary standards are developed by consensus by ISO committees. An ISO advisory committee began assessing the need for a harmonized environmental management standard in June 1991. In January 1993 ISO created Technical Committee 207 (TC 207) to develop the ISO 14000 series of standards. National advisory groups contribute to TC 207, which includes many working groups and subcommittees (Bell, 1997).

Furthermore, the across-the-board interest in establishing environmental principles for business practices indicates that the arena of environmental management is changing. The trend towards corporate environmental responsibility and self-regulation may affect how companies are managed. The changes may also redefine the expectations of the public, industry associations, regulators and employees in terms of

the level of environmental performance they demand of organizations, and therefore change the role of corporations in overall environmental stewardship (Elkington, 1994, Green and LaFontaine, 1996, Shrivastava, 1995). An important component of the environmental principles and standards that are guiding such initiatives is the extension of environmental awareness to all employees of an organization.

## **2.7 Evaluation of EMS**

In evaluations of EMS theory, many benefits have been cited for organizations that implement ISO 14001. While designing and implementing an EMS, the hotel or any other organization should know which benefits it expects to reap from using the standard. Studies have found that the expenditure of resources in an EMS do not always correspond with the objectives that an organization wished to achieve.

The literature reported that understanding and prioritizing the applicable benefits will help an organization achieve a higher level of focus for its EMS. Having this focus, in turn allows an organization to better design its training, awareness and communication programmes for its employees and other stakeholders. The following discussion of ISO 14001 emphasizes issues of debate that may require clarification in an organization's environmental training and awareness programmes.

**Table 2. The benefits of ISO 14001**

- demonstrating standard of care with respect to due diligence
- savings from reduced noncompliance with environmental regulations
- satisfying investors, public and environmental groups
- heightening employee satisfaction and morale
- meeting modern environmental ethics
- facilitating access to capital and insurance
- forestalling external pressure from regulators and public
- streamlining and reducing environmental assessment and audits
- increasing resource productivity (materials savings and waste reduction)
- accessing markets that develop the standard requirement in business relationships
- leveling the playing field with respect to international environmental legislation if widespread implementation occurs

Though the ISO 14000 series has benefited from ISO's experience in introducing the quality management standards known as the ISO 9000 series, there are several concerns about ISO 14001 that may limit its overall acceptance (Lamprecht, 1997, 51). These uncertainties are listed in table 3 as possible limitations to the widespread acceptance of ISO 14001. Knowing potential limitations of the standard will help an organization to develop informed expectations of its EMS and to present the system with confidence to all stakeholders.



**Table 3.** The limitations of ISO 14001

- ensuring consistency among ISO registrars will prove difficult
- interpreting terms such as environmental aspects and environmental aspects of a company “ over which it can be expected to have an influence ”
- revoking of certification based on third party audits may not be reliable
- measuring environmental performance is not done, only conformance to the EMS
- implementing an EMS may have costs that are too high for small and medium-sized enterprises
- allowing for self-declaration may create a wide variation among systems
- creating a nontariff trade barrier through certification is a possibility, especially if the standard becomes mandated rather than voluntary
- varying international rigor of environmental laws and enforcement may lesson the utility of the standard
- increasing liability is a potential through the subpoena of EMS records
- resisting change frequently occurs within organizations and presents barriers to implementation

### **2.7.1 Critiques of ISO 14001**

Benefits and limitations associated with implementing an ISO 14001 EMS can be linked to three overriding themes. These themes relate to the text of ISO 14001, inferences about the role of the standard and real-world reactions to the standard since it was introduced. In many cases, the inferences that ISO 14001 is a vehicle for sustainable development or that it necessarily improves environmental performance are not borne out in the text of the standard (Gleckman, 1996).

Criticisms of ISO 14001, normally in comparison to other standards like EMAS have identified specific points related to the text of the standard itself. The following points represent substantive criticisms of ISO 14001 :

- Many see ISO as a step back from more progressive initiatives that require public disclosure of environmental performance. The ISO standard requires only that an organization's environmental policy be made public (Gleckman, 1996, 4).
- Instead of using the term "continuous improvement" which over a decade of TQM has developed a performance-based meaning ISO opted to use "continual improvement", a new term that has a vague interpretation (Gleckman, 1996, 3).
- "Prevention of pollution" is used in the ISO standard, avoiding the "pollution prevention" language recognized in United States law to include waste management at source (Gleckman, 1996, 3).
- By emphasizing the commitment of top management and not requiring employee input to EMS policies, ISO outlines a top-down, hierarchical

management approach, which contradicts modern management trends

(Boiral and Sala, 1998, 61).

- Giving multinational companies the option of complying with local laws instead of home country standards is seen as regressive given commitments made by several industries and businesses to abide by local laws (Gleckman and Krut, 1997, 48).

### **2.7.2 ISO 14001 in Public Policy**

As discussed with respect to disclosure issues, there are ongoing discussions and pilot projects about how regulators could employ ISO 14001. Several states and provinces are considering “accountable devolution” of regulatory or command and control company. These regulators consider ISO 14001 a holistic approach to achieving environmental protection and helping the economy. The argument for the use of voluntary initiatives in the regulatory regime is that if regulators use ISO 14001 to identify responsible companies, they can focus their limited resources on helping or scrutinizing those companies that have not made a commitment to a comprehensive environmental policy.

However, the argument is that additional government imposed regulations may be avoided if self-regulation can achieve acceptable environmental performance. This argument is presented based on a general assumption that government is doing a satisfactory job of creating environmental policy. A policy network or political structure that gives corporate and labour elites direct access to decision makers to the exclusion of environmental interests, means that the reason corporations exceed government standards may be because the corporations themselves force government to set the bar too low. Political structures, as Welford (1996, 12) and others have

articulated are issues that must be addressed in concert with EMSs for the transition to sustainable development. Critics are skeptical of using ISO 14001 as an indicator of environmental responsibility because there is no direct relationship between ISO 14001 and improved environmental performance (Gleckman, 1996). ISO 14001 is not a performance standard and the text of the standard makes explicit statements to that effect.

However, problems arise when consideration is given to how the standard may be used. One concern about ISO 14001 is that certification to the standard may to an uniformed public, mask the environmental performance of a company. Another concern is that it is a step back from more prescriptive standards, like EMAS, and it may slow the rate of corporate innovation that has been taking place in many industries (Gleckman and Krut, 1997). Most regulators and other observers are now saying they do not foresee a role for ISO 14001 that would lessen the enforcement of environmental regulations. Hence, EMS analysts are recommending that only those companies that can justify certification on the basis of strategic management or cost savings should pursue certification to the standard (Boiral and Sala, 1998; Lewis, 1997). Therefore, EMS training, awareness and communication programmes must be designed with full respect for the law.

### **2.7.3 Accountability and Auditing**

It has been argued that individual industries can design more aggressive standards that suit their environmental issues more precisely and use their resources more efficiently. However, what can be lost when using an industry-designed standard is accountability in the auditing process. Even though EMS audits are not necessarily compliance audits and audit results need not be disclosed, auditing is a strength of the

ISO 14001 standard (Johnson, 1997). External audits are not required if an organization opts for self-declaration. If a company is certified, it must be audited by an accredited third party. To meet this requirement, an EMS must be audited by an accredited registrar to ensure conformity to the elements of ISO 14001.

At the same time, the relationship of ISO 14001 with other standards and the relationships of ISO with other organizations, all help to define what an ISO-based EMS should be and what it can or can not accomplish. The literature identified several benefits, limitations, and critiques of ISO 14001. A minimum degree of familiarity with the development of ISO 14001, its requirements and common points of debate about EMSs will help an organization achieve a clear understanding of its EMS.

In order to implement what it intends to implement and ensure that it reaps the desired benefits, an organization needs to be conscious of exaggerated promises about ISO 14001. Likewise, an organization should be able to defend its EMS from uniformed criticisms. Understanding the broad issues around EMSs and incorporating them into training and awareness programmes allows an organization to maintain a clear understanding among employees of what an ISO 14001 system is and why environmental management is a priority.

## **2.8 Implementation and Strategies**

Examining the known barriers, pitfalls and strategies that have been associated with implementation of ISO 14001 accentuated the role that training and awareness programmes play in EMS. It also identified different levels of environmental awareness and competence to consider. Awareness requirements for senior management compared to those for line employees, and the difference between

awareness training and competence training are examples of different levels of training, awareness and competence. These various levels have different roles in facilitating the implementation of an ISO-compatible EMS.

In table 5, 6, and 7, the items identified as needing attention primarily at the senior management level are issues that involve broad, strategic, corporate decisions. Items listed as aiding with the integration of the environmental policy also depend heavily on the commitment of senior management, but could be addressed more effectively with the participation of all employees.

The employee training and awareness category in these tables lists barriers, pitfalls and strategies that are directly related to understanding environmental issues, awareness about the EMS and the roles and responsibilities of employees. These training and awareness issues relate to comprehension challenges that impede the effective use of an ISO-compatible EMS. Although all of the barriers, pitfalls and strategies have some relation to the ISO 14001 component of training, awareness and competence. Since integration depends on awareness and awareness depends on the commitment of senior management, the previously described classifications of barriers, pitfalls and strategies are somewhat arbitrary. However, the distinction is useful because it identifies and separates narrow fields of potential research.

### **2.8.1 Constraints of EMS**

Constraint of EMS are factors that can prevent an organization from implementing an ISO 14001 EMS. Like the progression of environmental management from ignorance (compliance) to integration (sustainable development), there are stages of development in the introduction of an EMS (Elkington, 1994, 90).

**Table 4. Stages of EMS**

- developing awareness
- obtaining and maintaining commitment
- designing an EMS
- implementing an EMS
- continual improvement

Specific constraint that affect an organization depend on the size of the organization, the company's corporate culture, management styles and individuals involved in the process. Constraint also depend on the stage of EMS development that the organization is at (Kirkland and Thompson, 1997, 6). Based on Kirkland's survey of 32 resource-based companies, a comprehensive list of barriers to EMS implementation is presented in table 5.

**Table 5. Barriers and constraints to EMS implementation****Top management**

- *denial* : organizations may choose to ignore certain issues or solutions, especially if they fall outside of the focus of intention of managers
- *concerns about legal issues* : organizations fear that EMS may raise issues with legal implications such as noncompliance and confidentiality

**Table 5. Barriers and constraints to EMS implementation (continued)**

- *lack of studies, examples and explanations* : implementation studies are difficult to obtain, environment managers often work in isolation from other practitioners
- *reluctance to use external assistance* : organizations may not like the idea of depending on outside expertise and barriers may result from the client consultant relationship

**Integration of environmental policy**

- *lack of recognition of the need for an EMS* : lack of awareness or concern ; short-term vision allows for environmental issues to be dealt with on an as-needed basis
- *perceived cost of an EMS and underestimation of benefits* : EMSs are generally perceived as expensive, costs need be amortized over long time frames and benefits are often underestimated
- *resistance to complexity* : environmental concerns may be seen as unfamiliar and unwelcome management issues
- *inadequate resources* : personnel, money and time requirements may not be recognized or provided
- *multiple stakeholders with conflicting interests* : community groups, environmental organizations, suppliers, contractors, regulators and others may not value environmental issues the same way

**Table 5. Barriers and constraints to EMS implementation (continued)**

- *lack of identification of motivations affecting a company* : failure to recognize the driving forces behind an EMS may result in underestimation of resources or benefits and a poorly-targeted EMS
- *loss of commitment* : the iterative nature of EMS may be construed as a sign of failure ; new approaches may seem like fads or flavors of the month and are subject to regression

**Employee training and awareness (comprehension challenges)**

- *avoidance of the unknown* : distrust of management systems or any new solutions ; the willingness of a firm to use unfamiliar solutions, its absorptive capacity, depends on its previous experience
- *no delegated responsibility or lack of resources or power* : responsibilities may be uncertain or allocated to positions that can not bring about change
- *lack of skills, knowledge and expertise* : those guiding EMS development may not have the necessary skills, especially in small firms where there are inadequate resources to hire a specialist
- *incompatibility with corporate culture* : radical shifts in organization behaviour are difficult to achieve ; prevailing attitudes take time to form and change
- *isolation of environmental issues from other aspects of operations* : to be most effective, EMS policies and practices need to be incorporated into all corporate activities

The above list of barriers and constraint is extensive and is likely to grow as more implementation studies become available. Barriers are not distilled into a small number of key factors because the relationships between the barriers are not well understood and a comprehensive list of barriers is a useful reference for those encountering difficulties in introducing an EMS (Kirkland and Thompson, 1997, 6).

### 2.8.2 Challenges of EMS

Organization face many challenges when implementing an ISO 14001 EMS are in the table 6.

**Table 6. Implementation challenges of EMS**

#### **Top management failures**

- *obtaining the commitment of senior management* : this must be evident early on and made visible ; it is necessary to ensure a steady flow of resources
- *conducting a gap analysis* : identifying deficiencies by comparing the existing system of environmental management to the proposed ISO 14001 format is a valuable start

#### **Failures in the integration of environmental policy**

- *defining realistic commitments* : environmental policies need to be concise and measurable ; not obscure, but honorable
- *identifying all environmental aspects* : the organization is in control of its EMS and should not fear identifying all of its activities, products and services that interact with the environment

**Table 6. Implementation challenges of EMS (continued)**

- *prioritizing improvements* : all identified aspects should be prioritized based on regulations, technology, policy, finances, objectives and targets ; a company is not expected to tackle all of its aspects immediately
- *controlling documents* : documents must be available to relevant individuals, kept up-to-date and obsolete documents must be replaced
- *validating corrective/preventative action* : objective evidence is required to validate the implementation and effectiveness of EMS actions
- *involving interested parties* : organizations should identify interested parties (neighbours, regulators, environmental organizations) early on and address their concerns

**Failures in employee training and awareness (comprehension challenges)**

- *securing employee buy-in* : employees must feel ownership of an EMS and understand the common vision for environmental improvement
- *integrating EMS into business plans* : an EMS is not a documentation exercise about procedural controls, it should be considered in the context of the firm's overall strategy and goals

### 2.8.3 EMS Implementation

Practitioners, researchers and consultants recommended a variety of implementation strategies and EMS best practices that can help an organization address common challenges of implementing ISO 14001. Strategies listed in table 7 were described in various implementation studies and critiques of the ISO standard. The strategies have been grouped and generalized or distilled, so that they do not reflect management imperatives of previously studied industries or businesses.

**Table 7. Strategies for successful EMS implementation**

#### **Top management**

- *conduct a preliminary environmental review* : assess facilities, processes, products, services and stakeholders ; a gap analysis should be conducted to measure existing practices against the new EMS, to help define objectives and targets. A life-cycle approach should be taken for these assessments (Boiral and Sala, 1998 ; Green and LaFontaine, 1996)
- *assess the needs of an organization in terms of its motivating factors* : recognizing what forces are driving an EMS will help keep it focused (Kirkland and Thompson, 1997 ; Lawrence and Morell, 1995)
- *undertake an assessment of risk* : the environmental review, gap analysis, and investigation of drivers should prioritize environmental aspects and define objectives and targets (Green and LaFontaine, 1996)

**Table 7. Strategies for successful EMS implementation (continued)**

- *secure the support of upper management to ensure credibility* : it is suggested that putting an operating executive in charge of environment and assigning it high-level reporting priority are advantageous ; top management must be willing and able to use opportunities for improving environmental performance (Boiral and Sala, 1998 ; Green and LaFontaine, 1996)
- *publish an environmental performance report* : public reports on environment performance, akin to annual financial statements, should include operational data and describe objectives, targets, and results (Hamner, 1996)

**Integration of environmental policy**

- *ensure the EMS fits with corporate culture, history, and habits* : an EMS must be aligned with other business aspects ; an EMS needs to be phased-in according to the corporate culture, priorities and objectives (Kirkland and Thompson, 1997)
- *measure the costs and benefits* : especially the benefits from environmental improvements and measure them over an appropriate timeframe (Kirkland and Thompson, 1997)
- *identify the required resources* : failure to identify required resources or an underestimation of the required resources, causes failure or delay ; it is advantageous to share resources, including information with

**Table 7. Strategies for successful EMS implementation (continued)**

other companies ; it is also advantageous to have cross-functional teams working within an organization (Lawrence and Morell, 1995)

- *focus on pollution prevention* : it is key to understand that prevention costs less than corrective measures and stakeholders are interested in what is being done to prevent pollution, not about what is being done to improve an EMS (Green and LaFontaine, 1996)

**Employee training and awareness (comprehension challenges)**

- *encourage employee acceptance of an EMS* : company personnel should be involved in all stages of the process, including before the decision is made to adopt the system ; responsibilities for line managers are key ( Green and LaFontaine, 1996 ; Kirkland and Thompson, 1997)
- *educate and train employees* : this involves developing a shared vision of environmental management and technical competence, training must include follow-up (Green LaFontaine, 1996 ; Kirkland and Thompson, 1997 ; Lawrence and Morell, 1995)
- *reward environmental performance* : employee compensation or some other form of recognition should be explicitly tied to the meeting of environmental goals ; environmental responsibilities should be included in job descriptions (Kirkland and Thompson, 1997 ; Lawrence and Morell, 1995)

## **2.9 Training, Awareness and Competence**

EMS research needs to focus on tools or strategies that help overcome implementation barriers and pitfalls : training, awareness and communication initiatives are such strategies. The training and awareness requirements of environmental management under the ISO standard often appear as gaps in the programmes of organizations that are updating their EMS to meet ISO 14001 specifications. Training, awareness and competence requirements of ISO 14001 are components of the standard's section on implementation and operation. This component requires that employees involved in environmental matters must be made aware of the following :

- the importance of conformance with the environmental policy and procedures and with the requirements of the EMS
- actual or potential impacts of their work activities
- their roles and responsibilities in abiding by EMS procedures
- potential consequences of departing from specified operation procedures

### **2.9.1 Awareness Training**

The challenges and strategies related to implementing ISO 14001, the training, awareness and competence component addresses the training needs of an organization related to technical issues like targets for the prevention of pollution and the education of employees, to reduce comprehension challenges and develop employee involvement. Though not explicit in ISO 14001, a distinction can be made between awareness training and competence training.

Adequate awareness training is key to developing a common vision and having employees understand their roles and responsibilities. Many of the difficulties in using ISO 14001 effectively, appear to be comprehension challenges, where employees do not know enough about the intentions or significance of an EMS. Employees may also be unaware of policies or their roles in seeing that policies are carried out.

### **2.9.2 Competence Training**

The ISO training, awareness and competence component is required to ensure that the right employees have the knowledge and skills to perform their required tasks without unnecessary harm to the environment. With respect to environmental competence, ISO 14001 states an organization must ensure that “.....all personnel whose work may create a significant impact upon the environment have received appropriate training”. However, technical training should follow awareness training, so that employees first understand the EMS. Overall competence is a combination of knowledge, skills and attitude.

For considering the EMS implementing, a parallel can be drawn between the need for corporate decision makers to be educated about the origins and capabilities of an EMS and environmental training that must be provided for line employees. Top management needs to demonstrate ongoing commitment and leadership. They must ensure a flow of resources and make the EMS part of the corporate culture. The literature consistently referred to the necessity of ongoing commitment from senior management.

Finally, potential programmes in training, awareness and competence can be separated into three categories : awareness training, competence training and senior management education. The literature was found to be lacking on the effect of EMS

knowledge held by directors and senior managers. The ISO 14001's requirement for training, awareness and competence focuses to appropriate training for all personnel whose work may significantly affect the environment.

However, the experience of companies in Thailand which have used Environmental Management System such as PTT Exploration and Production Public Company Limited (PTTEP) and The Thainamthip Company Limited. To implement ISO 14001, PTTEP has integrated the environmental management with health and safety. PTTEP realized that workforce and teamwork commitment was essential if the EMS was to become fully integrated within the company. At the same time, a series of ISO 14000 Awareness training course was given to all employees. The actions needed to ensure compliance were added and cross-referenced to specific procedures and/or work instructions. Then PTTEP used brain storming meetings approach lead to the identification of other opportunities for performance improvement. So PTTEP has used the controllable in the procedures, work instructions for supporting with the environmental policy (Soponkanabhon, 1998).

For the Thainamthip Company Limited, the company has various procedures for environmental management system such as management programmes, management manual, operational control, records, audit and management review (Dechanakorn, 1998). However, the company has to serious about the strategies for ISO 14001 Implementation. They are pollution prevention, resource utilization, legal compliance, commitment to environment, commitment to community, awareness training and communication with all employees in company. Therefore, the experiences gained from the implementation of ISO 14001 at the both companies can be applied to other companies.

## **CHAPTER III**

### **METHODOLOGY**

This research used a case study approach to accomplish its objectives. Using elements of the preceding literature review as a framework, this study focused on environmental awareness training at the River Side Bangkok Hotel. This research represents an effort to aid the transition of EMS theory into environmental management practice. This case study examines training and awareness aspects of the Safety and Environment Department and its Environmental Management Plan (EMP).

#### **3.1 Objectives**

The goals of this research were to :

- identify challenges and strategies associated with the training and awareness components of implementing an ISO-based EMS
- propose the content and structure of environmental training and awareness programmes that the department could use as implementation strategies

Extending environmental awareness and responsibility throughout an organization was identified in the literature as an important step in implementing an integrated EMS. Findings about broad-level barriers to designing or implementing an EMS were reported in this research where they had implications for awareness training. This research was designed to inform the Safety and Environment Department about

training and awareness tools that can help it implement a comprehensive EMS and improve its environmental performance.

### **3.2 Case Study**

The reasons were selected for the following :

- it expressed interest in using ISO 14001 and had undergone an external EMS audit including developing action plans related to meeting the standard
- it had publicly committed to establishing certain environmental programmes and updating its environmental management plan
- training, awareness and communication were identified as weaknesses in the department's previous EMS

The department was preparing a new management programme for air quality and wanted to make that programme compatible with ISO 14001 requirements. In addition, the department was using the ISO 14001 framework to update its EMP. The department was also interested in improving its environmental training and awareness programmes. Then the factors that are unique to the case of the hotel were :

- the hotel was located on central land of Bangkok Metropolitan, therefore especially with respect to air quality regulations
- management of the hotel was relatively isolated from market-driven incentives in terms of environmental management

Furthermore, the hotel wanted to demonstrate environmental leadership in the hotel industry. In its previous, the hotel's top management stated the organization would strive to be a model of environmentally responsible hotel operations and

development and create a center of excellence for environmental management. More recently, management recognized an opportunity to assess the ISO 14001 standard. It decided to use the development of its air quality management programme as a template for the next generation of environmental programmes and the redrafting of its EMP.

However, the Safety and Environment Department of the hotel recognized ISO 14001 as the industry standard for environmental management. In the case of the hotel, corporate values established for customer service aligned well with the concepts of awareness and communication in ISO 14001. Through its balanced scorecard initiatives, which measure financial and nonfinancial progress of the organization, the hotel was actively working to promote and adhere to these balanced values. The hotel was also interested in participating in this study because it desired to develop an effective and credible EMS and to keep pace with the industry-wide interest in ISO 14001.

### **3.3 Research Design**

A case study is an in-dept, multifaceted investigation using qualitative research methods, of a single social phenomenon. A case study is an appropriate research approach when “ how ” and “ why ” questions are involved, when behaviour control is not required and when the research focuses on contemporary events (Yin, 1993, 6).

This research was concerned with how the ISO 14001 standard was being used at the River Side Bangkok Hotel and how the role of training and awareness was included in this undertaking. In this context, there was no need to control the behaviour of the organization or its employees. In fact, it was desirable to evaluate the

design and implementation of environmental management initiatives in a natural, nonexperimental, organizational setting. As such, the research dealt with a contemporary event : the day-to-day management of structuring and operating an ISO-compatible EMS.

This case study evaluated training and awareness programmes associated with the implementation of an EMS based on the ISO 14001 standard. Using Yin's terminology (1993, 56) the use of ISO 14001 represents an intervention or demonstration project. The essence of a demonstration project is to show an innovation operated at or near full-scale in a realistic environment.

The merits of case study research as an evaluation tool are especially high when the phenomenon being investigated is not readily distinguishable from its context, such as other EMSs, organizational structure and environmental priorities or issues (Yin, 1993, 31). Evaluation studies of projects or programmes also warrant the use of case studies when there is complex interaction between a phenomenon and its temporal context, as in determining when an activity started or ended. Because the phenomenon of ISO 14001 at the River Side Bangkok Hotel can be affected by other, concurrent variables, like central regulations and public pressure.

A strength of the case study approach is that it relies on multiple sources of evidence converging on the same set of issues. Another strength of this approach is that its weaknesses are readily perceived. One such weakness stems from recognizing the whole as more than the sum of its parts, this requires theoretical construction of the whole that can not be precisely replicated by other researchers. The role of researchers in a case study may be different from the role or judgments of subsequent researchers. Reliability in such instances is compromised by the idiosyncratic biases

of the investigator, especially when multiple observers or comparative studies are not used and when there is no database of evidence.

Protocols for case study procedures, including the identification of interview respondents and a database of notes and documents were used to increase the reliability of this study. Also the participation of the hotel, an exemplary organization in terms of environmental management provided a form of replication. Validity of observations was aided by using multiple sources of evidence, including personal observation, document analyses and ground-truthing interviews that provided overlapping measures of the same phenomena. At the same time, perspectives of those with no power in determining policy may be different from those in management. In addition, the nature of the department was such that many operating procedures remained at a policy level and involved managers more than it did line employees.

In addition, in terms of number of employees (330) be considered that distinction usually indicates an organization with insufficient resources to hire environmental specialists (Ecotec, 1992, 2, 24). Because hotel is responsible for managing large numbers of employee operations, their situation is more typical of a large organization. Therefore, another potential bias of this study is that the findings may be more applicable to large organizations.

For the evaluation study (Yin, 1993, 56), this research defines questions for subsequent studies and describes the use of training and awareness programmes in the hotel's EMS. The study is intended for theory generation, not statistical generalization (Hartley, 1994, 213 ; Yin, 1993, 5). Recommendations for training, awareness and communication initiatives represent EMS implementation strategies that are worth exploring. However, based on this type of research, no correlation can be made

between certain approaches to employee training about environmental issues and the overall success of an EMS or the environmental performance of an organization. Training and awareness programmes can not be separated from the overall context of numerous, concurrent management directives or operational activities that affect environmental performance at the River Side Bangkok Hotel.

One of this study's focuses is air quality management. Different environmental management programmes at the River Side Bangkok Hotel are at various stages of documentation and development. While the Air Quality Management Programme (AQMP) was documented to reflect ISO standards, it is a relatively new programme ; others, such as noise management and emergency spill response may be at higher developmental stages in terms how their training and awareness processes function.

### **3.4 Collection of Evidence**

On-site data collection for this research occurred in two distinct phases. From 15 June 2002 through 30 June 2002 this researcher was employed in the Environment Department of the hotel. During that time, the department researched air quality issues and developed the hotel's AQMP. After the first phase of this work, on-site data collection continued from 1 July to 15 July 2002. This time was used to update the hotel's overall Environmental Management Plan (EMP).

During the on-site work term, data for this case study were derived from this author's personal observations and a review of relevant documentation. Observations of organizational structure, environmental policies and practices and training and awareness initiatives were obtained via interactions with personnel in the hotel's environment department, as well as through feedback solicited from other hotel

employees. Managers of departments that had been given responsibilities in the AQMP or EMP were forwarded draft documents and asked to give input. In cases where other departments had multiple areas of responsibility, those managers met with management and staff of the environment department. Documentation included internal memoranda ; external consultants' report ; manuals and reports ; industry documents and other material collected by the department, including legal and environmental reports and newsletters.

### **3.4.1 Analysis of Documents**

A second component of data collection for this case study, carried out during 8 July and 31 July 2002, was a secondary analysis of the AQMP , EMP and related documents. Content analyses of these documents were conducted to extract information relevant to environmental awareness training in the hotel's EMS. This research was based on principles identified in the literature review.

In document analyses, the AQMP and EMP were reviewed for relevance to the development and existence of environmental training and awareness initiatives as part of EMS implementation. Document analyses assessed what the department said it would do. The content analyses of these two documents also involved progress analyses, which consisted of reviewing related materials, including action plans and business plans. These progress assessments followed-up on commitments that were identified in the document analyses of the AQMP and EMP. The progress analyses assessed what the hotel can prove it has done. Together, these analyses ensured the content analyses were current with respect to ongoing initiatives at the hotel.

### **3.4.2 Employee Interviews**

The final component of data collection for this research involved interviews with hotel employees. From 1 July to 20 July 2002, The interviews were conducted to confirm, clarify and elaborate on the previous data collection and to resolve differences of interpretation or emphasis (Lawrence and Morell, 1995, 106). These follow-up interviews were used to improve the utility of data on awareness issues in the EMS and to ground-truth the existence of gaps that were identified through the content analyses.

Interviews involved the use of a semistructured questionnaire about employee awareness of corporate policies, individual responsibilities and training programmes. The survey instrument was designed based on the ISO 14001 specifications for training, awareness and competence ; comprehension challenges that were identified in the literature review (table 5, 6 and 7) ; and the content analyses of the AQMP and EMP. These different areas of inquiry identified employee buy-in and awareness of responsibilities as common themes in environmental training and awareness programmes (Seidman, 1998).

Prior to conducting interviews, staff of the environment department who had responsibilities for training and awareness programmes and the person from the Human Resources Department who oversees training were given the opportunity to have input into the design of interview questions. These responses were used to modify the questionnaire, helping to validate interview questions. Employees of environment department were not asked to respond to the general section of the questionnaire because the focus of this study was on the extension of environmental awareness and responsibilities beyond that department.

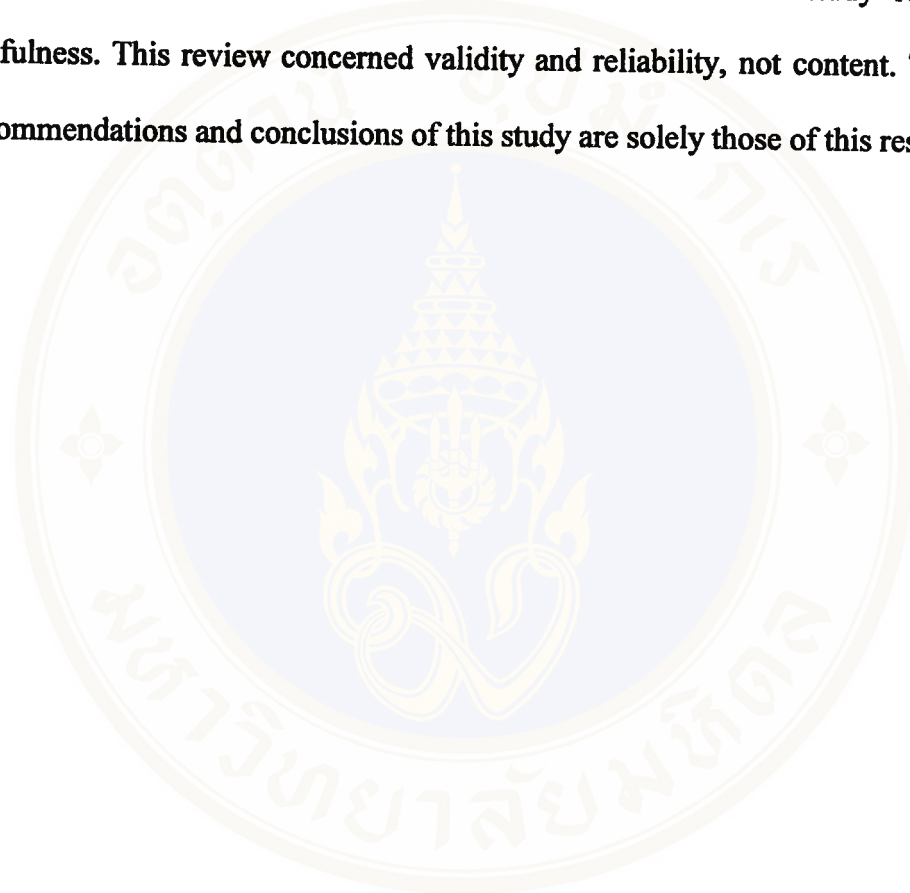
From the population of approximately 330 hotel employees, a total of 17 respondents were interviewed. Of the 17 interviews, four were conducted with members of the environmental department to address specific issues of fact relevant to their job function. Therefore, 13 interviews involved the environmental training and awareness questionnaire. Of these 13 interviews, six respondents were managers of their departments and seven respondents were operational level employees.

Questionnaires were administered only to employees of the hotel because the ISO 14001 requirement for training, awareness and competence is limited to employees. To trace the extension of environmental awareness and responsibility, respondents were selected through the document analyses : any position implicated in the AQMP or EMP as having a role in programme implementation was included on an initial list of respondents. A snowball interviewing technique was employed from this point : respondents from the initial list identified other potential respondents having roles in the AQMP or EMP. Therefore, results of this case study apply directly to training and awareness initiatives of specific programmes of the AQMP and the EMP. Interview findings do not represent statistically valid results in terms of generalizations about the hotel's other environmental management programmes.

A common protocol for follow-up interviews was used to ensure voluntary participation and confidentiality. Respondents were directed to offer simple, concise answers ; many questions required only yes or no responses. All participant's responses were recorded by the interviewer. Interviews lasted between 20 and 50 minutes.

### **3.5 Evaluation of case study**

To validate conclusions of the case study, preliminary reports were provided to the manager of the hotel's environment department. In particular, the manager evaluated the case study to confirm facts and assess the study relevance and usefulness. This review concerned validity and reliability, not content. The findings, recommendations and conclusions of this study are solely those of this researcher.



## CHAPTER IV

### RESULTS OF STUDY

#### 4.1 Organization

The purpose of this case study was to identify challenges and strategies related to training and awareness in the implementation of an ISO-based EMS. More specifically, this study focused on identifying training and awareness strategies that could improve the EMS, and the environmental performance of the organization.

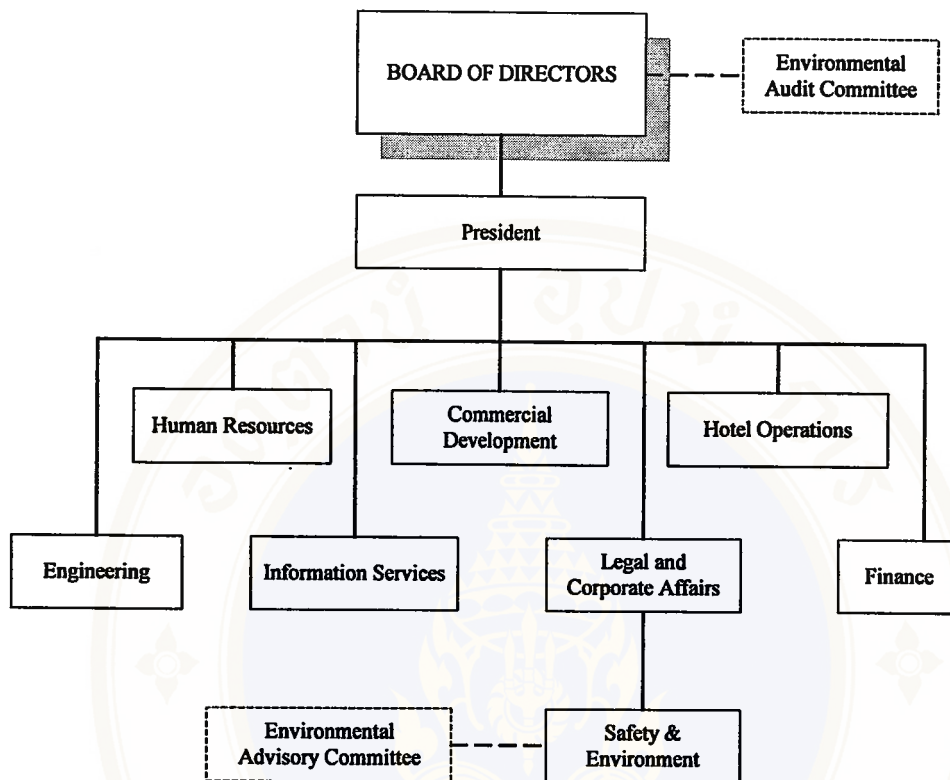
The River Side Bangkok Hotel is a busiest hotel handling about 250,000 persons per year between 1998-2001. Today the economy of the Southeast Asia including Thailand and the popularity of Bangkok as a tourist destination have helped to make The River Side Bangkok Hotel a major hub for travel and seminar. Then The River Side Bangkok Hotel is located on central owned land on Bangkok. Near the hotel are all types of residential, industrial, commercial and recreational land use. The hotel is in the west of Chaophraya River near Krung Thonburi Bridge. Hotel lands occupy approximately 25,000 m<sup>2</sup>, which the ecological and social sensitivities of this area require that the hotel develop and implement sound environmental management practices.

The hotel's mission is to serve our community by building a better hotel for the 21<sup>st</sup> century and by providing superior hotel services to our customers. The values of the hotel include :

- being achievement-driven and proactive
- providing leading-edge service
- engendering loyalty and teamwork
- forstering innovation and creativity
- being responsible and sensitive
- being flexible and eager to change

These values mesh well with establishing progressive environmental training and awareness programmes. Similarly, in its balanced scorecard initiative, the hotel measures its performance according to six key result areas that complement the organization's values. The key result areas measure financial and nonfinancial goals of the organization. By measuring these broad goals, the balanced scorecard helps the hotel achieve its mission. The key result areas reported in the balanced scorecard are creating the very best customer experience (stakeholder satisfaction), generating maximum value in our company, and being known as one of the top hotels in Thailand. The organization, which was recently restructured has seven broad functional groups that they are accountable to the board of directors via the president of the hotel.

Each of these departments is divided into smaller operating units. For example, Hotel Operations includes functions such as room operations, scheduling and parking. Similarly, the Engineering Department includes engineering services as well as maintenance. In total, there are approximately 15 divisions within the structure of the hotel. The Safety and Environment Department is accountable to the vice-president of Legal and Corporate Affairs. The Environment Department is the only division that has an explicit mandate to address environmental concerns.



**Figure 6.** Organizational structure of the hotel

#### 4.1.1 Potential of the Hotel

The potential of the hotel to continue as a leader in environmental management and improve its environmental performance was assessed using the MORP model (figure 5). Examining the hotel according to the determinants of this model (motivation, opportunities, resources and processes) provided a good understanding of the setting of environmental management at hotel and helped to address the validity and reliability of this case study.



## **Motivation**

The hotel had several motivating factors pushing proactive environmental management. Its desire to be proactive, provide leading-edge service and to be sensitive to public concerns is made explicit in its customer service manual. The stated values embrace teamwork, innovation and creativity, sensitivity to stakeholders and flexibility and eagerness to change.

While immediate pressure from top management did not appear to be a factor during this research, the hotel was motivated to improve its environmental management activities. The principles of ISO 14001 in the hotel new EMS fit closely with the organization's overall mission, vision and values. Consequently, the public exerts significant pressure on hotel management to use effective environmental management approaches. The influence of the public on the hotel's programmes is magnified by the frequency with which issues at the hotel are carried by the media.

Regulation was another powerful driver of environmental initiatives at hotel. If hotel can self-regulate with respect to certain issues, especially emissions to air, they may be able to pre-empt intrusive forms of government regulation. At least two occurrences at hotel represent critical events that may have influenced the hotel's approach to environmental management. These events helped the hotel understand the importance of having a credible EMS in place. They also demonstrated the need to install systems that are designed to meet industry standards of reasonable care. Then competitive advantage is a final motivation that supported the potential of the hotel to achieve improved environmental performance. It has subsidiary companies that may gain competitive advantage in their markets.

### **Opportunity**

The establishment of new facilities represents potential for the improvement of environmental performance. The hotel's ten year capital plan includes opening the floating restaurant, upgrading rooms and building a new hotel. All of these developments offer opportunities to advance environmental management initiatives at the hotel. The implementation of new processes or procedures also represents opportunities for improving environmental management practices. By using the writing of AQMP to test the use of the ISO 14001 standard, the hotel was taking advantage of such an opportunity.

### **Resources**

Although the hotel itself is not a large organization, employing approximately 330 people on a full-time, permanent basis, it appeared to have the resources to implement an EMS. Its capital plan provided evidence that the hotel is able to finance EMS initiatives. However, financial resources may become more scarce in the future. Due to a fall in the Asian market in the last half of 1998, causing reduced tourists and as a result of escalating lease payments, the hotel anticipates a drop in revenue.

The hotel's Safety and Environment Department included 9 full-time employees, including 7 environment managers, specialists or analysts. The hotel also used external expertise to guide its environmental projects. All of these indicators suggested that appropriate funding, technical expertise and information were available to support the hotel's environmental management initiatives.

### **Internal processes**

Since its inception in 1992, the hotel has used environmental assessment procedures, including environmental audits, to guide and monitor its operations. In

addition to environmental programmes, the hotel has been using TQM principles and processes to focus its customer service activities. An example of such management technique is the balanced scorecard, which integrates different corporate objectives. The hotel's balanced scorecard includes the following initiatives : financial performance, customers, internal business processes, and learning and innovation. Training on the use of the balanced scorecard is mandatory for all the hotel employees. All departments must link items in their annual business plans and budget requests to at least one area of the balanced scorecard.

The existence of such internal processes is a necessary condition for practicing leading-edge environmental management. In this regard, training and awareness programmes represent techniques that can be used to support the implementation of environmental activities at the hotel. However, the hotel appeared to meet the necessary conditions for developing and implementing effective environmental programmes : motivation and processes. In addition, the hotel had opportunities for improvement and the resources to support such initiatives. As such, the hotel was well-suited to expand its activities in environmental training, awareness and competence, and to improve its environmental performance.

## **4.2 Scope of the Case Study**

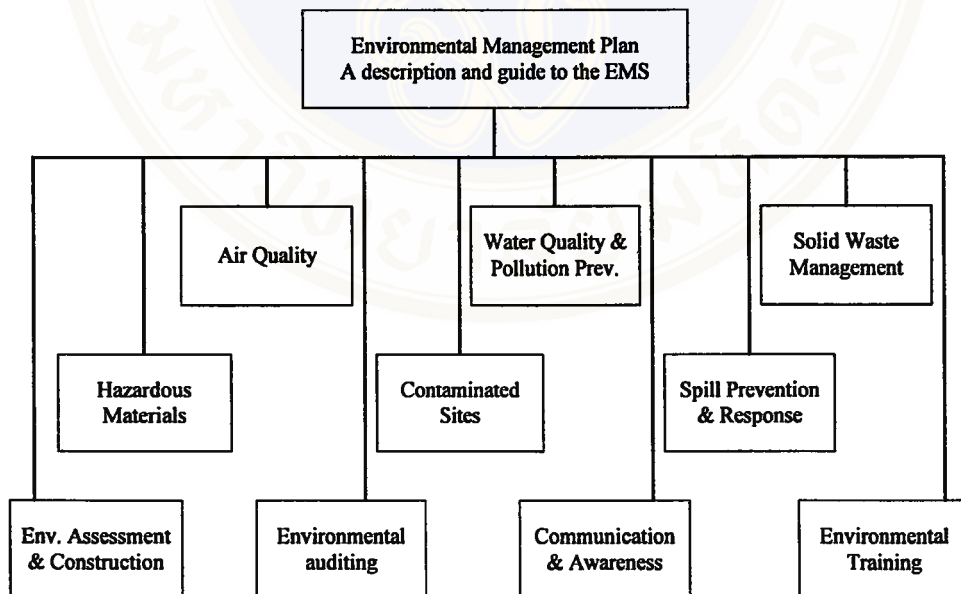
### **4.2.1 Safety and Environment Department**

Although this case study pertained to the entire organization, its eventual management recommendations focus on the Safety and Environment Department. This department has been responsible for designing and implementing environmental programmes at The River Side Bangkok Hotel and has links to all other divisions of

the hotel. Because an EMS should be phased-in and should fit with the overall corporate culture of an organization, this study maintained the approach of the Department playing the central role in delivery of environmental programmes.

#### 4.2.2 Air Quality Management Programme (AQMP)

The Safety and Environment Department has divided the hotel's environmental aspects into 10 programme areas (figure 7). These programmes described in the EMP, make up the hotel's EMS. Air quality has been a growing concern in many large cities and Bangkok is no exception. Air emissions from various medias have begun to receive increased attention from regulators. It is expected that air quality will become a major environmental issue for hotels as road traffic continues to increase.



**Figure 7.** Environmental management programmes

This case study was to investigate the training and awareness challenges and strategies associated with operationalizing a specific management programme within an EMS. The experience of establishing this programme as compatible with the ISO 14001 will allow the hotel, where appropriate, to use it as a template for other programmes. The AQMP at hotel a large, complex programme that involves interaction with many other departments. It is also a recently developed programme. Relative to other programmes, such as solid waste management, the AQMP is quite centralized in the Safety and Environment Department. Although documentation of other programmes, such as noise and spill response may not be formatted to reflect the ISO standard, they may be at more advanced stages of implementation with respect to training and awareness processes. Regardless, principles of the recommendations based on the AQMP should be transferable to other management programmes.

#### **4.2.3 The Environmental Management Plan (EMP)**

The EMP itself was included in this case study for the following reasons :

- it describes the hotel's complete EMS
- the EMP contains the organization's environmental policies, which drive all environmental programmes
- it provides the rationale and general principles of the EMS and its management programmes, the foundation of awareness training and therefore the success of the EMS.

Evaluation of the EMP provided an opportunity to analyze general environmental training and awareness issues that apply to the implementation of the overall EMS.

#### **4.2.4 Awareness Training**

This study focused on environmental awareness training as a strategy for overcoming challenges associated with implementing an ISO-based. Three different types of training and awareness were identified from the literature review : awareness training, competence training and the training of senior management. General awareness training or education is critical to involving the entire organization and integrating environmental goals into day-to-day business practices. Awareness training includes education about the EMS itself and about environmental issues.

Training also has direct ties to many other components and principles of the ISO standard, particularly communication and responsibilities. Therefore, training and awareness serves as a good focal point from which to address the improvement of corporate environmental performance. The ISO requirement for training, awareness and competence necessitates the sharing of environmental knowledge within the organization. Education programmes that support the extension of environmental awareness beyond the Safety and Environment Department are one component that distinguishes an integrated, comprehensive, ISO-compatible EMS from a generic one.

However, the case study results focused principally on the issues and challenges associated with general awareness training. Findings about broad-level barriers to designing or implementing the EMS were reported where they identified issues that should be included in awareness programmes of an EMS. Otherwise, this study's findings concentrated on issues related to the extension of environmental knowledge and responsibility throughout the organization by means of environmental awareness training for employees.

### **4.3 Environmental Management System**

The hotel's EMP described the environmental mission and policies of the hotel was reviewed and approved by the board of directors and guided the actions of employees, managers and leaseholders. The Safety and Environment Department had the lead role in developing environmental processes and programmes, as it does under the new EMP. Then the EMP contained minimal reference to environmental training and awareness. But environmental awareness training was not included as an independent item, either as a process or within environmental programmes. Then two points in the environmental policy statement stated that the hotel would encourage personnel to be aware of and meet their responsibility for environmental protection, providing environmental training where necessary and communicate openly with employees, customers, governments and the public on the environmental aspects of hotel operations and development.

Furthermore, the Safety and Environment Department committed to reviewing the EMP annually and updating the document as required. To obtain an external, independent evaluation of its EMS, the hotel had an EMS audit. The audit was also conducted as a gap analysis. The hotel had its EMS reviewed to determine whether the EMP met requirements and expectations as identified in the ISO 14001. Deficiencies in the old EMS were structured in the audit according to audit observation describing the consultant findings audit standard, pointing out the relevant sections of ISO standards and recommended action, suggesting steps on how to meet the specifications. The EMS was audited against ISO 14001 and a guidance standard. Based on the audit recommendations, the Safety and Environment Department drew up an action plan to guide the revision of its EMS.

The audit made several recommendations related to training and awareness. In particular, the audit identified the need for an overall training plan to ensure that employees are provided with the knowledge and skills to achieve environmental objectives and targets. Examples of audit findings that related to environmental training and awareness in the EMS included :

- Employees are not familiar with the environmental policy
- The hotel goals and objectives document does not include objectives and targets for departments other than environment
- The roles of individuals in achieving environmental objectives and targets are not documented
- The EMS is not fully integrated with the hotel reward and appraisal system and other performance enablers
- Employees are not sufficiently aware of the hotel's commitment to environmental stewardship
- Employee environmental knowledge, skill and training requirements have not been identified
- Employees not familiar with the commitments and requirement contained in the EMP
- Environmental education bulletins have not been regularly published and have not been distributed to all employees

These observations supported the premise that comprehension challenges are significant impediments to the successful implementation of a comprehensive, integrated EMS. Effective, systematic training, awareness and communication strategies that promote an understanding of EMS could eliminate many of the above

shortfalls. This case study used results of the gap analysis as a starting point for its analyses of the hotel's AQMP and EMP.

#### **4.4 The Air Quality Management Programme**

The gap analysis of air quality management that was part of the EMS audit made practical, operational recommendations to the Safety and Environment Department. The audit findings with respect to air quality management noted that the programme objectives for vehicular emissions and ozone-depleting substances were not being achieved. As well, some stated objectives for air quality management were not in accordance with the overall EMS objectives. Audit findings about the EMS made it clear that employees were unaware of the hotel's environmental policies. Unfortunately, the audit made no direct links between the substantive shortcomings of air quality management and the lack of cross-functional, environmental training and awareness programmes. It was recognized, however, that failing to meet specific objectives may be a symptom of broader, systematic problems in the EMS.

Insufficient environmental training, awareness and communication may have contributed to the operational failings identified by the audit. For instance, to effectively control the purchase of items that are not environmentally friendly, purchasing officers needed to be aware of the hotel's environmental policies, and educated about the environmental significance of relevant issues, such as ozone depletion. To develop and implement successful policies, the hotel needed to overcome comprehension challenges by ensuring that mutual understanding existed between departments. Such policy development would have required the clear

designation of responsibilities, interdepartmental communication and education about cross-functional mandates and values.

#### **4.4.1 Design of the AQMP**

The AQMP was the first programme that the hotel prepared and documented with ISO 14001 principles in mind. Findings about the design of this management programme were based primarily on data that were collected during the work team. The premise used to guide the design of the AQMP, as a programme that would meet the specifications of ISO 14001 was to ensure that the programme could easily be audited with reference to the standard. For each programme area of the AQMP, the following four subheadings were used to summarize the information that would be needed to compare the programme to ISO 14001 requirements, such as application and objectives, roles and responsibilities, targets and timelines, and documentation and communication.

However, AQMP management programmes were listed under the following programme areas : monitoring, modeling, mobile sources, area sources, point sources and ozone-depleting substances. At the same time, this approach to addressing components of ISO 14001 does not directly present details of training and awareness initiatives related to each programme area. Such details are included among the different subheadings, depending on the programme. Typically, the departments or stakeholders to which the programme objectives apply are identified first. The Application and objectives section clarifies the scope and purpose of the programme. The Roles and responsibilities section then identifies the departments that will be directly involved in implementing the programme. The majority of the hotel's plan for training and awareness in any given management programme of the AQMP can be

derived most readily from the statement on roles and responsibilities. Links to other management programmes are also mentioned under this subheading. The targets and timelines section applied to measurement issues. Awareness training is closely tied to the communication of environmental programmes. Therefore, the section on documentation and communication often clarifies responsibilities for the programme and, hence, identifies training needs. With respect to training and awareness, Roles and responsibilities and Documentation and communication are the AQMP's most relevant programme descriptions.

While designing the format and the content of the AQMP, several broad-level issues relating to implementing an EMS needed to be resolved. These barriers represented major issues that required the Safety and Environment Department to consult with policy or legal issues or other departments on technical issues. The cross-functional nature of such issues presented potential training and awareness challenges in the implementation of the programme. Four items were identified as broad-level barriers to designing the AQMP : scoping, local by-laws, priority of issues, and cross-functional requirements. Each of these issues presented comprehension challenges and awareness-building initiatives may be needed to reduce potential misunderstandings between departments.

Furthermore, the hotel has a limited amount of control over many of the sources of air emission on all hotel area (internal and external area). The hotel can not directly control the emissions from private vehicles. Then they were the biggest source of air pollutants on hotel area, accounting for approximately 55 % of emissions. Emissions from kitchen and rooms accounted for approximately 30 % of emissions and over 15 % of air pollutants for other emissions. The hotel could have argued that the

transportation decisions of its employees or especially of its customers and the employees of its were beyond the scope of its EMS. However, the view that an institution that has influence over such a concentration of vehicle trips has a moral obligation to minimize air pollution and raise awareness about air quality problems was accepted.

If air quality in Bangkok is not worsen, it needs the cooperation of the hotel and other commuter destinations, such as universities, hospitals, large factories and shopping malls. The way in which an organization like the hotel scopes its air quality programme could send a strong message to the public, as it has the potential to impact many people. The scope of a programme also determines training and awareness needs ; for example, whether or not the AQMP should include a mandate to educate employees and the public.

However, different stakeholders have conflicting ideas about which environmental issues the hotel should address. For example, the public associates the hotel with concerns about emissions from car, but the hotel may be able to have a greater influence on reducing air pollution by targeting emissions from cars, trucks and buses. Similar to the trade-off between air quality and the distribution of noise, customers may be concerned about air quality, yet they continue to demand cheap parking close to the hotel. These conflicting priorities all originate from a desire to achieve stakeholder satisfaction and the conflict create barriers to the successful implementation of environmental programmes. So stakeholders need to be educated about the trade-off involved in environmental management at the hotel. Then the departments may have conflicting mandates need to develop policies with consistent objectives.

From an operational perspective, the challenge of involving other departments in the AQMP was most significant. Virtually all commitments that the Safety and Environment Department made in the management programmes of the AQMP have implications for other departments, such as Parking, Purchasing or Engineering. Of the broad-level barriers, cross-functional requirements are most relevant to training, awareness and the extension of environmental responsibility. Many of the training and awareness challenges encountered in implementing the AQMP relate to cross-functional requirements.

#### **4.4.2 Awareness Training in AQMP**

The review of the AQMP is described as the document analysis. Other documents relating to training and awareness commitments made in the AQMP are referred to in the progress analysis.

##### **4.4.2.1 Document Analysis**

###### **Awareness of responsibilities**

In the AQMP's descriptions, training and awareness requirements for the programme are addressed under "Roles and responsibilities" and "Documents and communication". The descriptions may assign certain responsibilities by department or job function, but types or levels of training needs are not stipulated. These descriptions do not indicate whether any training should be provided in support of the stated responsibilities, or who would conduct such training. For example, if the machine operators are responsible for being familiar with the AQMP's programme requirements, what processes exist to make the operators aware of these policies? It is unclear whether the Safety and Environment Department is obligated to provide awareness training to machine operators or whether supervisors of airfield

maintenance are responsible for training their employees. As personnel whose work activities have the potential to negatively affect the environment, these employees should be receiving structured, documented, environmental training.

It can be interpreted from the EMP that the Safety and Environment Department is responsible for providing specific training to other departments, but this is not reiterated in the AQMP. Interviews supported the role of Environment in providing training to other departments. Managers and operational staff alike frequently identified Environment's role as the experts and preferred that Environment be involved in training efforts. However, one employee had a preference for awareness training from external experts, because they would not have the image of the hotel to protect.

Departmental managers also have a key role in awareness training, despite the preference for training from the Safety and Environment Department. When asked where they would go for information on their environmental responsibilities, line employees often responded that they would go to their supervisors, within their departments and not necessarily to Environment staff. In keeping with this model, it was suggested that the Safety and Environment Department is responsible for initial awareness training, but that other departments had to be responsible for downstream compliance.

### **Management relationships**

Departmental managers tend to be involved with the Safety and Environmental Department on committees or projects or otherwise contribute to environmental policies and targets. If managers had not read the AQMP and felt the hotel does a poor

job of communicating its EMS, said they had a strong link to the Safety and Environment Department in terms of knowing where to get information.

Managers prefer face-to-face interaction with the Safety and Environment Department, though some mentioned the need for written material to bring them up-to-speed and set an agenda for proposed meetings or seminars. Most managers that were interviewed stated that they confer with environment staff on an as-needed basis. On the other hand, operational level employees, even if they were of relevant operating procedures were seldom familiar with the AQMP's environmental objectives. Several line employees responded that they have received no environmental training and indicated they were not aware that the hotel had an EMS.

#### **Job descriptions and training needs**

Many programme areas of the AQMP rely on the manager of air quality for tasks such as data collection, communication and reporting. Presumably, it is also this manager who should identify training needs and see that members of cross-functional teams receive awareness training. However, the hotel does not have a job description for the manager of air quality to reflect such responsibilities. Employees directly involved with the extension of environmental awareness cited this lack of accountability as a major limitation to achieving greater environmental awareness throughout the organization.

Work priorities are driven by the demands of senior management, based on stakeholder concerns. While Environment's employees who were assigned responsibilities related to air quality management were familiar with their roles, following-up on those commitments was not been a priority. Therefore, it is reasonable to assume that other departments and individuals who should be receiving

awareness training about the AQMP may not be getting the support they need. It was agreed that there are targets in the AQMP that have not been met and that it should be Environment's responsibility to follow-up on progress towards these targets.

#### **4.4.2.2 Progress Analysis**

Two of the most significant recommendations of the AQMP are the consideration of creating a position for an employee transportation administrator and transferring the entire responsibility for transportation demand management (TDM). It is unclear who would have the responsibility of identifying training and awareness needs to facilitate the implementation of these recommendations. Environment has not ensured that the appropriate personnel transportation are, in fact, aware of and in agreement with commitments that have been made.

In this researcher's interviews, it was apparent that employees were sometimes unsure of management support for environmental initiatives at hotel. For example, some commissionaires stated they do ask vehicle operators to shut off their engines even though the commissionaires did not know that role has, been given to them in the AQMP. In cases such as this, environmental initiatives could be viewed as environmental rights of the employees, the right to work in clean, nonpolluted areas, rather than responsibilities of their work activity.

Similarly, some employees indicated that financially efficient operations were all that matters to the hotel. For example, a machine operator pointed out that operating procedures to minimize dust may be perceived by management as too costly and time consuming. Employees were unaware of the commitments that exist in the AQMP and EMP to reduce emissions and be sensitive to the needs of the public. Even though

public complaints about dust appear in the hotel's operations log, which report on virtually all activities that take place at the hotel.

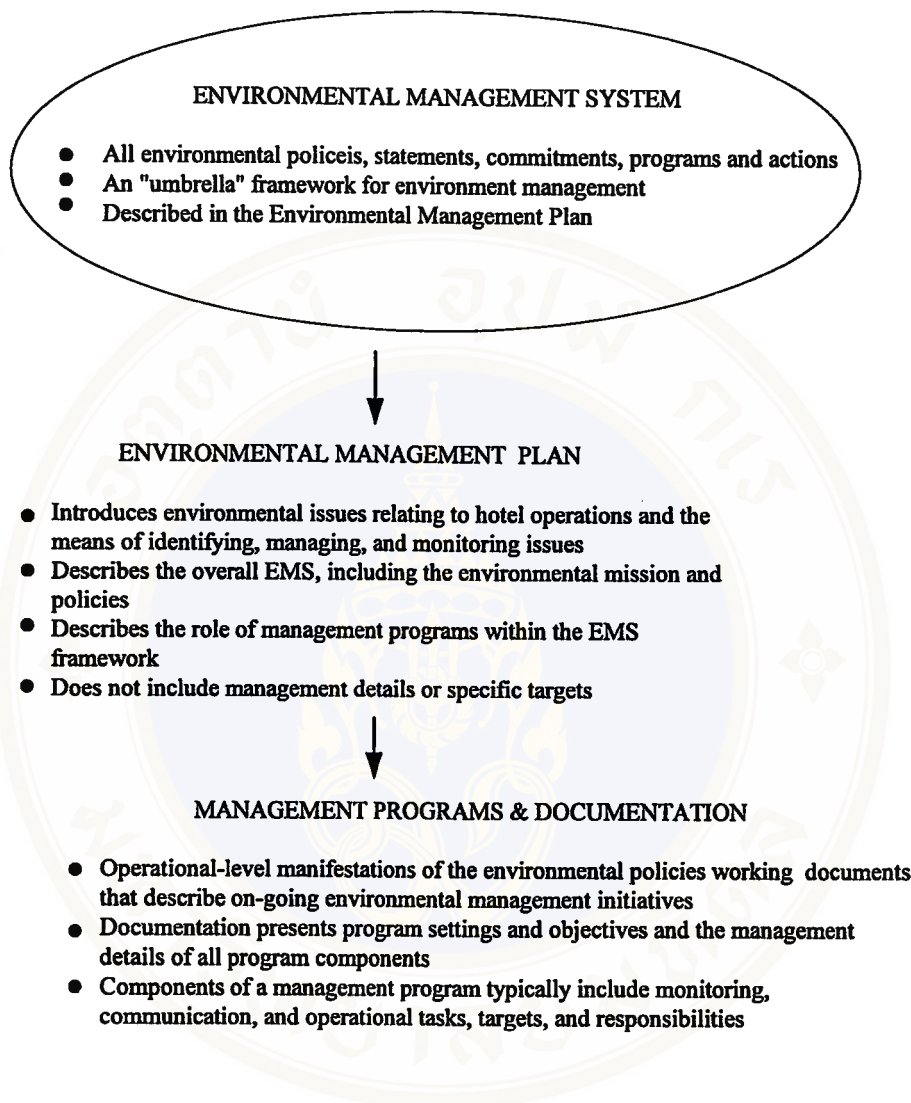
#### **4.5 Analyses of the Environmental Management Plan**

Policies documented in the EMP are the engines that drive the EMS. Objectives in the EMP underlay all of the management programmes of the EMS. The EMP of the Safety and Environment Department describes the contents and structure of the hotel's EMS. The relationship between the EMS, EMP and management programmes is illustrated in figure 8.

The observations of the gap analysis indicated that environmental training and awareness programmes at the hotel were not sufficient to ensure that employees or customers were aware of the hotel's environmental policies. This study of the EMP investigated the role of training and awareness programmes in the EMS and how they could be altered to improve environmental awareness among hotel employees.

##### **4.5.1 Design of the EMP**

The EMP was written as a guidance document, describing the EMS of the hotel. The EMP introduces the environmental management setting at The River Side Bangkok Hotel, explains the EMS and presents the hotel's environmental mission and policy, which include references to training and communication. It then describes components of the EMS, following the exact contents of the ISO 14001 standard (table 1).



**Figure 8.** Conceptual description of the hotel's EMS

Using the ISO 14001 framework to guide the revision of the EMP was intended by the hotel to facilitate EMS auditing and to take advantage of the standard's potential recognizability among stakeholders. In the EMP, each management programme of the EMS is described in terms of " Programme Description " and " Programme Management ". However, environmental training and

awareness is included in the policy statement and is explicitly addressed in two of the EMP's comprehensive management programmes ; Environmental Training and Awareness and Communications. These comprehensive programmes unlike aspect specific ones, such as contaminated sites or air quality, apply to all the EMS management programmes.

Therefore, fewer barriers were identified while designing the format and content of the EMP, in comparison to the AQMP. Because it is more general in nature than a management programme, the EMP involves fewer detailed commitments. Scoping and application were the only issues that presented logistical dilemmas that could create challenges to understanding and implementing an EMS.

The issue of scoping and application is addressed in the EMP with the following statement ; the policy and programmes of the EMS apply to all activities undertaken by hotel staff and , where possible, as indicated in the programme documents to operators, contractors, agents and customers. So the hotel is only responsible for providing environmental training and awareness programmes to its staff, unless training and awareness requirements for others are identified in programme documents. The environmental policy of the hotel includes this commitment about communication :

- communicate openly with employees, customers, governments and the public, maintaining a high profile for environmental issues
- Encourage personnel to be aware of and meet their responsibility for environmental protection, providing training and other support or resources where necessary

Neither of these policy statements changed significantly from those in the EMP. The phrases “ maintaining a high profile for environmental issues ” and “ training and other support or resources where necessary ” are the only modifications affecting training, awareness and competence. To meet its policy statement about training its staff, the hotel has an orientation session for new employees as the foundation of its EMS training programme. The environmental training programme also mentions specific training sessions for other departments and specific environmental issues and training of customers. The specific training for other departments such as waste management or emergency spill response.

Another significant, broad-level decision that was made during the revision of the EMP was the separation of the ISO’s training requirement into two management programmes at the hotel. The former addresses the ISO concept of environmental training and awareness, with an emphasis on technical, competence training. However, communication processes are also crucial to the promotion of environmental awareness among employees. Awareness and communication programmes are critical to overcoming challenges associated with implementing an EMS.

#### **4.5.2 Awareness Training in EMP**

The training initiatives have been carried out within specific management programmes, such as emergency spill response. The document analyses of Environmental Training and Awareness and Communication refer to the EMP’s descriptions of these programmes. Other planning documents relating to these comprehensive training and awareness programmes are assessed in the progress analyses.

#### **4.5.2.1 Environmental Training Programme**

As described in the EMP, the Safety and Environment Department's, management programme for environmental training addresses the following commitments :

- new employee orientation
- professional development training for Environmental staff
- task-specific training for employees from other departments
- topic-specific training for appropriate personnel

The first of these components is an awareness training strategy for employees that is designed specifically to overcome challenges of EMS implementation. Professional development training for staff of the Safety and Environment Department is an important part of the training programme and the EMS. However, it does not necessarily contribute to the extension of environmental awareness throughout the organization. The next two components relate more to technical, competence training that deals with specific environmental issues.

In new employee orientation, a three-day orientation session for new employees has been in operation. This orientation is the hotel's primary method of conducting environmental awareness training. The hotel's Human Resources Department organizes the orientation programme. The new employee orientation programme is designed to ensure timely training by scheduling sessions every two months. The manager of environment is responsible for conducting the orientation session on environmental issues at hotel. Human Resources maintains records of the employees who have received environmental training through the orientation session. The session introduces environmental issues at the River Side Bangkok Hotel and the hotel's

EMS. However, interviews indicated that Environment's orientation session may not serve the purpose of teaching employees about the environmental significance of their individual, job-specific activities. For instance, with respect to individual responsibilities in the AQMP, no new employees have requested job-specific training as a result of the orientation session.

A representative of the Human Resources Department estimated that 75 employees have received environmental awareness training through the orientation session for new employees. This represents approximately 25 percent of the hotel's full-time complement of employees. Human resources reported that no old employees have attended the orientation session. However, some long-time employees would like the opportunity to attend the orientation programme, several people that deliver training sessions as part of the programme indicated they would like to experience the programme themselves.

At the same time, the 13 non-environment employees that were interviewed about their training preferences, 11 (84.6 %) wanted to receive more environmental awareness training. Most of those preferred training to be of a general nature, about the hotel's overall environmental commitments and programmes. Most respondents also preferred that training be conducted in the format of a scheduled seminar. Therefore, that if environment's orientation session for new employees could be expanded to accommodate other employees, it would be well-received. The Safety and Environment Department does not have records of any feedback on its session, but interviews indicated that the session appears to meet the needs of employees for general environmental awareness training.

Although it can be geared to the interests of a particular audience, it provides little in terms of skill training for specific jobs. The EMP states that environmental training specific to work activities of individual employees will be conducted by appropriate Environmental staff, as requested. The fact that specific responsibilities for identifying and providing the necessary environmental training are not assigned in management programme documents may limit the efficiency of the training programme for work-activity issues. Also, the Safety and Environment Department has to ensure that it has adequate resources to identify the needs and conduct the training.

The Human Resources Department is responsible for keeping records of scheduled training that Environment undertakes with other departments. While environmental training programmes are in place for some other management programmes, there are none that relate to air quality management. Responsibility for keeping track of Environment's awareness and communication programmes has recently been assigned to a staff member of Environment Department. However, the content of Environment's records is dominated by review of the hotel's overall, non-environmental, training and development programme for employees. Environment's documentation of awareness programmes does not include records of individuals who have requested specific environmental training.

#### **4.5.2.2 Awareness and Communication Programme**

The awareness and communication programme described in the EMP includes two initiatives :

- providing two-way communication between the hotel and employees by establishing an electronic suggestion box

- raising environmental awareness by publishing environmental education bulletins at least two times per year

These two programmes are critical to the success of the hotel's EMS. Such opportunities to maintain a high profile for environmental issues at The River Side Bangkok Hotel are important in terms of sending a consistent message to employees. These efforts reinforce the hotel's environmental policy commitments. Then the success of these programmes in raising environmental awareness, involving employees and thereby improving environmental performance, will depend on how well the Safety and Environment Department is able to promote and manage the programmes. So its accomplishments related to the environmental awareness of its employees, the EMP outlines other awareness and communication initiatives.

The assessment of the progress of training and awareness commitments indicated that published goals have generally been met. The above-mentioned electronic suggestion box and environmental education bulletins are positive initiatives, and this research indicated that the hotel has followed-up on its commitments to implement these programmes. The Safety and Environment Department recently announced the release of its on-line suggestion box for employees.

The suggestion box, in particular has potential to build the employees feeling of ownership toward the EMS. One employee that was interviewed stated that he/she made suggestions about improving environmental programmes in the past, but received no response and saw no action taken. The suggestions were made to his/her own supervisors and e-mail to staff of the Safety and Environment Department. A lack of response had the effect of teaching the employee that his/her supervisor was not committed to environmental initiatives and that the Safety and Environment

Department was not interested in input from other departments. Now, Environment is actively seeking input and has assigned a staff person to handle suggestions. Suggestions will be directed to the appropriate personnel and are to be answered. Initiatives are under consideration for recognizing progressive, effective suggestions.

Furthermore, Informal meetings about environmental issues give environmental staff an opportunity to promote understanding about their role as a resource for environmental management information. Such meetings also allow Environment to learn about the interests, concerns and needs of other departments. An Environment employee has recently been assigned the responsibility of maintaining a binder of awareness training records. These records include information on dates, attendance, handouts and notes about the meetings. A review of the records indicated that environment has been recording the comments that are brought up at these meetings. The Safety and Environment Department has a goal of having other departments include environmental targets in their business plans. Seven other departments that were represented in the interviews conducted for this research, three departments indicated that they did not have any environmental targets or measures in their business plans. The four departments that responded affirmatively were not asked to specify the type of measure or target they believed to be relevant. At least one of the departments without any environmental targets has significant responsibilities in implementing the AQMP and EMP.

## **4.6 Programme and Planning**

### **4.6.1 Air Quality Management Programme**

The design of the AQMP were found to be both unique to air quality issues, like the application of local by-laws and permitting and more general in nature, such as scoping the programme and facilitating cross-functional teams. In the AQMP document, relationships that involved for cross-functional management of environmental aspects were described in terms of roles and responsibilities. However, interviews confirmed that there are significant shortcomings in the implementation of such interdepartmental requirements.

In practice, the hotel lacked the human resources with respect to time and the internal processes required to identify the training needs and deliver appropriate awareness training. Generally, communication of environmental objectives was effective between managers. Line employees, even if they were aware of relevant operating procedures, did not relate their work activities to objectives of environmental programmes. In some cases, employees that were given explicit roles in the AQMP were not aware that the hotel had any environmental programmes.

However, the awareness programmes did not appear to achieve a high level of impact on employees. Managers were normally familiar with the general contents of relevant environment programmes and had strong links to the Safety and Environmental Department when needed. Typically, employees were aware of the existence of environmental programmes, but unaware of their responsibilities to ensure the success of specific initiatives. Possible reasons for the incomplete extension of environmental awareness and responsibilities included ; the absence of job descriptions, uncertain support from senior or departmental management, time

constraints on the staff of environment, lack of processes for identifying training and awareness needs, lack of processes for delivering recurrent training and awareness seminars or meetings and conflicting mandates of different departments. The hotel's ability to improve its performance in air quality management was restricted by these awareness related implementation challenges.

#### **4.6.2 Environmental Management Plan**

Compared to plans for programme management, the EMP identified few responsibilities that related to specific work activities. For example, the AQMP identified roles of certain employees, whereas the EMP presented policies and described programmes generally. The official policy on training applied only to the hotel's personnel. However, the EMP offered extension of these programmes to other stakeholders, where possible, as indicated in management programmes.

The overall training and development programmes provided a good base for environmental training and awareness initiatives. Recent developments, such as the reconstitution of the committee, negotiations with the union about job descriptions and appraisal systems and the use of the balanced scorecard approach in business planning, all indicated the hotel was following through with its mission to build a better hotel.

The main weakness of the environmental training programme was that Environment's orientation session may not meet its objective of training employees about environmental issues that are specific to their work activities. The awareness and communication programme was able to meet its targets ; the on-line, environmental suggestion box is operating and education bulletins are scheduled for publication. Despite these successes, there are still employees who are unaware of the

hotel's EMS. Analysis of various publications and planning documents indicated that the hotel's commitment to stakeholder satisfaction is supported throughout different programmes and different departments. Less directly, most of the hotel's documents also included commitments to learning, innovation and employee education.

#### **4.7 Interview Results**

This section presents the results of the 13 interviews that were conducted with employees from different departments other than Environment. Interviews are directly relevant to management initiatives of the AQMP and to the Environmental Training and Awareness and Communication programmes of the EMP. Generalizations, especially about other programme areas are not statistically valid conclusions, but identify management principles that may apply to improving training and awareness in the EMS. Results are presented beginning with overall ratings of communication of the EMS. The results progressively address more specific findings about training and awareness requirements that were identified by the employees. Six of the 13 respondents were managers ; seven were operational employees.

Overall, eight of 13 respondents (61.5 %) thought that, in general, employees were aware of the hotel's environmental programmes. The remaining five participants (38.5 %) felt that employees were not aware of the environmental programmes.

Even though five respondents (38.5 %) felt that employees were not aware of the organization's environmental commitments, one manager felt that the hotel does not need to improve its environmental training and awareness programmes. This particular respondent rated the communication of the EMS as satisfactory, not excellent. This

**Table 8.** Frequency and percentage of the respondents were interviewed by items

General Information	Non-environment members (N = 13)		Environment members (N = 4)	
	Yes	%	Yes	%
1. Are you aware that the hotel has an environmental management system ?	13	100.00	4	100.00
2. If so, did you have an opportunity to offer your input ?	13	100.00	4	100.00
3. Are you familiar with the policies and objectives of the EMP and/or AQMP [circle which] ?	13	100.00	4	100.00
4. If so, how did you become aware of the policies/ programme(s) ? .....				
5. Have you read the EMP/AQMP [circle which] ?	12	92.31	4	100.00
6. Do you know where you can obtain a copy of the document(s) ?	13	100.00	3	75.00
7. If so, where [indicate which document] ? .....				
8. Do you believe that, in general, most employees are aware of the hotel's environmental programmes ?	8	61.54	4	100.00
9. Do you know of any specific responsibilities in the document(s) that relate to your job ?	8	61.54	4	100.00
10. If so, how did you become of aware of those responsibilities ? .....				
11. Have you received any environmental training from the hotel ?	13	100.00	4	100.00
12. If so, who conducted the training ? .....				
13. Was it about the hotel/EMS as a whole or specific to your job ?	13	100.00	4	100.00
14. Where would you go/who would you go to if you needed information about any environmental responsibilities that you might have [indicate for which document] ? .....				
15. If you were to receive awareness training about the hotel's environmental policies and programmes, how would you like to receive it ?....				
16. Do feel that, in general, employees need more environmental training ?	13	100.00	2	50.00
17. If so, what kind (general or specific ; seminar or documents) ? .....				

**Table 8.** Frequency and percentage of the respondents were interviewed by items

(continued)

General Information	Non-environment members (N = 13)		Environment members (N = 4)	
	Yes	%	Yes	%
18. Do you feel that you would like to receive more training about the hotel's environmental commitments/programmes ?	10	76.92	4	100.00
19. If so, what kind (general or specific ; seminars or documents) ? .....				
20. Do you feel that you receive more environmental training than you would like ?	0	0.00	0	0.00
21. Do you think the hotel does a (excellent/satisfactory/poor) job of communicating its EMS to its employees ? [circle response]				
22. Do you feel the hotel needs to improve its EMS ?	5	38.46	4	100.00
23. Do you feel the hotel needs to improve its environmental training and awareness programmes ?	0	0.00	4	100.00
24. Do you feel a part of the hotel's EMS ?	13	100.00	4	100.00
25. If so, how have you participated ? .....				
26. Do you have an assigned representative ?	8	61.54	4	100.00
27. Do you know who your departmental contact is for the balanced scorecard ?	13	100.00	4	100.00
28. Has your department included environmental targets or measures in its business plan ?	13	100.00	4	100.00
29. Do you have any suggestions for improving environmental awareness at the hotel ?	9	69.23	2	50.00



combination of responses indicated that environmental commitments, in the opinion of one respondent are not a top priority for the hotel.

Finally, Interviews confirmed that with respect to the AQMP and EMS, there was a need for improved environmental training, awareness and communication programmes. In total, 11 of 13 employees (84.6 %) responded that they would like to receive more training about the hotel's environmental commitments and programmes. Only one respondent (7.7 % of total) a manager felt the hotel does not need to improve the communication of its EMS.

The details about these results are shown in table 8.

#### **4.8 Opinions of Personnel from Open-Ended Questions**

The open-ended questions from questionnaires numbers 4, 7, 10, 12, 14, 15, 17, 19, and 25 requested the respondents to give responses concerning the problems and comments most often faced by non-environment and environment members. The results of those members' responses can be concluded in the following :

a.) Several managers commented that it is unrealistic and impractical to expect anyone to be familiar with the text of entire documents. Managers receive so many procedural manuals that time does not allow them to read all of the AQMP and EMP. Generally, managers felt that most of the text of the complete documents was not relevant to line employees. One manager suggested that environment should hold quarterly, perhaps seasonal, meetings with departments that are potentially involved with environmental compliance issues. Changing environmental regulations were cited as one factor that necessitates recurrent training.

b.) Most respondents indicated that additional environmental training should be general in nature. The general training would address overall environmental policies and commitments and the structure of the EMS. Those departments or employees that identified a need for specific training had concerns about either personal health or legal compliance. A preference for seminar type training came across in the interviews. There was little support for computer-based training and awareness methods.

Therefore, interview results supported the observation that the extension of environmental awareness and responsibility was more complete at a management level than among line employees. Results also indicated that there needed to be stronger links between operating procedures and environmental policies. This supports the observation that communicating operational responsibilities identified in management programmes, such as the AQMP, is a challenge to successful EMS implementation.

## **CHAPTER V**

### **DISCUSSION**

This research identified challenges and strategies associated with the implementation of an ISO-compatible EMS. Specifically, it examined the role of training, awareness and communication initiatives in a case study of the River Side Bangkok Hotel. The analyses of the hotel's Air Quality Management Programme and Environmental Management Plan identified environmental training and awareness processes that may improve the hotel's capacity to reduce its negative environmental effects. Furthermore, this research proposes an awareness-based approach to EMS that frames this study's recommendations.

Recommendations of this study present internal business processes to help the hotel overcome comprehension challenges and improve its environmental performance. Detailed process recommendations for the extension of environmental awareness and responsibility are made with respect to the AQMP, the EMP's Environmental Training Programme and Awareness and Communication Programme.

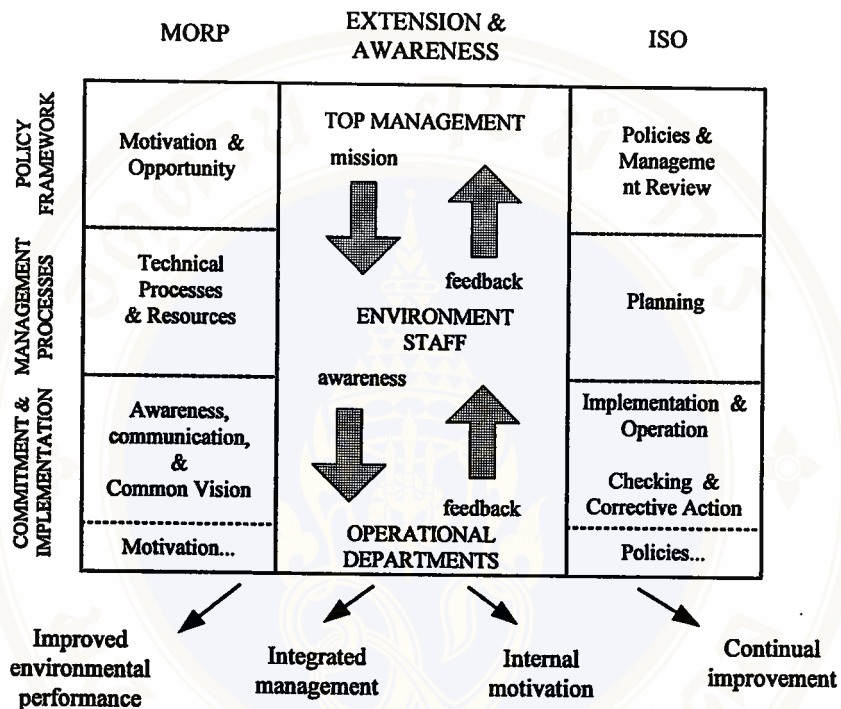
#### **5.1 Awareness-based Management**

The extending environmental awareness and responsibility throughout an organization is one that may help managers conceptualize a new approach to progressive environmental management and environmentally sustainable development. A systems approach based on extending awareness and developing a

common vision may be what is required to help hotel. Such a focus on environmental training, awareness and communication gives new perspective to other frameworks of environmental management. The extension of environmental awareness and responsibility presents EMS as having three levels : an overall, policy framework ; micro-processes of planning, management and communication and on-the-ground commitment and implementation. Successful extension of environmental responsibilities occurs as awareness percolates from top management to operational departments and individual employees. Directors and senior managers must commit to improving the organization's environmental performance by establishing a policy framework for environmental management.

By understanding EMS concepts, the organization's motivations and by knowing their stakeholders, management should be able to form a clear environmental mission. Successful development of a common vision depends on communication of organization's policy, motivations, opportunities, and mission to all employees. Within the context of corporate policies and the environmental mission, the safety and environmental department takes on an environmental planning function. This includes the establishment of the necessary training and communication processes to facilitate the extension of environmental awareness. Such an approach to environmental management highlights an safety and environment department's role as a resource for other departments. Management support and the details of EMS processes should reach operational employees, making their responsibilities for EMS implementation clear. When developing or communicating EMS policies or processes, senior management and the safety and environment department should solicit input from line

employees. Effective planning of resource allocation and process design depends on input from other operational departments.



**Figure 9.** An awareness-based environmental management

The communication of management support and the opportunity for employees to offer feedback on the system, including its effects on the management imperatives of their own departments, should clarify a shared vision of environmental performance and stakeholder satisfaction. The outcome from this model provides two advantages for achieving improved environmental performance. These are a holistic understanding of interdepartmental mandates, facilitating integrated management and internal employee-driven motivation to pursue continual improvement of the EMS. In

this sense, an awareness-based approach to EMS may identify the level of environmental awareness as an indicator of successful EMS implementation. The degree to which environmental awareness has penetrated an organization may be a useful measurement of an organization's sincerity about improving its environmental performance.

A model that concentrates on the extension of environmental awareness (figure 9) can be compared with the components of the MORP model (figure 4) and the ISO framework (figure 2). This conceptualization of environmental management demonstrates that departments other than the safety and environment department usually undertake the operation and maintenance of an EMS. At this operational level, clear management support, a common vision and the opportunity for input appear to be key determinants of environmental performance and continual improvement.

Development of a common vision and opportunities for line employees to give feedback on the EMS framework and its processes are two areas that should receive more attention in EMS. Both these aspects of an awareness-based approach to EMS appear in the operational level of an EMS (figure 9). This suggests that existing EMS frameworks often focus too heavily on the commitment of senior management and not enough on the communication of their support or the development of a shared vision of environmental improvement.

In particular, line personnel who were unaware of environmental policies and questioned the support of senior management's commitment to environmental initiatives provided strong support for such a system. If the hotel is successful in developing Environment's role as a resource for other departments, it has the potential to improve environmental protection. The role of an safety and environment

department can be thought of as liaison between managers and line employees or as a facilitator between policy and action.

However, another advantage of an EMS approach that focuses on common vision and feedback opportunities is that it may offer an organization increased flexibility. The ISO model (figure 2) presents EMS as progressing through a full cycle from policy development to management review before the EMS is revised. An awareness-based approach focuses more on ongoing feedback than on complete cycles and more on the commitment of employees than that of senior management. The emphasis on feedback from operational departments and employees is more dynamic. It allows departments to assess relevant environmental programmes and issues independent of the EMS as a whole.

Therefore, the environmental awareness model, the following management recommendations address the extension of environmental awareness and responsibility and the development of a shared vision for environmental improvement. Recommendations focus on the function of the Safety and Environment Department in implementing training and communication processes that may aid the extension of environmental awareness throughout the hotel.

## **5.2 Air Quality Management Programme**

The challenges that affected the implementation of the AQMP were created by the lack of training, awareness and communication processes and by limited time resources of key employees. Recommendations that address these challenges are presented according to the following divisions : participation of programme managers

and employees ; commitment, resources and processes ; cross-functional requirements and continual improvement.

### **5.2.1 Participation of Programme Managers and Employees**

#### **5.2.1.1 All management programmes of the EMS should have clearly assigned responsibilities and priorities**

The Safety and Environmental Department has been a lack of clarity about the assignment of responsibilities related to environmental training and awareness and communication. Arrangements and initiatives that have recently been established may help in this regard. However, each employee needs clearly defined responsibilities about the requirements for documentation and follow-up action.

#### **5.2.1.2 Responsibilities should be documented in job descriptions**

Employees having environmental responsibilities should be made accountable for those specific functions in job descriptions. In addition, a general commitment to environmental stewardship should be a requirement of hiring and evaluating staff. Management and the union should continue negotiating the use of job descriptions.

#### **5.2.1.3 Employees should be given incentives to participate in EMS and be rewarded for sound environmental performance**

Such initiatives could include acknowledgement awards for progressive suggestions, achievement awards for environmental performance and individual awards for environmental stewardship. Rewards could be in the form of recognition in newsletters could contribute to formal evaluation and compensation systems, or could involve prizes such as gift certificates.

## **5.2.2 Commitment, Resources and Processes**

### **5.2.2.1 Priorities of senior management should match the level of commitment reflected by the programme documents**

Senior management and the board have approved the AQMP. In cases where mandates of different departments are in conflict, senior management may have to explicitly assert its priorities.

### **5.2.2.2 Environment needs to ensure that managers have time to fulfill the duties that have been assigned to them**

The employee responsible for air quality management is overwhelmed by other responsibilities. If progress is not satisfactory in a programme, environment needs to realign its existing human resources, include a request for more personnel in its budget or enlist the help of other departments.

### **5.2.2.3 Programme managers need to develop processes for identifying training needs and providing awareness training**

The responsible managers should assess new programme documents for training and awareness needs. It was unrealistic to expect that line employees would read management programme documents. Programme managers should develop specific presentations and materials for all other departments implicated in a management programme. The manager should deliver awareness training and make educational resource accessible to relevant staff through their managers, departmental libraries or designated contact people.

#### **5.2.2.4 Human resources should identify environmental stewardship as one of the desirable corporate capabilities in the hotel's hiring procedures**

The organization's ability to achieve its environmental mission will be limited if environmental awareness is not considered in the selection of new employees.

### **5.2.3 Cross-functional Requirements**

#### **5.2.3.1 Other departments must explicitly be made aware of their environmental responsibilities**

The current practice of inviting comments from managers of other departments on draft documents is insufficient to ensure lasting commitment to environmental objectives. Where appropriate, the hotel should consider decentralizing some environmental management responsibilities. This could be done within the existing framework ; through heightened, departmental specific environmental training or through shared employees and explicit job descriptions.

#### **5.2.3.2 The Environment Department should develop procedures to ensure that all hotel's departments are provided with environmental awareness training**

Environmental should take advantage of seasonal operations, new projects or new programmes to schedule mandatory awareness training. Environment should host more brainstorming awareness meeting related to upcoming projects.

#### **5.2.3.3 Operational Departments should be responsible for downstream environmental awareness**

Environment staff should be available as the training and technical resource, but departmental managers and supervisors should be responsible for maintaining environmental awareness within their departments. Operational employees should

know that their supervisors expect conformance to environmental policies and objectives. The material of environmental programmes should be accessible to all employees through a departmental library and designated resource people.

**5.2.3.4 Human Resources should be responsible for coordinating and documenting technical training requirements that have been identified by environment or leadership, education and development committee**

If a programme manager identifies technical training needs, that training should be brought to the attention of Human Resources. The Human Resources Department should coordinate and document competence training that is required by environmental management programmes. Then what environment is responsible for recording as an awareness or communication initiative and what human resources should record as a training programme are vague.

**5.2.4 Continual Improvement**

**5.2.4.1 Management programmes should include training and awareness objectives that parallel the policies and objectives of the EMP**

Training, awareness and competence were overlooked as objectives of the AQMP. The management programme document only makes a commitment to communicating air quality conditions. The strong position on training in order documents is undetermined by the absence of similar upfront objectives in management programme documents.

**5.2.4.2 Management programmes should include measurable targets for training and awareness**

The AQMP addresses training requirements under roles and responsibilities and communication and documentation, but setting targets for training would solidify the

commitment. For example, environment manager of air quality will conduct a seminar for the parking division once a year, the training will be supplied by the supervisor of commissionairs with the support of environment department. Data collection is essential to measuring continual improvement. The newness of many of the hotel's training and awareness procedures presents the hotel with the opportunity to establish a baseline for future reference.

#### **5.2.4.3 EMS should concentrate on employee participation in addition to technical competence training**

Open participation from operational levels giving line employees ample opportunities to provide input may foster internal motivation to improve the EMS. Such feedback loops in the EMS will create information exchange that could help maintain a high level of awareness about environmental initiatives.

### **5.3 Environmental Training Programme**

The hotel management programme documents suggest environmental responsibilities that require awareness training, technical training or both. The comprehensive environmental training programme needs to introduce the framework of the EMS and the environmental issues with which the hotel is faced. To improve the environmental training component of its EMS, the hotel should expand its existing programmes, identify new procedures and measure the progress of extending environmental awareness and responsibility.

### **5.3.1 The Orientation for New Employees should be opened up to Other Employees**

As well as new hires to the hotel, any employee who has not received environmental orientation session should be required to attend. For example, employees that change departments or take on new job functions should attend the session. Employees that are given responsibilities in an environmental management programme, especially supervisors who will be responsible for awareness training within their department should also attend environment awareness session.

### **5.3.2 Environment should collect Feedback on Its Presentation to the Employee Orientation Programme**

This programme has the potential to be environmental largest vehicle for the extension of environmental awareness and responsibility to employees. At the end of each presentation the department should survey the participants. Survey results would help environment to ensure a high level of relevance and understanding. The staff person responsible for maintaining records of the environmental training programme should monitor the feedback and suggest amendments to the presentation content or format as required.

### **5.3.3 Environment should discontinue the Claim that Orientation Session provides Employees with an Opportunity to Learn about Environmental Responsibilities Specific to Their Individual Jobs**

Interviews confirmed that employees are not using the orientation programme to learn about their own work activities. The orientation is most effective as an a general

overview of environmental management at the hotel. Other processes are recommended for identifying and delivering specific training requirements.

#### **5.3.4 The Environmental Training Programme should include Training for the Board of Directors and Senior Management**

The commitment of senior management is critical to the success of an EMS, yet the system does not include educational programmes about environmental issues, EMS or ISO 14001 for senior managers. The hotel should consider providing training on public policy issues, EMS auditing and the measurement of environmental benefits. If necessary, the hotel should retain an outside expert for this training. Such training would improve management's ability to prioritize its objectives and guide different departments in integrating their objectives. It would also allow them to make optimal use of ISO 14001 in terms of its applications to due diligence and stakeholder satisfaction. Such knowledge is necessary to account for environmental benefits that the EMS can achieve. In addition, senior managers and board members should be invited to attend environment new employee awareness session, departmental meetings and project specific training and awareness initiatives.

#### **5.3.5 Targets should be set for Environment Orientation Session to Strive for Continual Improvement**

The Safety and Environment Department should set a goal for increasing the number of employees that have attended this session. It should also consider setting goals that are specific to concern job functions.

## **5.4 Awareness and Communication Programme**

The awareness and communication programme appears to be meeting its existing commitments. There are also several recent developments that may improve the organization and delivery of this programme. However, the following recommendations provide additional measures that should be taken to improve implementation of the EMS. The hotel should make optimal use of all initiatives under this programme. All environmental awareness training that employees receive need follow-up strategies to ensure the hotel is developing a common vision and delivering a consistent message. Follow-up should include opportunities for two ways communication. With a clear understanding of its EMS and the participation of all employees, the hotel could make better use of the knowledge and priorities that are held by its employees. A share vision and open line of communication would ensure an efficient expenditure of resources and lasting commitment to environmental objectives.

### **5.4.1 Environment should have an Organized Effort to Ensure the Availability of Resource Materials about Environmental Management at Other Departments.**

Line employees did not always believe that supervisors supported environmental objectives. Therefore, it is important to make relevant environmental policies and commitments available directly to interested employees. Environment person responsible for the awareness and communication programme should maintain a system of document control with resource libraries at all hotel departments.

#### **5.4.2 The Environmental Advisory Committee should be used as an Environmental Awareness Tool.**

Employees from outside the Safety and Environment Department who have roles in the EMS should be invited to selected meeting of the Committee. Conversely, the hotel should invite committee members to internal business functions that are relevant their concerns. Such functions might include a staff meeting with the Safety and Environment Department, an employee orientation session or inviting a committee member to write an article for the education bulletin.

#### **5.4.3 Environment should take an Inventory of Awareness and Communication Tools that Other Departments have in Place.**

Other departments may have effective means of communicating the hotel policies to specific user groups. Environment may be unaware of these processes or not using them to their full potential. Such initiatives should be presented to environment as opportunities and where appropriate listed in programme management documents like the AQMP.

#### **5.4.4 The Hotel should increase the Attention it gives to the Activities of its Customers and Suppliers.**

The Safety and Environment Department should continue to scope its programmes to include all stakeholders. In this regard, it should also ensure a consistent policy between the EMP and its management programmes. One manager was interviewed felt that the hotel needs to provide more direct support to customers and suppliers.

## CHAPTER VI

### CONCLUSION

#### 6.1 Summary of Case Study

This research concerned that an analysis of the hotel motivations, opportunities, resources and processes, the hotel has the potential to improve its environmental performance. In addition, the corporate values and strategic planning processes of the hotel are well-suited to use of an Environmental Management System (EMS). Then the environmental training and awareness programmes have significant potential to help the hotel achieve improved environmental performance. So the focus these places on continual improvement and the measurement of change appears to work well with the objectives the hotel and The Safety and Environment Department. At the same time, it may help the hotel to achieve integration of its environmental objectives into the day-to-day operating procedures of all its departments.

However, the hotel's greatest weakness in implementing EMS is the identification and delivery of training, awareness and communication programmes, including the focus on compliance issues, the focus on personnel in an organization, the lack of a requirement for public reporting and the lack of requirements for two-way communication between managers and line employees. Furthermore, employees especially at an operational level are generally not aware of environmental responsibilities that relate to their work activities. The hotel needs to develop procedures for identifying environmental training needs. It also needs to maintain its

focus on stakeholder satisfaction and address environmental issues of local and regional importance, not only the environmental issues that it is legally required to address.

This research presented an approach to EMS that focuses on environmental awareness and the extension of environmental responsibility. This model identified a common vision of environmental performance standards and opportunities for employee feedback as aspects of traditional EMS frameworks that do not receive sufficient attention. The outcomes of the awareness-based model were improved integration of different management objectives and an internal source of motivation for environmental improvement. Then taking an awareness-based approach to implementing an EMS may allow organizations to manage their environmental affairs in a more dynamic fashion. The degree of environmental awareness was also suggested as a useful indicator of successful EMS implementation and as a measure of an organization's commitment.

In addition, if employees are well-informed about the strengths, weakness, barriers, pitfalls and strategies of EMS, provided they have the opportunity to offer feedback integration of environmental objectives into all areas of the hotel operations may be improved. Staff of the Safety and Environment Department, as resource people to other departments should be clear on what the EMS of the hotel is intended to achieve. Based on interviews, any consolidation of paperwork and reading material that managers face will improve the EMS success.

## **6.2 Recommendation**

The further research in environmental training and awareness programme and corporate environmental responsibility may make significant contributions to minimizing environmental degradation. For the future research that are in the following :

- Combined with a larger sample of case studies, quantitative environmental data that measure change in environmental quality are essential to identifying cause and effect relationships between EMS processes and environmental performance.
- EMS research should focus on training requirements for all levels of management, including directors and senior management and line employees.
- Further research should investigate differences between managers, supervisors, line employees, and different departments with respect to their environmental training needs.

## BIBLIOGRAPHY

- Balta, Wayne. (1998). IBM registration to ISO 14001, Corporate Environmental Affairs. Washington, DC., USA : Island Press.
- Bell Christopher L. (1997). The ISO 14001 Environmental Management Systems Standard. Sheffield, England : Greenleaf Publishing.
- Boiral, Oliver and Sala, Jean-Marie. (1998). Environmental Management : Should industry adopt ISO 14001 ?. Business Horizons, 41, no. 1 (January-February) : 57-64
- (BSI) British Standards Institute. (1992). BS 7750 : Specification for Environmental Management Systems. London, England : British Standard Institute.
- Cameron, Donald R. (1993). The Impact of Environmental Law on Business. Canada : Canada Law Book Inc.
- Dechanakorn, Porn. (1998). Environmental Management System (ISO-14001). Bangkok : Chulalongkorn University.
- \_\_\_\_\_ (1996). Environmental Management Systems – Specification with Guidance for Use. CAN/CSA-ISO 14001-96 (September) Canada : Canadian Standard Association.
- (Ecotec) Ecotec Research and Consulting Ltd. (1992). Education and Training of Personnel Concerned with Environmental Issues Relating to Industry. Dublin, Ireland : European Foundation for the Improvement of Living and Working Conditions.

- Elkington, John. (1994). Towards the Sustainable Corporation : Win-Win-Win Business Strategies for Sustainable Development. California Management Review, 36, no. 2 : 90-100.
- Fischer, K. and Schot, J. (1993). Environmental Strategies for Industry : International Perspectives on Research Needs and Policy Implications. Washington, DC.,USA : Island Press.
- Galimberti, Tom. (1998). Redesigning Environmental Management for the 21<sup>st</sup> Century : The Creation of Performance-Based, Regulatory Systems, Vancouver, BC : GLOBE 98 : 5<sup>th</sup> International Trade Fair and Conference on Developing the Business of the Environmental.
- Gleckman, Harris. (1996). Promising much but delivering little : ISO 14001 should not be part of government regulations or procurement. Business and the Environment, 7, no. 4 (April), ISO 1400 Update : 1-6.
- Gleckman, Harris and Krut, Riva. (1997). Neither International nor Standard : The Limits of ISO 14001 as an Instrument of Global Corporate Environmental Management. In ISO 14001 and Beyond : Environmental Management Systems in the Real World, Sheffield, England : Greenleaf Publishing.
- Green, P.E.J. and LaFontaine, G. (1996). Creating an Effective Environmental Management System. Pulp & Paper Canada, 97, no. 9, 42-44.
- Hamner, Burton. (1996). Pollution Prevention : The Cost-Effective Approach to ISO 14000 Compliance. Business and the Environment, 7, no. 5 (May), ISO 14000 Update :5-8.

- Hartley, Jean F. (1994). Case Studies in Organizational Research. In Qualitative Methods in Organizational Research : A Practical Guide. London : SAGE Publication.
- Johnson, Gregory P. (1997). ISO 14000 Audit Handbook. Florida, USA : Lucie Press.
- Jose, P. D. (1996). Corporate Strategy and the Environment : A Portfolio Approach. Long Range Planning, 29, no. 4 : 462-472.
- Kirkland, Lisa-Henri and Thompson, Dixon. (1997). Challenges in Designing, Implementing and Operating an Environmental Management System. Vancouver, BC, Canada : University of Calgary, Faculty of Environmental Design.
- Lamprecht, James, L. (1997). ISO 14000 : Issues & Implementation Guidelines Standards for Responsible Environmental Management. New York, USA : AMACOM
- Lewis, Darcy. (1997). ISO 14000 : Is Certification Right for Your Company ? . Safety & Health, (March) : 74-78.
- Lawrence, Anne T. and Morell, David. (1995). Leading-Edge Environmental Management : Motivation, Opportunity, Resources, and Processes. In Research in Corporate Social Performance and Policy. Supplement, 1, 99-126.
- Paul W. (1996). Integrated Environmental Management Handbook. Chichester, England : John Wiley & Sons Ltd.
- Porter, Micheal E. and Claas van der Linde. (1995). Green and Competitive Ending the Stalemate. Harvard Business Review, (September-October) : 120-134.
- Puri, Subhash C. (1996). Stepping up to ISO 14000 : Integrating Environmental Quality with ISO 9000 and TQM. Portland, England : OR Productivity Press.

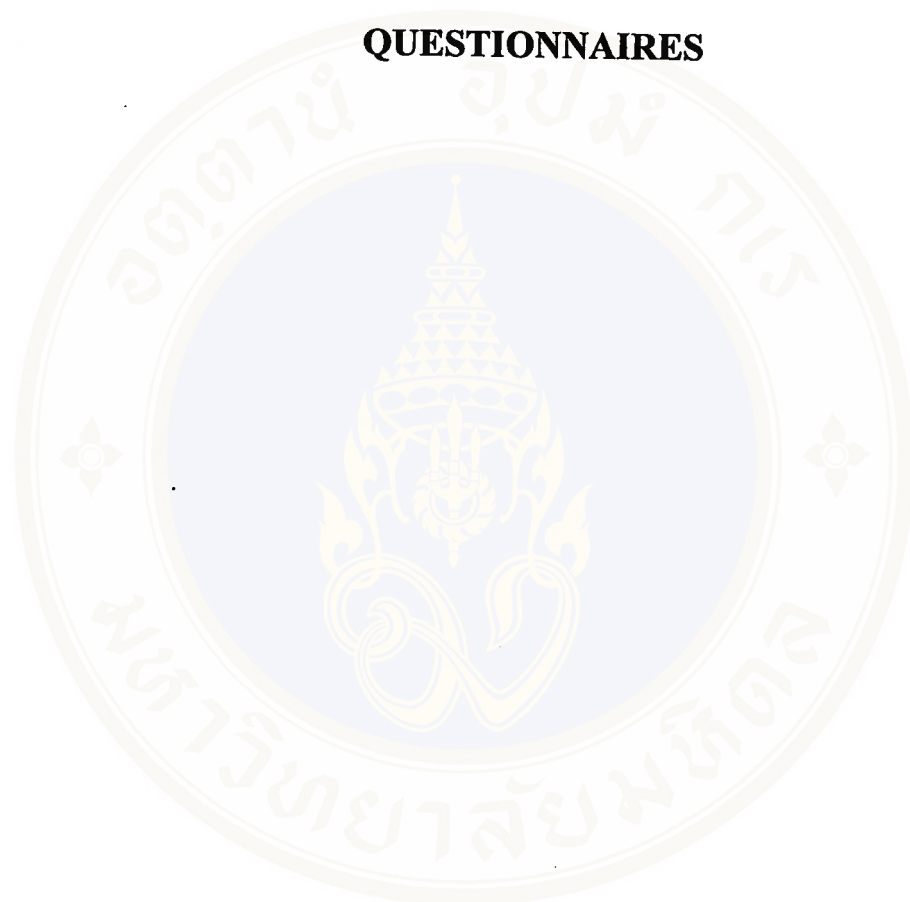
- Rowan, Malcom. (1997). Strengthening ISO 14001 : Personnel Training key to Environmental Systems Infrastructure. Plant, 56, no. 12 : 26.
- Sasseville, Dennis R., Wilson, Gary W. and Lawson, Robert W. (1997). ISO 14000 answer book : Environmental Management for the World Market. New York, USA : John Wiley & Sons Inc.
- Schonberger, Richard J. (1994). Human Resource Management Lessons from a Decade of Total Quality Management and Reengineering. California Management Review, 36, no. 4 : 109-123.
- Seidman, Irving. (1998). Interviewing as Qualitative Research : A Guide for Researchers in Education and the Social Sciences. New York, USA : Teachers College Press.
- Shrivastava, Paul. (1995). The Role of Corporations in Achieving Ecological Sustainability. Acadamy of Management Review, 20, no. 4 : 936-957.
- Soponkanabhon, Teerapon. (1998). Environmental Management System(ISO 14001). Bangkok : Chulalongkorn University.
- Tibor, Tom and Feldman, Ira. (1996). ISO 14000 : A Guide to the New Environmental Management Standards. Chicago, USA : Irwin.
- Voorhees, John and Woellner, Robert A. (1998). International Environmental Risk Management : ISO 14000 and the Systems Approach. Boca Raton, FLA : Lewis Publishers.
- Welford, Richard. (1996). Corporate Environmental Management : Systems and Strategies. London, England : Earthscan.
- Wenmonth, Bryan A.(1994). Quality Systems and Environmental Management. Journal of Environmental Health, 15, no. 4 (November) : 15-20.

- Wilson, Robert C. (1997). Taking Steps to Avoid Implementation Pitfalls, ISO 14000 Update. Pollution Engineering, 29, no. 12 (November) : 43-45.
- Yin, Robert k. (1993). Applications of Case Study Research. Applied Social Science Research Methods Series, 5, CA., USA : SAGE Publications.



## APPENDIX

### QUESTIONNAIRES





5. Have you read the EMP/AQMP [circle which] ? Y N

6. Do you know where you can obtain a copy of the document(s) ? Y N

7. If so, where [indicate which document] ?

.....

.....

8. Do you believe that, in general, most employees are aware of the hotel's environmental programmes ? Y N

9. Do you know of any specific responsibilities in the document(s) that relate to your job ? Y N

10. If so, how did you become of aware of those responsibilities ?

.....

.....

11. Have you received any environmental training from the hotel ? Y N

12. If so, who conducted the training ?

.....

.....

13. Was it about the hotel/EMS as a whole or specific to your job ? Y N

14. Where would you go/who would you go to if you needed information about any environmental responsibilities that you might have [indicate for which document] ?

.....

.....

15. If you were to receive awareness training about the hotel's environmental policies and programmes, how would you like to receive it ?

.....  
.....

16. Do you feel that, in general, employees need more environmental training ? **Y N**

17. If so, what kind (general or specific ; seminar or documents) ?

.....  
.....

18. Do you feel that you would like to receive more training about the hotel's environmental commitments/programmes ? **Y N**

19. If so, what kind (general or specific ; seminars or documents) ?

.....  
.....

20. Do you feel that you receive more environmental training than you would like ? **Y N**

21. Do you think the hotel does a (excellent/satisfactory/poor) job of communicating its EMS to its employees ? [circle response]

22. Do you feel the hotel needs to improve its EMS ? **Y N**

23. Do you feel the hotel needs to improve its environmental training and awareness programmes ? **Y N**

24. Do you feel a part of the hotel's EMS ? **Y N**

25. If so, how have you participated ?

.....  
.....

26. Do you have an assigned representative ? Y N
27. Do you know who your departmental contact is for the balanced scorecard ? Y N
28. Has your department included environmental targets or measures in its business plan ? Y N
29. Do you have any suggestions for improving environmental awareness at the hotel ? Y N

Field notes/comments about respondent/interview :

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