Chapter 3

Environmental Performance of Tourism Development

3.1 Introduction

Tourism is largely an environmentally dependent industry, and the natural and cultural environments of host regions provide one of the major drawcards for tourism (Hall, 1991). As Mathieson and Wall (1982) point:

> In the absence of an attractive environment, there would be little tourism. Ranging from the basic attractions of sun, sea and sand to the undoubted appeal of historic sites and structures, the environment is the foundation of the tourist industry.
> (Mathieson and Wall, 1982:97).

The continuing success of tourism development depends in large measure on a clean, safe and ecologically sustainable environment. Tourism has impacts on the integrity and quality of the environment. The key to sustainable tourism development is the ability to understand the interaction between tourism development and the environment including tourism impacts on the environment which influence tourism's long term prosperity. In recent years, there has been substantial growth in public attention being given to the environmental performance of tourism. The industry is also facing challenges to improve their environmental performance and to develop approaches to identifying and managing the interactions between tourism and environment. Tourism can and should contribute more effectively to the improvement of environmental performance. With increasingly complex regulatory requirements and public awareness, the tourism industry is recognising the need to improve its

environmental performance in order to maintain a competitive edge as well as community trust. Accordingly, the tourism industry is developing systems for measuring environmental performance and programs against established goals, objectives and regulatory requirements. However, there is very little by way of published work on characteristic systems for environmental performance and measurement. This chapter presents a brief analysis of the relationship between tourism and the environment. It addresses problems in the present studies, then discusses the environmental performance of tourism development. The emphasis is given to the monitoring and evaluation of environmental performance which includes the development of suitable performance indicators in the context of sustainable tourism development.

3.2 Relationship between Tourism and Environment

Tourism interacts with the environment in the framework of a two-way process (Briassoulis and Straaten, 1992). On the one hand, environmental resources provide the natural and/or human-made setting for the tourist to enjoy, live in and relax. Tourism is also the source of demand for significant amounts of energy and consumes many goods and services. On the other hand, tourists and their activities, affect the quality of environmental resources. Successful tourism development depends in many important ways on the proper handling of the interaction between tourism and the environment. Many forms of tourism are seen as contributing to environmental degradation, and tending to be self-destructive. Erosion of the resource base, impairment of the built environment, and disruption of the social fabric of host

communities are common indicators of undesirable impacts. Of course, tourism also has potential to bring about significant enhancement of the environment with proper planning and management (Pigram, 1980). This potential generally received less consideration until 1970s when it was highlighted by Budowski (1976), and later emphasised by Pigram (1980), Boyer (1984) and Romeril (1985).

Generally, the tourism-environment relationship includes the following three main aspects:

- Many features of the physical environment are attractions for tourists,
- Tourist facilities and infrastructure constitute one aspect of the built environment,
- Tourism development and tourist use of an area generate environmental impacts. (Inskeep, 1991:339).

Research about the tourism-environment relationship has evolved through several phases over the last two decades (Dowling, 1992). One of the most interesting perspectives was proposed by Budowski (1976), who suggested that three basic relationships can occur: conflict, coexistence and symbiosis. There are described in **Table 3.1**.

Table 3.1: Tourism-Environment Relationship

Conflict	Tourism and the environment are in conflict when tourism has detrimental impact on the environment
Coexistence	Tourism and environmental conservation can exist in a situation where the two have relatively little contact, because either both sets of supporters remain in isolation or there is a lack of development or administrative barriers. However, this situation 'rarely remains static, particularly as an increase of tourism is apt to induce substantial changes' (Budowski: 1976: 27).
Symbiosis	Tourism and environmental conservation can be mutually supportive and beneficial when they are organised to ensure that tourism benefits and the environment experiences improvements in management practices. This relationship may have economic advantages and contribute to the quality of life in host communities.

(Source: Hall, 1991:160)

Hall (1991) argued that all these three relationships exist simultaneously depending on location and issue. The view of conflict is the most common form of relationship and is endorsed by Mathieson and Wall (1982). Gradually, the view of a symbiosis relationship has emerged which claims that tourism, far from conflicting with environmental conservation, can be credited with enhancing concern and appreciation for the environment (Gunn, 1978). Over recent years, the relationship between tourism and environment has increasingly been viewed as one with considerable potential for either conflict or symbiosis. This new orientation to the tourism-environment relationship is referred to as integration (Dowling, 1990), in which both the

environment and tourism are working as a unified whole, and environmentally appropriate tourism opportunities are advanced. This view states that tourism activities and developments are fostered if they are environmentally compatible, minimise adverse impacts and maximise benefit. This is the essence of sustainable tourism development. It may be achieved by the approach of environmentally appropriate tourism planning (Pigram, 1980; Murphy, 1985; Gunn, 1988; Inskeep, 1991). This approach was endorsed in a special issue of the *Annals of Tourism Research (1987)* which centred on Tourism and the Physical Environment. It stated that the environment and tourism must be integrated in order to maintain environmental integrity and successful tourism development (Farrell and McLellan, 1987).

However, the integration of tourism and the environment requires interdisciplinary and multidisciplinary links between two components which are often without unity (Pigram, 1980). This lack of integration of research is further highlighted in Singh's book *Tourism Environment* (1992), who asserts that the gap in tourism - environment relationship research widens with time and must be bridged for environmentally sound development of tourism. The book is an attempt to redress this situation, and reflects a multidisciplinary approach to the research.

Overall, the relationship between tourism and the environment is both complex and dynamic (Shaw and Williams, 1992). Evidence of such complexities is partly provided by Budowski (1976) who proposed the above three different forms of the tourism-environment relationship. Although Budowski's view provides a useful

starting point, it ignores the broader setting of these relationships. More recently, the integration approach for studying the relationship has been advanced. Such an approach will be attained only through environmentally appropriate tourism management.

3.3 Evaluation of the Environmental Performance of Tourism Development

3.3.1 Introduction

In recent years, the community is becoming more aware and concerned about environmental issues. In Australia, a survey (Australian Manufacturing Council, 1992) revealed that more than 85 per cent of respondents were either "extremely concerned" or "concerned" about environment. It also indicated that more than 80 per cent of respondents agree with the statement that "industry is not doing enough to protect the environment". Governments in Australia have been responding in a concerted way to growing community demands for increased protection of the environment. This response has taken the form of environmental regulation and enforcement and has focused on command and control activities.

Tourism, like other industries, has been experiencing increased public scrutiny over environmental issues. There has also been a rapid growth in the nature and number of environmental regulations and standards with which tourism must comply. The regulatory environment has become one of ever-tightening regulations being applied to a wide range of activities. Under this situation, tourism has sought to improve its environmental performance and gain the benefits associated with environmental

responsibility. This is evident in the development of the Australian Tourism Industry Association's *Code of Environmental Practice* (Australian Tourist Industry Association, 1990). ATIA outlines the dangers in ignoring the use of sound environmental practices in planning and developing tourist facilities. These include the deterioration of natural features, increasing public opposition to development, and the costs of restoration. These factors, in conjunction with growing environmental awareness, have led the trend away from environmentally destructive tourism and a move towards green or sustainable tourism (Goodall, 1992).

Evaluation provides a means of measuring environmental performance in terms of both effectiveness and efficiency. It is fundamental to sound environmental management and has a key role to play in the implementation of environmental auditing program.

3.3.2 Environmental Impacts of Tourism Development

When attempting to develop a method for evaluating the environmental performance of tourism, consideration must be given to existing research. Most of the literature on the environmental performance of tourism was found in similar research on the environmental impacts of tourism. While many early studies addressed impact problems from a narrow, site-specific , single discipline point of view, most recent studies have taken a wider perspective. The earliest attention given to environmental impacts of tourism was directed basically to impacts of leisure activities and especially outdoor recreation (Wall and Wright, 1977). This study did not make explicit reference to the activities of tourists but it can be assumed that tourists were

responsible, at least in part, for many of the environmental impacts which were documented. Afterwards, more studies concerning the environmental impacts of tourism appeared (Tangi, 1977; Cohen, 1978; OECD, 1980; Mathieson and Wall, 1982; Dunkel, 1984; Pearce, 1985; Edington and Edington, 1986; Farrell and McLellan, 1987; Romeril, 1989; Buckley and Pannell, 1990). Generally, most of these studies have concentrated on particular areas experiencing some forms of adverse environmental impacts due to tourism development, such as the Carribean islands, the Mediterranean coasts, ski resorts, etc. In Australia, much of the research has focused on the coastal area, or on locations such as the Great Barrier Reef, Uluru and Kakadu National Park. Environmental impacts of tourism have also been approached from other directions such as the biological and ecological, the behavioural, planning and design, and policy directions (Briassoulis and Straaten, 1992). However, few longitudinal studies exist by which the long-term impacts of visitation can be assessed (Hall, 1992). In addition, several significant methodological problems have been identified as requiring urgent attention (Mathieson and Wall, 1982; Brassoulis and Straaten, 1992):

1. Difficulties of distinguishing between changes induced by tourism and those induced by other activities;
2. Lack of reliable and accurate empirical evidence for measuring and explaining the impacts observed;
3. Significant variability in the factors influencing the frequency and magnitude of impacts, e.g., type of tourism activities, intensity, duration, spatial-temporal distribution, etc., the result being problems of comparability among regions, and difficulties in generalising findings from specific locations and over time;

4. Concentration of researchers upon particular primary resources such as beaches and mountains, which are ecologically sensitive.

In their major evaluation of impact methodologies, Mathieson and Wall (1982:185) concluded that, "the economic impacts of tourism are largely beneficial, social impacts are mainly undesirable, and the environmental impacts are mixed".

However, despite the deficiencies of current research, a number of attempts have been made to collate and organise knowledge on the impacts of tourism into a suitable framework for analysis. Mathieson and Wall (1982) proposed one approach, while Pearce (1989) organised the results of the extensive OECD (1980) studies into a comprehensive framework in terms of stress and responses. The summary is included in **Table 3.2**

Within Australia, a study by Buckley and Pannell (1990) gives a comprehensive review of numerous research findings of specific impacts with additional observations by the authors. Buckley and Pannell divided environmental impacts of tourism in natural areas into three main categories: those associated with transport and travel; those associated with accommodation and shelter; and those associated with recreational activities. The major negative impacts included vegetation clearance and damage, soil erosion and compaction, wildlife disturbance or habitat destruction, solid wastes, water pollution, air pollution, noise, introduced weeds and fungi. Similarly, based on the work of Buckley and Pannell, the Australian Government Ecologically Sustainable Development Working Group on Tourism (1991) prepared a table

summarising the range of possible impacts of tourism These are set out in **Table 3.3**. The Working Group also noted that the type of impact and its magnitude depend on the nature of the tourist activity and on the specific location of that activity.

Table 3.2 A framework for the study of tourism impact

Stressor activities	Stress	Primary response environmental	Secondary response (reaction) human
I. Permanent environmental restructuring (a) Major construction activity urban expansion transport network tourist facilities marinas, ski-lifts Sea walls (b) Change in land use expansion of recreational lands	Restructuring of local environments expansion of built environments land taken out of primary production	Change in habitat Change in population of biological species Change in health and welfare of man Change in visual quality	Individual - impact on aesthetic values Collective measures expenditure on environmental improvements expenditure on management of conservation designation of wildlife conservation and national parks controls on access to recreational lands
2. Generation of waste residuals urbanisation transportation	Pollution loadings emissions effluent discharges solid waste disposal noise (traffic, aircraft)	Change in quality of environmental media Air Water Soil Health of biological organisms Health of humans	Individual defensive measures Locals air conditioning recycling of waste materials protests and attitude change Tourists change of attitude towards the environment decline in tourist revenues Collective defensive measures expenditure of pollution abatement by tourist-related industries clean-up of river, beaches
3. Tourist activities skiing walking hunting trial bike riding	Trampling of vegetation and soils Destruction of species	Change in habitat Change in population of biological species	Collective defensive measures expenditure on management of conservation designation of wildlife conservation and national parks controls on access to recreational lands
4. Effect on population dynamics Population growth	Population density (seasonal)	Congestion Demand for natural resources land and water energy	Individual-Attitudes to overcrowding and the environment Collective-growth in support services, eg water supply, electricity,

(Source: adopted from Pearce: 1987:230-1; and OECD, 1980)

Table 3.3 Environmental impacts to which tourism may contribute

	IMPACTS ON FLORA AND FAUNA	BIODIVERSITY	SOIL IMPACTS
COMMON IMPACTS TO MOST ENVIRONMENTS	clearance & damage to vegetation at accommodation/ shelter site, along transport & service links *introduction of exotic species/ pests, animals, plants *nutrient impact on vegetation *increase fire risk/frequency *barriers to wildlife movement *migration of some species to other areas *shooting/killing/destruction of wildlife	*possible loss of a representative habitat *habitat change & modification lion *possible species loss *possible impacts on the ecological resilience of eco systems (change in competitive advantage) *increased sensitivity to climate change. or changed conditions resulting in loss of genetic diversity	*possible loss of soil productivity *soil erosion and compaction at accommodation/shelter site *soil erosion and compaction from transport links (roads, airstrips. tracks, boats, boat moorings) plus service provi-sion (electricity, telephone, pipelines, fire trails, sewerage systems) *contamination of soil from waste generation at tourist site
CRITICAL IMPACTS **1.NATURAL** AQUATIC MARINE/ESTUARINE SALINE WETLANDS	*anchor damage of coral reefs *potential loss of fish breeding grounds *death from contamination		
FRESHWATER	*potential loss of fish breeding grounds *death from contamination		
TERRESTRIAL COASTAL (ISLAND)	*impacts on migratory birds *loss of mangrove swamps. coastal wetlands *impacts on fish from recreational fishing		*destabilisation of beach & dune systems
ALPINE	*increase fringe effect on alpine forests *magnitude of impacts increase because of short growing/ germination season *seasonal impacts		*clearance of land for skiing resulting in less topsoil, eros-ion of steep inclines, siltation of waterways
NATIONAL PARK/ PROTECTED AREA	*increase fringe effect *greater sensitivity to imported/ exotic species *contrary to conservation principles *increase fire risk/frequency		*compaction from four-wheel drive trail bikes, mountain bikes & walking trails
FOREST/WOODLAND	*increase fringe effect on forest area		*clearance of land - loss of topsoil, *erosion of steep inclines, *siltation of waterways
SEMI-ARID/ARID	*short germination/breeding season - greater sensitivity to external shocks *seasonal use means ecosystem has to withstand greater shocks		
2.DEVELOPED URBAN			

Table 3.3 Environmental impacts to which tourism may contribute

(continued)

IMPACTS ON AIR, NOISE & WATER	WASTE PRODUCTION	IMPACTS ON ENERGY USE	IMPACTS ON CULTURAL HERITAG
exhaust fumes 'greenhouse gas emissions due to consumption of electricity 'land. water & air traffic noise *construction site noise 'machinery/motor noise · diversion of water supply 'construction of water storage · change to hydrological conditions In rivers, estuaries & ground water · increase nutrients from sewage/pollution - effect on water quality	littler & solid waste at site & along transport, service, recreational route 'sewage 'land fill sites *toxic/hazardous chemicals eg. chlorine for pools, fuel storage etc. *heat waste (hot water In streams etc.)	transport to & within tourist site (air. water, food. track) *provision of services - generation of electricity. cooking, heating · construction. maintenance of site	'possible deterioration, desecratio & loss of sites of significance (aboriginal, geophysical & built) 'loss of original identity
contamination from ocean outfalls/oil spills · contamination from runoff from roads/construction · eutrophication due to in crease nutrient lead	plastics in the sea resulting in the death of wildlife 'disused fishing lines		social-hazard to other recreations eg, water skiers
increased turbulence on waterways due to boating "eutrophication due to in crease nutrient lead	*sewage discharge		
contamination from ocean outfalls, sewage tanks			'conurbation resulting in increased pressure to improve facilities. access routes to cater for increased numbers
pollution from nearing, wood burning stoves · increased nutrient due to 'runoff · impacts on downstream water supply/ecosystems		'remoteness/climate conditions generates high per capita use of energy 'energy use associated with maintaining accessibility to tourist site 'heating 'seasonal energydemand	'possible loss of aesthetic quality of wilderness'
	problem of disposal	'remoteness/climate conditions generates high per capita use of enemy 'high energy use to get to site · use of firewood	'possible loss of aesthetic quality of wilderness'
salinity due to land clearance 'impact on downstream comm unities			
contamination of groundwater · lack of readily available water in dry season	problem of disposal & servicing to meet seasonal demand	'remoteness/climate conditions generates high per capita use of enemy 'high energy use to get to site · use of firewood	'possible loss el aesthetic quality of wilderness' 'possible loss/desecration of sites of significance
increased noise & air pollution from traffic 'problem of water supply during peak season	*litter *problem of disposal 'servicing to meet seasonal demand		'loss of original identity 'loss of social amenity 'possible loss of public access · services overloaded during peak season · Increased infrastructure costs to local community 'cost of housing

Source: Australian Government Working Group on Tourism and Sustainable Development, 1991:14-15.

In sum, while the literature on the impacts of tourism is relatively extensive and diverse, it should be noted that many studies on the subject are incomplete and significantly methodological problems remain to be resolved (Pearce, 1989). Research has been focused on particular regions or environments, and there is a limited ability to generalise findings from one area to another (Hall, 1991). Furthermore, environmental impact assessment for tourism, as a process to identify, examine and measure environmental impacts in the planning stage of the tourist proposal (ATIA, 1990), although a necessary and useful procedure, has shortcomings (Butler, 1993a; Ding and Pigram, 1995). It tends to concentrate solely on the negative and gives little indication of the importance of each of the impacts under consideration. Detailed work on this aspect has been discussed in Chapter 2. Thus, there exists a need for an environmental auditing process which is more beneficial and effective for identifying and managing the environmental impacts of tourism development. In particular, monitoring, as an important component of environmental auditing, is needed to take into account the whole procedure. This is the topic of the next section.

3.3.3 Monitoring and Evaluating the Environmental Performance of Tourism Development

Although environmental impacts may have been considered throughout the planning of the area and in the environmental impact assessment of specific projects, there is still a need for continuous monitoring and evaluation of these impacts to ensure that no serious problems result from tourism development. Butler (1993a) states that:

> It would seem logical that developments which were viewed as significant enough to require assessment of anticipated impacts would also be significant enough to warrant ongoing monitoring of operations and/or post-development audits or assessments to determine if unexpected impacts are occurring, and/or if mitigation measures have been effective. Yet such actions in the context of tourism developments do not appear to exist (Butler, 1993a:149).

Monitoring and evaluation are most important and integral components in an environmental auditing program. An effective environmental auditing program would be aided by improved data and knowledge relating to the immediate and cumulative impacts of tourism on the environment.

The importance of monitoring in environmental impact assessment has been discussed in Chapter 2. Here, the focus will be on discussing the importance of monitoring and evaluation of the tourism development in the context of environmental management, especially environmental auditing.

Generally, the concepts of "monitoring" and "evaluation" are bound together to indicate a set of related activities concerned with gathering of information about performance and effectiveness of an operation. However, it is important to distinguish between the two concepts and use them to indicate distinct sets of activities. The terms "monitoring" and "evaluation" are used in many different ways. Within the process of environmental management for tourism development, for example, different things are

monitored and evaluated in different ways and for different purposes. Therefore, different sorts of monitoring and evaluation may be carried out for different purposes.

Monitoring usually refers to the process of routine periodic measurement of program activities undertaken during program implementation. While evaluation is a more complex process which seeks to identify the factors which are related to the performance and effectiveness of a management or operation program, and develop solutions of problems in implementation and more effective programs in future. What distinguishes evaluation from monitoring is that it goes beyond collection of data and seeks to determine the effects and impacts of the program.

It is clear that there is a considerable overlap between monitoring and evaluation, as both are concerned with description and analysis of what is currently happening to the program. However, evaluation undertakes a deeper analysis of problems identified through monitoring, and assesses the effects and impacts of the program to enable the program management to adjust the goals of management and adopt more effective implementation plans.

Monitoring and evaluation are of critical importance in the environmental auditing program for tourism development. There are several possible reasons:

First, monitoring and evaluation are necessary to determine whether the methods adopted by environmental management are appropriate. They can provide useful information to enable tourism management to choose the most effective method and

bring out the deficiencies in the environmental management processes. They can also identify problems which were not anticipated at the planning stage, and help in developing solutions for these problems;

Secondly, monitoring and evaluation can determine the feasibility of the environmental management objectives both at the planning as well as the implementation stage;

Thirdly, monitoring and evaluation can make an important contribution to environmental management in maximising the positive impacts and minimising the negative impacts of tourism development. They can also help tourism management to determine the extent of the intended beneficiaries and costs of the operation;

Fourthly, tourism managers and operators rely heavily on their working knowledge and experience to make decisions about environmental management, but these are generally inadequate. Therefore, some kind of specific knowledge is needed to obtain information focused on particular problems or activities. Monitoring and evaluation can fill some of the gaps between working and specific knowledge. Although in some cases, they are insufficient for addressing particular problems, they can provide a basis for the kind of specific knowledge required;

Fifthly, monitoring and evaluation can serve several functions directly pertinent to improving the environmental performance of tourism development. They can be used to identify problem areas in management, so that corrective action can be taken. They

can also assist management in determining the best allocation of resources and can be used to determine strengths and weaknesses in management systems. Therefore, they can stimulate discussion about the goals of management and give rise to new ideas that affect management policy and practice.

However, in the context of tourism development, the importance of monitoring and evaluation of environmental performance has yet to be fully appreciated. Some monitoring and evaluation in tourism development does take place, not on a systematic and scientific basis nor on the environmental aspects, but on the basis of specific management purposes. Even the data generated by existing surveys and records are rarely used for evaluating the environmental performance of tourism development (Nelson, Butler and Wall, 1993). In some areas, of course, the situation is better than in others, particularly in large hotel groups and airlines where management has developed internal monitoring and evaluation programs on a systematic and regular basis (Troyer, 1992; British Airways, 1992; Inter-Continental Hotel Groups, 1991; International Hotels Environmental Initiative, 1993).

Why is there little development of effective monitoring and evaluation for the environmental performance of tourism development (Nelson *et al*, 1993) ? In the context of environmental impact assessment for tourism development, Butler (1993a) and Buckley (1991a) proposed several possible reasons which have been discussed in Chapter 2. Here, some further tentative explanation can be presented as follows:

(1) There is insufficient realisation of the importance of incorporating effective monitoring and evaluation procedures into management programs by decision makers. Frequently, tourist operation managers rely greatly on direct observations and impressions of environmental performance which are sometimes erroneously considered to be a substitute for systematic monitoring and evaluation. Moreover, concern exists in management that monitoring and evaluation may reveal adverse data and weaknesses to critics and consequently weaken support for management activities;

(2) Whereas sometimes, the requirement for monitoring and evaluating the environmental performance of tourism development can come from the regulatory authority, in most situations, such requirements either do not exist or are too weak. Therefore, it is not surprising that mechanisms for monitoring and evaluating the environmental performance of tourism development have not been established (Ding and Pigram, 1995);

(3) Monitoring and evaluation can be costly in terms of human resources, time and funds. This is another reason which explains the lack of development of monitoring and evaluation procedures. Most tourist managers operate their environmental management activities with limited resources. In this situation, when the choice is between using limited resources for realising marketing objectives, or allocating these resources to the development of monitoring and evaluating procedures for the environmental performance of their operations, the choice is usually in favour of the former rather than the latter (Hugo *et al.*, 1992; Ding and Pigram, 1995);

(4) Given the fragmentation characteristics of tourism, and deficiencies in the information collected, there is also no viable or universally accepted means of monitoring and evaluating tourism development. Thus, environmental performance cannot be monitored and evaluated completely.

3.3.4 Performance Indicators

The key to monitoring and evaluation of the environmental performance of tourism development is in the development and use of relevant and realistic environmental performance indicators. Developing effective indicators for sustainable tourism is particularly important and challenging where impacts are likely to be complex, cumulative and multi-factorial. Although a set of environmental performance indicators similar to the well-accepted economic indicators has yet to be developed, it is increasingly clear that there is a need for such indicators which can be used to monitor and evaluate the environmental performance of tourism development.

Usually, only a few aspects of the impacts of tourism on the environment are examined, and difficulties are experienced in quantifying the ecological impacts addressed. Among the reasons for these difficulties is the lack of generally accepted environmental indicators for a variety of impacts.

An indicator is an explicit and objectively verifiable measure of results expected. Performance indicators are configurations or expressions of measures, which signify that dimensions or characteristics of an accomplishment. They form the basis of

performance measurement and as such determine the variables to be measured in the performance process (Mathur, 1980). According to the World Tourism Organisation's definition, environmental indicators are like warning systems and are measurements that should indicate that the tourism environment is about to have trouble or is in the middle of it (World Tourism Organisation, 1994). The indicators may be quantitative or qualitative. A set of environmental indicators will help the planners and managers of tourism anticipate and prevent environmental problems. Indicators are an investment in reducing the risk of inadvertent damage to the industry and to its own resource base. Indicators can also help in understanding the effects of management efforts, and provide a framework for obtaining objective supporting information to allow the industry to take credit for its successes (Manning, 1993).

Defining the term "indicator" is relatively simple. However, it is not an easy task to determine suitable environmental performance indicators for tourism development. Part of the problem is because tourism development today is fragmented and marked by multi-sectoral characteristics. Although there are difficulties in determining environmental performance indicators for tourism development, a number of important initiatives which are related to the environmental performance are currently under way. As it has been understood that the environmental performance indicators are important components of environmental management for the tourism industry. Some useful principles or criteria should be established in selecting the performance indicators.

By way of example, a stringent set of criteria for the selection of Urban Environmental Indicators for Inner Melbourne has been identified as follows:

CREDIBLE through being based on:

- replicated quantifiable evidence
- scientifically validated techniques and standards;
- realistic baselines and goals; and
- goals and standards valid for the communities concerned.

INFORMATIVE because they

- record the impact of human activities on the natural environment (and so extend the usual emphasis of the impact of the environment on people)
- monitor trends towards given goals;
- provide interrelated information;
- link social, economic and environment aspects of urban issues; and
- use surrogate or process measures, rather than avoid the issue where direct measures are available

ACCESSIBLE through

- using language and concepts common to the citizen and the expert
- collecting and reporting data on a regular and public basis; and
- disseminating results through the full range of communication channels, from national policy to local media.

PRACTICAL in that they:

- use continuing information systems with existing funding and resources, rather than expensive one-off collections

- identify a small number of memorable core indicators, rather than a larger quantity of disconnected facts; and
- include simple monitoring procedures, which can be replicated by community groups.

RESPONSIVE because they:

- record type, direction and rate of change
- apply to wide range of decision - making
- are capable of registering new pressures as well changes in existing trends
- document both tangible and intangible effects; and
- remain open to amendment by users.

(ICF Pty Ltd and Brown, 1993)

At present, universally acceptable indicators which can meet the demanding requirements or criteria such as those listed above do not appear to exist for any kind of tourism development. However, some useful relevant initiatives have been proposed. Kreutzwiser (1993) developed criteria by which the value of sustainability indicators might be judged (see **Table 3.4**).

Table 3.4 Criteria for Selecting Sustainability Indicators for Tourism Development

1. Sensitive to temporal change and spatial variation
2. Predictive or anticipatory capability
3. Provide relative measures of conditions, eg. population per habitat area
4. Reference or threshold values are established
5. Practical to apply

(Source: Kreutzwiser, 1993)

In considering the specific characteristics of tourism development, there should be a common set of criteria for choosing environmental performance indicators. The following criteria are suggested:

(1) Indicators should be related to the objectives of tourism operations, especially those concerned with an environmental auditing program;

(2) Indicators should be relevant and comprehensive and thus feasible for monitoring and evaluation;

(3) Indicators should be as simple as possible in order to aid understanding of the environmental activities of tourism operations;

(4) Indicators must be reliable, acceptable, credible and free from bias, and reflect as accurately as possible the particular aspect of the tourist operation being audited. They should thus be capable of being truthfully reported;

(5) Indicators should be amenable to monitoring and evaluation in the sense that they can be integrated in the scheme of an environmental management system for tourism operations.

Internationally, the World Tourism Organisation is developing a set of internationally acceptable environmental indicators to strengthen planners' and managers' understanding of the principal factors influencing the tourism industry's long term sustainability and prosperity (World Tourism Organisation, 1992). The WTO's general types of indicators include:

(1) Warning indicators: These sensitise management to potential areas o[concern and to the need to act to anticipate and prevent problems. As an example, cholesterol levels are indicators of future risk to health, or leading economic indicators attempt to predict future economic outlooks;

(2) Measures of pressures or stresses: These measure key external factors of concern, or known things which must be built into the management response. Examples are: population growth, and changing expectations or demands;

(3) Measures of the state of the resource and its use: These allow managers to understand what has changed regarding the resources which they manage or influence, and to discern how they stand relative to others, to last year, or to established standards. Examples are: current levels of pollutants, or current use levels of resources;

(4) Measures of impacts/consequences: These allow managers to include their impacts in their business plans, and to target the actions of others which they may wish to influence. Examples are: days of beach closures due to pollution, loss of animal populations in impacted areas. Two sets of measures are:

- a. biological and physical impact
- b. cultural and economic impact (some of which may be a result of the physical impact.);

(5) Measures of management effort/action: These give managers information on the level of action being carried out by governments and industry in response to particular situations. Examples are: levels of pollution regulation, amount spent to control waste, areas protected, and existence of sustainable tourism plans;

(6) Measures of management impact: These permit managers to understand the effect of responses and to adjust their approaches and instruments to obtain the desired result and allow credit to be taken for successes. Examples include levels of waste reduction in measured levels of degradation.

It should be noted that the types of indicators needed to help the tourism industry to define and take a sustainable path are varied. While each of six types listed above serve different management purposes, there is much commonality. For example, the same indicators useful to measure impacts may serve to measure the effectivenesses of management actions to address those impacts (Manning, 1993). Based on the above classification of types of indicators, the WTO Environmental Committee developed a set of potential indicators which are related to the monitoring and evaluation of national and site specific environmental performance of tourism development. The WTO hopes that these indicators framework can lead to the creation of an internationally recognised and agreed on set of sustainability measures. If used properly, these indicators will strength the development of environmental performance indicators for tourism (Manning, 1993).

At the national level, many developed countries are also developing a number of indicators relevant to tourism development. For example, in Australia, the CSIRO

Division of Wildlife and Ecology has developed methodologies cable of monitoring and predicting the outcomes of various management regions in different environments. The Environmental Strategies Directorate of the Environment, Sport and Territories is developing a set of environmental indicators, embracing tourism's impacts on natural resources, through its development of the National State of the Environment Reporting System (Commonwealth Department of Tourism ,1994).

Canada, as a member of the World Tourism Organisation Environmental Committee, is taking the lead internationally in the area of development of key indicators for sustainable tourism. Tourism Canada sponsored a workshop to focus the expertise and experience of Canada's environmental and tourism specialists on the issues of indicator development of sustainable tourism. The publication *Tourism and Sustainable Development: Monitoring, Planning, Management* is an important contribution. In this book, a set of indicators is set out which includes measures of environmental sensitivity, levels of stress being put on to particular environments, levels of management and planning action to address problems and potential impacts, and key indicators of the impact of remedial actions. Marsh (1993) also provides a Tourism Sustainability Index which can be used by the tourism industry as a checklist, or potentially as a quantitative means, of addressing the ecological, economic and social sustainability of various components of the tourism industry at different locations and scales. It can also be useful in planning future tourism development and comparing options.

It can be seen that, to some extent, the indicators proposed above, are too general, and that more specialised indicators are needed for specific types of tourist operations. It would be unlikely then that a set of indicators could be developed which would be suitable in all instances. Under these circumstances, case studies which address the environmental performance of tourism developments are useful, although much of literature is descriptive and commonly in the form of articles. For example, in 1992, the German tour operator TUI launched a wide ranging environmental plan aimed at applying environmental measures to monitoring and evaluating the environmental performance of its own organisation (Hoon and Cockerell, 1993). As a means of achieving this aim, TUI produced two checklists or indicators, one for the destination areas it operates to, and the other for the hotels it owns (see **Table 3.5 and 3.6**).

Table 3.5: TUI Environmental Criteria for Destinations

	Suggestions for background:
1, Sea and shoreline	Quality of water for bathing and of the beaches (water for bathing = sea, lakes, rivers); assessment based on appearance, smell, or survey findings where available; cleanliness and care of beaches = refuse collection, type of beach cleaning; Blue Flags, etc
2, Waste water disposal	Filtration plans (technology, capacity, function; drains; other forms of waste water filtration; where is waste water diverted; re-use, etc.
3, Garbage disposal	Garbage collection; avoidance of waste in built-up areas and the countryside; separation and recycling; depots, rubbish incineration, etc.
4, Atmosphere and noise	Air pollution by industry, traffic, use of incinerators at rubbish dumps; measures for cutting down noise (traffic, discos, machinery, etc).
5, Surroundings	Architecture/building density/concrete traffic and traffic reduction measures; green spaces, parks, public grounds, etc.
6, Landscape and nature	Scenery; extent of building on the coast, nature reserves; protection of plants and animals; measures to preserve the landscape, etc.
7, Power sources	Power generation (type of fuel used); alternative forms; wind and solar energy, etc.
8, Water supplies	Sources/springs of drinking water; ground water desalination, etc quality of drinking water; measures to reduce consumption of groundwater by use of used water (eg. filtrated waste water), etc.
9, Environmental briefing/Environmental facilities	Briefing material issued local authorities, local information points, possibilities for obtaining information, notice boards, posters; tracks for walkers and cyclists, guided tours, excursions, etc.
10, Environmental awareness	Awareness among the populace and the authorities/our partners/suppliers; behaviour generally; treatment of environmental protection in the media, schools, etc; willingness to provide information and extent of efforts made by the authorities; environmental legislation; tourism planning, etc.

(Source: Hoon and Cockerell, 1993)

Table 3.6. TUI Environmental Checklist for Hotels

	Very good	Good	Satisfact -ory	Sufficient	Unsatisf-actory
1, Hotel management a), Waste water treatment Connection with waste water treatment plan, own water treatment plant (which technique - mechanical, biological, etc), keeping clean of waste water, etc.	!	!	!	!	!
b), Waste disposal Waste avoidance (no small packages, etc), separation of water for recycling, composting, gathering of special waste, etc.	!	!	!	!	!
c), Waste supply Lowering of water consumption / water economy measures, use of ground water, etc.	!	!	!	!	!
d), Energy supply Energy saving, alternative energy production (solar or wind energy) etc.	!	!	!	!	!
e), Management Detergents; insect pest control, food, etc.	!	!	!	!	!
2, Noise protection in / at hotel Traffic abatement, other noise protection measures, etc.	!	!	!	!	!
3, Garden of hotel Arrangement and maintenance of gardens, water economy measures / use of purified waste water, pesticides, etc.	!	!	!	!	!
4, Architecture and building materials of hotel Building style and materials typical of particular region, problematic building material, etc.	!	!	!	!	!
5, Environmental information and environmental offers of hotel Information leaflets, bicycle rental, courses and guided tours, etc.	!	!	!	!	!
6, Location and immediate surroundings of hotel grounds Surround landscape, buildings around hotel, traffic, etc.	!	!	!	!	!
7, Sea and poolwater and beach quality in hotel area Cleanliness / hygiene, natural state, etc.	!	!	!	!	!
8, Other aspects of hotel either causing concern or being particularly environment - friendly	!	!	!	!	!

(Source: Hoon and Cockerell, 1993)

Of particular relevance in relation to the study of environmental auditing for beach resorts are the checklists or indicators for hotels. This checklist rates the environmental performance of a hotel's organisation on a scale of "very good" through to "unsatisfactory". As illustrated in **Table 3.5** and **3.6**, the checklist incorporates waste water treatment, waste disposal, waste supply, energy supply, noise, gardens, architecture, information and water quality. It attempts to rate a hotel's environmental performance, thus providing a basis for possible comparison with other hotels. Also, internationally, there are some other hotel groups which have developed internal environmental management programs, such as Canadian Pacific Hotels & Resorts, Inter-Continental Hotels Group, the Westin Hotels group, the Grecotel Hotels Group, etc. The environmental performance indicators addressed by these international hotel groups include waste management, indoor air quality, energy efficiency, emissions, pesticides and herbicide, water use, staff training and education, community involvement, etc.

Apart from hotel groups, internationally, there are very few other tourist operations have developed environmental performance indicators. Only one example could be found from current literature. Hugo *et al* 91992), in developing an environmental auditing program for a hiking-skiing trail, proposed a set of performance indicators (see **Table 3.7**).

Table 3.7 Environmental Performance Indicators for Auditing the Recreation Division's Mission Concerning hiking facilities

Environmental	Soil	Erosion: sheet Compaction Eutrofication Land slips/slides Walking surface: clay-slippery, stony, sandy
	Vegetation	Removal/clearance (construction; maintenance) Damage: subsequent to trail eg. picking flowers, collecting walking sticks, vistas, interesting spots Change in composition (removal, additions) Fires: controlled & uncontrolled wildlife, camp fires Collection of wood Spread of weeds (by opening of woods, loosening of soil in construction; etc.) Trampling
	Fauna	Breeding habits Breeding habitats Hunting/killing Domestic animals: feeding, injuring hikers
	Water	Pollution: washing places (soap), sewerage discharge Use of ground & surface water for supply purposes Shortages Storage: tanks, dams etc. Quality of water Swimming?
	Geology	Sensitive: caves, pedestal rocks, mushroom rocks, etc Graffiti Bushman paintings
	Visual Impact	Facilities; car park Siting and construction of hut/toilets Construction material Litter/sewerage Crossing (rivers, ridges) Human development in surroundings
	Pollution	Noise: cars, minings, etc pesticides and herbicides
Medical	Information	Climate Plants Animals
	Safety	Chain ladders Ledges Cliffs Crossings: river, sea (river mouths) roads back-up (search and rescue)
Social/cultural	Environment	Information (what to expect eg. climate)
	Education	Field/brochures/maps
	Amenities	Functionality: huts, taps, beds, cooking utensils Safety of car parks (PBE)
	Route	Distance: total, between points Gradient Quality: difficulty, diversity/ variation, visual quality Type of path
Financial/Administrative	How functional is the booking system How are funds employed in maintenance Does community and ecology benefit in any way	

(Source: Hugo *et al.*, 1992)

The aim of this type of environmental performance indicators is to help the auditors to monitor and evaluate not only the natural environmental impacts but also user satisfaction. Needless to say that such a list performance indicators demands modification in terms of the geographic area and nature of operations concerned.

While the review of case studies, such as those discussed above, is useful, it is difficult to provide a full range of the performance indicators covering all environmental aspects of tourist operations. In an attempt to resolve this problem, on the basis of the existing case studies and associated consultations, environmental performance indicators for beach resorts were formulated and are presented in **Chapter 6.**

3.4. Summary

In summary, tourism as a resource-based industry reflects some of the basic environmental and sustainable development challenges of the present time. As the public and the tourism industry demand increasing attention to environmental issues, greater concern is being expressed regarding improvement of the environmental performance of tourism development. It also becomes increasingly important that tourism managers be informed with the best information about environmental performance. Without this information, the tourism industry will continue to be subject of environmental, economic, and social and cultural impacts which do harm to both the tourism operations' interests and the environment to which they relate. In this

discussion, emphasis has been placed on monitoring and evaluation, and the determination of environmental performance indicators. Monitoring and evaluation are crucial components of an effective environmental management system. However, monitoring and evaluation alone will not achieve the desired level of performance. Useful performance indicators also need to be developed. Moreover, measuring the environmental performance needs to be incorporated into the whole tourism organisation management system so that improvement of environmental performance opportunities can be pursued. Tourism development environmental management issues are discussed in the following **Chapter 4**.

Chapter 4

Organisational Structure and Responsibilities of Environmental Management for Tourism in Australia

4.1. Introduction

The environment has become a major concern of government, community and tourism industry. The environmental impacts of tourism development can be identified through a variety of analytical studies, including environmental impact assessment, monitoring and evaluation of environmental performance, indicators determination, etc. Such studies help define the current environmental situation of tourism development and show what needs to be done, but then the real question becomes how to do it. This is a management question, that is, how to organise and carry out an implementation program to improve environmental performance. As described in Chapter 2, environmental auditing is an important component of environmental management's control function. It measures the strengths and weaknesses of the environmental management system in place and points the ways to upgrading its environmental performance.

A useful starting point is to examine the existing management organisational structure and the responsibilities which have been created to deal with the environment in the development of tourism in Australia. Attention will be focused on the roles played by all three levels of government - Commonwealth, State, local, and the community and the tourism industry. The key issues are interagency and intersectoral co-ordination

and cooperation, and the difficulties in achieving best practice environmental management for tourism.

4.2. The Environmental Management System and Organisational Structures for Tourism in Australia

Improvement of the environmental performance of the tourism industry requires government and industry management commitment and integration of environmental management systems into operational activities. Environmental management systems are explicit sets of arrangements and processes linked to management issues to ensure that the organisation's environmental goals and objectives are achieved (Bragg, Knapp and McLean, 1994). Generally, an environmental management system encompasses:

- Policies and procedures which define company goals and objectives derived from both internal and external requirements;
- Allocation of responsibilities and the delegation of authority to achieve the goals and objectives;
- Operation and implementation of programs to meet the goals and objectives;
- Monitoring of performance with respect to goals and objectives to identify both strengths and weaknesses in the policies, procedures and organisational arrangements and to recommend improvements; and
- Implementation of corrective action by management to eliminate identified deficiencies.

(Bragg, Knapp and McLean, 1994: 4)

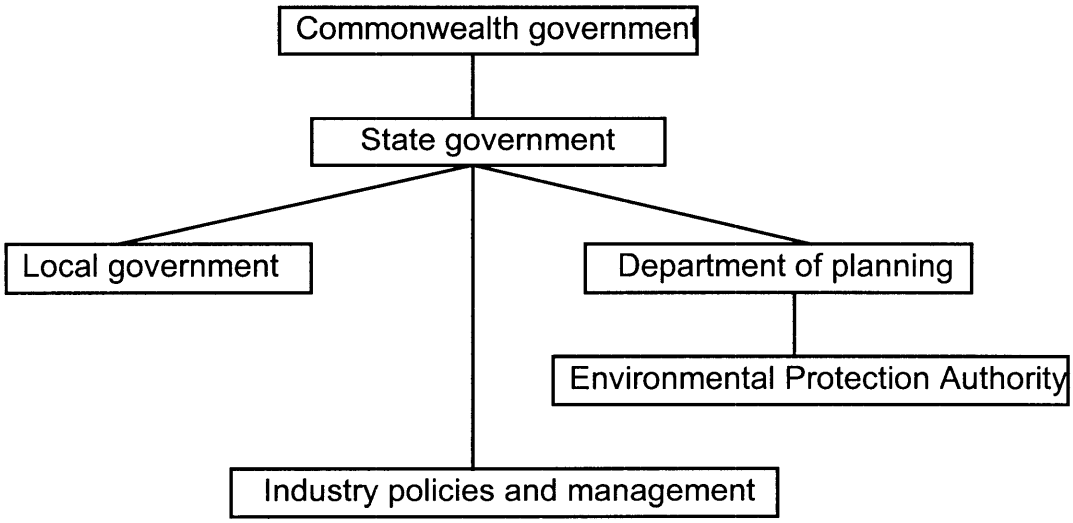
Environmental management is an integrated and interdisciplinary approach to manage and protect the environment sustainably. The key word here is *management.* In classical terms, management is generally viewed as a series of functions such as planning, organising, staffing, directing and controlling the operations of an organisation (Budizik, 1992). Management has a critical role to play in all stages of the tourism planning and development process. However, until recently, management's role in environmental issues was not fully appreciated. Since various factors affecting these functions such as relevant legislation, regulations, market demands, and community expectations, are constantly changing, environmental management itself requires continual review to cope with the new circumstances.

Environmental management for tourism also involves diverse interest groups . Each one of these groups has its own "agenda" associated with the environmental aspects of tourism development (Long, 1993). Of importance is the proper co-operation of the various groups involved in tourism development. Effective environmental management for tourism requires identification of who will be involved in the environmental management activities, who is important in these activities, what are the various "agendas" associated with these activities, how various groups can benefit from as well as assist with these activities, and how these groups interact (Long, 1993). The various groups can be divided into two parts: public sector and private sector. Therefore, the responsibilities of the public and private sectors and organisation structures in environmental management system for tourism should be decided, especially if tourism is to be sustainable and high quality over the long term. Maintaining close co-operation and co-ordination between and within governments

and between the public and private sectors is essential throughout the implementation and management processes. Specific organisational mechanisms may need to be established to achieve this co-operation (McIntyre, 1993).

The existing government organisational structure for tourism environmental management in Australia is summarised in **Figure 4.1.**

Figure 4.1: Summary of present environmental management organisation in Australia



There are many different ways to organise environmental management for tourism. In the early stages of developing an environmental management system for tourism, a centralised structure may be favoured since it provides great control (Bragg, Knapp and McLean, 1994). As management matures, decentralisation will increase. There is a general trend towards decentralisation because it fits the fragmented characteristics of tourism and provides a fast response to local conditions and pushes responsibility for environmental management further down the line. The ideal way is to maintain the advantage of decentralised line responsibility while still maintaining consistency in

environmental management implementation and performance (Bragg, Knapp and McLean, 1994).

An effective structure for environmental management for an operation includes:

- Strong top management involvement;
- Responsibility at division/site levels;
- One or more department(s) for environmental, health, safety and public relation management; and
- Task and management by committee

  (Bragg, Knapp and McLean, 1994).

Once effective organisational structure for environmental management is established, roles and responsibilities need to be defined and clarified.

4.3. The Roles of the Public Sector and Related Legislation and Regulations

4.3.1. Introduction

In the context of environmental management for tourism development in Australia, it is seen to be important to identify the respective roles and objectives of public sectors and co-operation among them. The public sectors, generally, include governments and community groups. Government also will obviously have a significant impact on tourism development based on the environment. Tourism is dependent on public infrastructure such as roads, electricity plans, etc., for development and

competitiveness in improving environmental performance. To this extent, how the Australian tourism industry meets its sustainable development objectives is as much in the government's hands as it is in industry. Furthermore, specifically in the context of environmental auditing for the improvement of environmental management for tourism, environmental auditing must be regarded as a management tool as well as an attempt to evaluate environmental impact assessment and specific tourism developments.

The existing knowledge and methods of environmental auditing for tourism development are at early stage. There are many constraints for implementing effective environmental auditing for tourism (Ding and Pigram, 1995), and there is no universally acceptable environmental auditing program in the field of tourism. Therefore, the responsibility for environmental auditing for tourism clearly extends beyond specific tourism development. In some cases, approval conditions may specify a developer's specific responsibility, but the background responsibility for environmental auditing rests with government.

According to Buckley (1991a), potential government actions to improve environmental planning and management in nature-based tourism fall into five major categories:

1. direct control by regulation and surveillance;
2. provision of incentives and disincentives, either economic or otherwise;
3. physical protection of specific areas, either by excluding people or by hardening the areas concerned against human impact;

4. education, at a range of scales; and
5. the acquisition, compilation and dissemination of information by sponsoring research of various types

   (Buckley, 1991a: 234).

Buckley (1991a) also claimed that all levels of government need to be involved if the above approaches are to be successful. Here, it should be addressed that there is an increasing recognition in Australia of the need for national regulation to take account of environmental issues (Mitchel and Brown, 1991). Governments now draw upon a range of regulatory techniques and procedures to ensure compliance with environmental constraints (Pigram and Ding, 1994).

The responsibility of environmental management for tourism in Australia is shared between the Commonwealth, state and local government. Current management regimes are both complex and interwoven. Therefore, the roles and responsibilities of these three spheres of governments are difficult to define and delineate. Most attempts fall short because they cannot accommodate the multitude of political and financial agendas that tend to complicate co-operation. In this section, the existing management regimes are described with particular reference to state and local government arrangement in New South Wales. The difficulties both inherent in, and created by, the existing framework of environmental management for tourism at each level of government, are also discussed. Furthermore, some general principles can be reflected in both organisational structure and legislation which are important parts of an environmental auditing program.

4.3.2. Federal Government

Under the Australian constitution, environmental management is not among the specific enumerated powers granted to the Federal Government and it remains in the residue of unspecified powers with the states which also have title to land, water, minerals and petroleum (Atherton, 1991). While the Federal Government lacks direct constitutional power, it has nevertheless enacted extensive legislation in recent years with respect to such matters as environmental impact assessment, nature conservation, heritage protection and the marine environment by making either direct or indirect use of its powers. It has also exercised some influence and control by means identified by Buckley (1989) as:

- financial instruments such as taxes and grants;
- model legislation, standards, guidelines and codes of practices for the states;
- co-ordination, facilitation and dispute resolution by means of Ministerial Councils, conferences and working groups, and
- sponsored research

  (Buckley, 1989).

In looking at environmental management for tourism at the national level in Australia, it is necessary to mention preceding environmental legislation which is relevant to tourism development. The following Acts come under Commonwealth legislation:

- Environment Protection (Impact of Proposals) Act, 1974,
- Australian Heritage Commission Act, 1975,
- National Parks and Wildlife Conservation Act, 1975,

- Great Barrier Reef Marine Park Act, 1975,
- Antarctic Treaty (Environment Protection) Act, 1980,
- World Heritage Properties Conservation Act, 1983,
- Aboriginal and Torres Strait Islander Heritage Protection Act, 1984,
- Australian Tourist Commission Act, 1987,
- Resource Assessment Commission Act, 1989,
- Endangered Species Protection Act, 1992,
- Antarctic (Environmental Protection) Legislation Amendment Act, 1992, and
- Native Title Act, 1993.

While the extent to which these Acts are used to regulate tourism within Australia varies, in certain circumstances, the Federal Government has some capacity to use them to secure outcomes that it judges to be in the national interest.

In the context of environmental management, the most relevant for tourism development have been Environment Protection (Impact of Proposals) Act, 1974 and Australian Tourist Commission Act, 1987.

The 1974 Environment Protection (Impact of Proposals) Act was substantially amended in 1987 and broadened the public consultation provision by Public Environmental Reports (PER) and introduced mediation procedures following publication of the draft of an Environmental Impact Statement (EIS). These procedures all involve consultation between the developers and government agencies and a later involvement by the community with public review of the PER or EIS.

EIA at Commonwealth level is currently an advisory process, not an approval process. It is the administrative responsibility of the Commonwealth Environmental Protection Agency (CEPA). The Act, together with its administrative procedures, establishes the Commonwealth's environmental impact assessment process which is designed to ensure that all environmentally significant considerations are taken into account in Commonwealth development activities. CEPA has identified a number of possible factors to help define the roles of the Federal Government in environmental impact assessment. These factors are:

- The Commonwealth represents the national interest;
- The Commonwealth has responsibility for international obligations;
- Trans-boundary impacts between States and Territories may lead to Commonwealth involvement;
- National EIA standards can be promoted by Commonwealth involvement, and
- The Commonwealth has responsibility for the impacts of its own activities (Commonwealth Environment Protection Agency, 1994: 2).

McPhail (1992) outlined the CEPA responsibilities in the Federal Government's environmental management program, which are:

- providing a firm base of knowledge of the state of the environment;
- improving performance in managing and protecting the environment;
- an active public affairs, information and education program aimed at key groups such as businesses, industry, educators and the general community;

- an emphasis on non-regulatory approaches (both legal and economic) but where regulatory frameworks are completed, to ensure their harmonisation nationally, and minimise micro-economic costs, and
- appropriate industry standards, guidelines, codes and targets.

  (McPhail, 1992: 66).

It should be understood that all these responsibilities should involve working co-operatively with State and local governments in pursuing a truly national approach to environmental issues, while recognising the fundamental role State governments must play in protecting the environment (McPhail, 1992).

Another most relevant piece of legislation for tourism development at the Federal level is the Australian Tourist Commission Act 1987. The principal objective of the Australian Tourist Commission as defined in the Act are:

- to increase the number of visitors to Australia from overseas;
- to maximise the benefits to Australia from overseas visitors; and
- to ensure that Australia is protected from adverse environmental and social impacts of international tourism.

  (Australian tourist Commission Act, 1987).

However, it should be noticed to the fact that the Australian Tourist Commission (ATC) has no powers under this Act to ensure the third objective is achieved. The ATC must rely on persuasion to fulfil this objective. Under the Act, the responsibilities of the ATC are:

- to promote Australia overseas as a tourist destination;
- to enhance awareness overseas of Australia as a tourist destination;
- to co-ordinate the overseas promotional efforts of the Australian tourism industry, in co-operation with State and Territory tourism authorities and with the Australian tourism industry;
- to enhance awareness in Australia of the Australian tourism industry; and
- to closely monitor and report the effect of international tourism on Australia's natural environment and society.

  (Australian Tourist Commission Act, 1987: S.7).

There are several points which should be addressed from the above responsibilities. First, international tourism accounts for only 26 per cent of Australian tourism (Ecologically Sustainable Development Working Group on Tourism, 1991). Secondly, the ATC sees its major role as the marketing of Australian overseas as a tourist destination. It has limited expertise in the area of monitoring and reporting the environmental and social impacts of overseas tourism. Even through the Act 1987 entrusted it the power to do so, unfortunately, there is no mechanism for the implementation of its environmental responsibility. The responsibility of the ATC to maximise numbers of overseas tourists could be perceived to be in conflict with considerations of environmental protection.

Apart from having direct responsibility given by the relevant legislation for a number of environmental issues for tourism development, the Federal Government has entered into many international agreements that have implications for tourism development.

There are currently at least 27 international treaties or conventions to which Australia is a signatory and that have implications for environmental management objectives. For example, Australia is a signatory to Agenda 21 of the report of the United Nations Conference on Environment and Development which can have significant implications for global development and for the various industrial sectors. Tourism is directly implicated in many of the Agenda items. Further, many of the actions in the Agenda can create new opportunities for tourism, or challenge its activities through new regulatory mechanism or management approaches.

Although the Federal Government has the power to protect and manage the environment through legislation which it has done in the past, it certainly prefers to work with the States and Territories, tourism industry and communities to develop a range of initiatives to ensure that tourism is developed in a sustainable way. One of the most notable initiatives of the Federal Government is the National Ecologically Sustainable Tourism Strategy (Commonwealth Department of Tourism, 1991). The Strategy identifies the economic, environmental, social and support goals which underpin ecologically sustainable tourism and recognises the importance of tourism development being compatible with the environment on which it depends. Another important initiative is the development of the National Ecotourism Strategy (Commonwealth Department of Tourism, 1994). The National Ecotourism Strategy is a policy statement which the Federal Government desires to be implemented by the tourism industry. It is hoped that the Strategy will enable Australia to take advantage of the current global tourism interest in ecotourism and to manage and conserve the Australian environment in an ecologically sustainable manner.

4.3.3. State Government

Under the Australian Constitution, the States have substantial responsibility for many aspects of environmental management for tourism. Consequently, each State has developed its own legislation on resources development and environmental management issues. In particular, considering the impact of tourism development, there is a demonstrated need:

- to ensure that the social and physical impact of tourist development is assessed adequately;
- to ensure that there are consistent and streamlined approval processes; and
- to provide guidance about the nature and extent of developments particularly in coastal zones and national heritage areas.

(Senate Standing Committee on Environment, Recreation and the Arts, 1992: 97).

Clearly, the States and Territories have a significant regulatory responsibility for planning, pollution control and environmental impact assessment, although for most tourism developments, all of these are carried out at local government level (Buckley, 1991a). The legislation and policies between the states are different, but a number of common themes and general principles can be drawn .

Environmental management at the State level is incorporated as an integral part of the normal decision-making and planning responsibilities of all State's authority agencies. The State legislations ask authority agencies to take environmental factors into

account not only when considering an application for approval for a development but also when considering the undertaking of works.

As the primary environmental protection administrator and regulator in New South Wales, the New South Wales Environmental Protection Authority (EPA) was formally established on 1992. It brings together a range of existing government agencies and functions. The main role of EPA is pollution prevention and control, waste and hazardous substance management and the development of alternative environment protection strategies. As part of this role, the EPA has significant interaction with industry, special interest groups, the general public and the full range of government agencies in New South Wales (Environment Protection Authority, 1992). The EPA also has responsibility for consolidating and streamlining the environmental legislation base.

More importantly, mandatory environmental audits could be required before the EPA determines whether to grant a licence or pollution control approval. The EPA also has power to impose a requirement that a licence holder carry out an environmental audit where a breach of pollution law is reasonably suspected, or to undertake compliance audits at any time. The EPA has responsibility to develop performance indicators in co-operation with other public communities to assist in environmental auditing and the regular reporting of environmental performance (Environment Protection Authority, 1993).

Apart from the EPA which is mainly responsible for the pollution control and waste management, environmental auditing and performance, another important role of state government in environmental management for tourism development is in the environmental impact assessment procedure.

In New South Wales, under the Environmental Planning and Assessment (EP &A) Act 1979, the principal objective of the EIA process is to incorporate in the decision making process a greater understanding and appreciation of the environmental consequences of certain types of development and, through this, more sensitive and effective decision with regard to such development (Department of Environment and Planning, 1985).

The State Government is also responsible for a policy framework for planning and development that contain objectives for tourism. The objectives are generally not as clearly articulated as environmental objectives for tourism, but all policies refer to the concept of achieving environmental protection whilst allowing sustainable use and development of resources. For example, the New South Wales Coastal Policy emphasises the maintenance of environmental quality within a framework of development for housing, tourism and industrial purposes. This is reflected in the objective of facilitating development that is sensitive to environmental constraints (New South Wales Government, 1990).

It can be seen that the main role for the state government in the area of environmental management is to enact environmental legislation.

4.3.4. Local Government

The role of local government in respect of environmental issues is addressed at the Earth Summit in Rio in 1992 and contained in Agenda 21:

> Because so many of the problems being addressed by Agenda 21 have their roots in local activities, the participation and co-operation of local authorities will be a determining factor in fulfilling its objectives. Local authorities construct, operate and maintain economic, social and environmental infrastructure, oversee planning processes, establish local environmental policies and regulations and assist in implementing national and sub-national environmental policies. As the level of governance closest to the people, they play a vital role in educating and mobilising the public for sustainable development (Tourism Canada, 1992:40)

It is obvious that local governments need to perform in an increasingly environmentally responsible manner.

In general, the roles of local government in the tourism planning have been discussed in a range of tourism literature (Gunn, 1988; Inskeep, 1991; McIntyre, 1993). In the context of Australian tourism, the topic is also discussed (Robertson and Veal, 1988; Bates, 1991; Hall, 1991). Furthermore, in Australia, local government administers many of the state legislations on environmental issues and is empowered to make by-

laws within areas authorities and delegated by the states (Atherton, 1991). it is often up to local government to implement national and state environmental policies.

It is quite clear that there are three main reasons for local government to hold the key to effective environmental management for tourism development:

(1). Local governments manage environmentally significant areas of tourism resources. Without the development and implementation of best practice environmental management, the environment cannot be protected as well as becoming a tourism destination;

(2). Through their own activities, local governments are also directly involved with the tourism industry in a variety of ways. Often they own and manage a range of leisure and cultural facilities, such as museums, theatres, parks, playing fields, beach and seafront areas, etc. They build and maintain their roads, water and sewerage facilities, or distribute energy, which significantly affect environmental performance;

(3). For most tourism developments, planning, pollution control and environmental impact assessment are actually carried out at the local government level, even if ultimate responsibility is at national level. In particular, local governments have primary authority to determine whether a proposed tourism development needs to be subject to the environmental impact assessment process.

Under state legislation in Australia, the power and responsibilities of local governments in the context of tourism development vary from state to state, but there are some common responsibilities which are:

- strategic planning;
- land use planning and regulation;
- land management;
- building regulation;
- road construction and maintenance;
- water supply and sewerage;
- recreation and related facilities;
- traffic management, and
- co-ordination with State/Federal agencies.

However, some significant barriers constrain the effectiveness of local government's roles in environmental management which are:

- vertical fiscal imbalance between the Federal Government, State Government and local governments;
- lack of recognition by the federal Government and the State Government of local government as equal partner;
- duplication and competition in the development of environmental policies and services;
- inadequate mechanisms for community consultation;
- inability of local government to empower itself to deal with environmental issues;
- the scarcity of programs in training and skills development to deal with increasingly complex environmental problems;
- lack of regional co-operation; and
- lack of political interest and, or, actual resistance by local government.

Currently, local governments are involved in the implementation of a wide range of activities including monitoring of air quality, noise pollution, protection of the built environment, heritage and conservation, waste management, recycling, water monitoring, litter and urban runoff controls, and stormwater disposal. Local governments are also involved in enforcement of legal regulatory provisions as well as preservation of community amenity, protection of local environments, and environmental education and promotion. Environmental officers in local government are also increasingly responsible for surveillance and pollution control, and assessment of environmental impact studies. In New South Wales, they are responsible for development control, building inspection, consideration of the impact of buildings upon community amenity and compliance with planning and building regulations, under the Local Government Act, Environmental Planning and Assessment Act and related legislation.

To ensure better harmonisation of tourism development with local environmental, social, economic and cultural conditions, it will be necessary to establish effective local administrative mechanisms, in particular, local government has a vital role to play in monitoring and managing the tourism environment (Nelson, Butler and Wall, 1993).

Recent changes in the Local Government Act 1993 in New South Wales have the effect of making local government more responsible for its own actions in dealing with environmental matters. Local government is required to adopt an integrated

strategic approach to environmental management which would include local environmental auditing, state of the environment reporting, and the introduction of an "environmental ethic" (Environmental Protection Authority, 1993). All these underpin local government activities in areas of environmental management. So far, local government environmental audits are still a new environmental management tool and, as yet, there are no procedures on how to use it. Local government appears not ready, and possibly due to lack of resources, not willing, to adopt a standard national or state approach. However the initiatives shown with environmental auditing suggest that local government has the potential to work in a more effective way in managing tourism environment

4.3.5. Community Participation

Agenda 21 particularly emphasised on the importance of enhanced opportunities for community participation in decision-making. It states:

> One of the fundamental prerequisites for the achievement of sustainable development is broad public participation in decision-making. Furthermore, in the more specific context of environment and development, the need for new forms of participation has emerged. This includes the need of individuals, groups and organisations to participate in environmental impact assessment procedures and to know about and participate in decision, particularly those which potentially affect the communities in which they live and work
>
> (Tourism Canada, 1992: 16).

Effective community participation in environmental management is one of the major goals for sustainable tourism development. Community involvement makes environmental policy implementation far easier. Community support is vital for the successful implementation of policies, because without it, implementation at best would only be partial (Pigram, 1990). Environmental management is carried out at the local level, and local communities have been recognised as playing a significant role in environmental management. As concerns about the effect of tourism development on the environment have emerged, adequate community participation in environmental management has been recognised as necessary to ensure management effectively and accountably. Buckley (1991a) points out that increasing public concern has produced a strong and growing demand for active involvement in environmental management issues. There is also a trend toward direct action by community groups

Community involvement in environmental management has many potential benefits. Among these are the following:

- mobilising resources available in the community to work together with government agencies;
- contributing to better management decisions by bringing a diverse range of values, attitudes and interests to bear on particular issues;
- providing opportunities for participation in management activities at the local level;

- contributing to greater acceptance of management policies and activities, thus reducing the costs, misuse, maintenance and enforcement of resources; and
- contributing to a reduction in community conflicts by encouraging communication between groups and seeking mutually beneficial solutions.

  (Resources Assessment Commission, 1992).

Currently, communities can play a role in environmental management through a variety of fields of activities which include:

- policy and planning decision-making;
- development assessment and approval;
- operational management;
- public information and education.

Among the above fields, the most important one is community involvement in the environmental impact assessment process.

In principle, although the importance of community participation and involvement in environmental management is well accepted, it is, however, difficult to implement effectively through the whole environmental management procedure. Actually, apart from a single opportunity for community involvement in the environmental impact assessment process, there is usually no formal mechanism for the community to determine whether environmental protection commitments made by a developer or government in an EIA or associated procedures are in fact followed (Buckley, 1991a). Buckley further states:

> There is little or no opportunity for public participation in the design of monitoring programs: and many monitoring programs are so poorly designed that they simply cannot yield the information required to test impact predictions in a scientifically and statistically competent manner. There is no mechanism for the results of monitoring programs to be subject to formal public review. In theory such results are scrutinised by regulatory agencies, but this is not always done competently and without negligence.
> (Buckley, 1991a:10).

The role of community participation in environmental management has been increasingly important in recent years. However, it should be noted that some deficiencies in the process of community participation and involvement still exist (Buckley, 1991a). Some of these deficiencies are as follows:

- lack of skills and time, because community members who become involved are usually volunteers;
- the fact that some environmental management information may not be noticeable to the community;
- lack of co-ordination in the participation and involvement process; and
- conflicting perspectives of managers, regulatory agencies and communities which may lead to a reluctance to share information and decision-making, and have a bearing the effectiveness of environmental management.

One important method in overcoming the above deficiencies, as Buckley (1991a) suggests, is regular environmental auditing which can provide a means for the community to evaluate the competence of the regulatory agencies in managing environmental performance, both at the planning stage through competent assessment of EIA documents, and during the operating stage through competent supervision of environmental monitoring and enforcement of environmental regulations (Buckley, 1991a).

4.3.6. Co-ordination of Public Sectors

Of all the roles of public sectors, in particular governments, probably the most important is that of co-ordination. The successful and effective implementation of all the other roles will, to a large extent, be dependent on the ability of governments to co-ordinate and balance their various roles in the environmental management process.

One problem arising from the above discussion is that different government agencies have different objectives and the objectives are often incompatible (Atherton, 1991). The characteristics of fragmented, inconsistent or disjointed responsibilities and objectives between, and sometimes within, various government agencies, reflect a complexity of administrative arrangements. There is a growing recognition that the different levels of government and the community need to co-operate as closely as possible to improve the effectiveness of environmental management and ensure that environmental requirements are met (Reid, 1989). However, different administrative arrangements among states and among the three levels of government hinder integration. Some difficulties can be explained as a result of competing inter- and

intra-government influences on administrative systems. Influence may be judicial, procedural, evaluative, instrumental, professional, and public.

Co-ordination is necessary both within and between the different levels of governments in order to avoid duplication of function and develop effective environmental management. However, as Hall (1991) states, despite the existence of formal consultative mechanisms, co-ordination has not taken place to any significant degree and is one of the major shortcomings of tourism policy and administration.

Demands for co-ordination of environmental management in Australia have increased and many agreements between the Commonwealth, State and local governments for carrying out effective environmental management have been developed. One of the most important agreements is the Inter-Governmental Agreement on the Environment. The Agreement was formalised in 1992. According to the Department of the Arts, Sport, the Environment and Territories (DASET):

> The Agreement represents a new approach to the role of governments in environment management in this country. It heralds a truly collaborative intergovernmental approach. ..... It sets out the roles of the parties and establishes the "ground roles" under which the Commonwealth, State, Territory and local governments will interact on the environment; includes a broad set of principles to guide the development of environment policies; and, in a series of schedules, sets out co-operative arrangements on a wide range of specific issues.

(Department of the Arts, Sport, the Environment and Territories, 1992:1).

The Inter-Governmental Agreement on Environment is an important step to overcome the lack of co-ordination, but it has not resolved many of the difficulties in environmental management in Australia (Buckley, 1990)

4.4. The Role of the Private Sector

4.4.1 Introduction

In this research, the private sector refers to the business activities and economic involvement in the operation of the tourism industry. Traditionally, the private sector's prime motivation is profit maximisation. Organisational activities within the private sector will primarily be designed to enhance this goal (Pearce, 1992). As noted in the foregoing discussion, the primary responsibility for environmental management in tourism development usually falls to the public sector. However, in recent years, tourism, as one of the largest industries and a major contributor to economic growth in Australia, has had an evident environmental impact. A large number of tourism operators, particularly at an international level, have begun to develop and implement environmental management strategies and programs, and are showing that the private sector of the tourism industry can play a very active role in improving environmental performance.

4.4.2. Initiatives

As public pressure grows for a clearer response by the tourism industry to environmental issues, the greater will be the need to take initiatives directed at creating a more sustainable industry. It will be imperative for the tourism industry not only to be concerned about external pressures influencing the environment in which they operate, but also with keeping their own internal environmental management programs in order. There is an increasing realisation that as a profit-orientated industry, tourism initiatives need to take into account environmental management as a key element of sustainable tourism development (Inskeep, 1991). The tourism industry has recognised environmental management as among the highest corporate priorities and as a key determinant to sustainable development. A proactive position is being taken to convince government and the community that they understand the pressures faced. Enlightened leaders in the tourism industry are increasingly taking voluntary initiatives, promoting and implementing self-regulation, and assuming greater responsibilities in ensuring their activities have minimal impacts on the environment. Some successful tourist companies are developing and integrating environmental management programs into their operations. The changes in the industry over recent years can be summarised as follows:

- recognition at highest management levels of the importance of sound environmental management and performance;
- development of corporate environmental policy and guidelines for implementation;
- appointment of corporate environmental managers;
- assignment of environmental responsibilities to line management; and

- tentative use of environmental auditing as management tool.

  (Scaife, 1991)

It is clear that sound environmental management and performance are becoming more and more widely recognised. The following factors can help to explain this trend in the hotel industry:

Economic opportunities and increased competitiveness - Hotels that are putting in place measures to monitor and reduce energy use, to increase the efficient use and recycling of resources and to reduce waste, find that these measures rapidly pay for themselves through cost-saving, and hence improve the competitiveness of the business;

Developing a sustainable industry - It is now recognised that business cannot afford to pursue economic success without regard to long-term ecological impact. Increased business travel and tourism are leading to ever greater pressure for companies in the tourism sector to demonstrate actively their commitment to the sustainable development of this, the world's largest industry.

Employee quality and motivation - All hotels want to recruit the best possible staff and retain them, wherever in the world they operate. Pride in the company is essential, and it will be those companies that are best responding to public expectations and concerns about the environment that will succeed in motivating their staff, reducing staff turnover and attracting the best recruits. Many hotels are asking their own employees for suggestions aimed at introducing new and improved environmental practices.

Market acceptance - The well-being of a company does not depend only on the goodwill of shareholders. It must secure the goodwill of all its stakeholders -its employees, customers, suppliers and the wider community - to develop, retain and enhance its market position. Concern for the environment is shared by more and more of these stakeholders.

Business development and market entry - In markets where a company is developing its operations through new ventures, a track record of environmental responsibility is increasingly important to protecting a favourable corporate image.

Projecting brand image - In markets where a hotel group is not yet well established, the association of the company's name and logo with events, publications and projects that are clearly focused on benefiting the environment can contribute to brand image and competitive market position (International Hotels Environmental Initiative, 1993).

The above factors have a common feature - self interest. It is in the industry's interest to cut costs, improve market share, capture new markets and comply with regulations. To this end, individual tourism operations and the industry association have developed environmental management programs or policies. As noted earlier, the Australian Tourism Industry Association (1990) made an important contribution to the development of sustainable tourism through its "Code of Environmental Practice" and the document, "Environmental Guidelines for Tourist Developments". The reasons for the ATIA formulating these codes and guidelines are perhaps twofold. First, a concern to maintain a sustainable industry: significant environmental damage will reduce the attraction of tourist sites with a consequent reduction in tourist

numbers. Secondly, however, ATIA is attempting to maximise the reputation of tourism as an ecologically responsible industry.

ATIA's Code of Environmental Practice provides the conceptual framework for encouraging environmentally responsible tourism. The Environmental Guidelines for Tourist Developments are comprehensive and enlightened.

While the above initiatives are developed from the industry's perspective, there are no mechanisms or ways developed to test the code's effectiveness and there seems no examples of any steps taken to ensure that the industry environmental performance in implementing the Code has been audited (Anderson, 1994). Therefore, environmental audits can provide a tool to examine the performance in implementing the Code of Environmental Practice by the tourism industry.

On the international tourism scene, some important initiatives have been taken to bring about best practice environmental management. The most notable initiative is provided by the World Travel and Tourism Council (WTTC). Since the Council was formed in 1990, promoting economic growth in harmony with the environment has been at the centre of its work. The Council's goal is for its member companies and the industry at large to build environmental responsibility into their basic management and operational practice. In its work, WTTC has:

- introduced Environment Guidelines for its Members, focused on impact assessment, environmental audits, Board-level control, and company-wide commitment of their companies to implementation of the Guidelines;

- established the World Travel and Tourism Environment Research Centre (WTTERC) in 1991 to track industry environment policies and programs, and identify best practice examples world-wide;
- developed the Green Globe program - a global environmental management improvement and public awareness program for the industry. Green Globe will encourage companies to incorporate environmental improvement into their management systems and will provide comprehensive support through a central database and world-wide network of advisers;
- undertaken a joint analysis of Agenda 21 for Travel and tourism with the World Tourism Organisation and Earth Council;
- Signed a memorandum of co-operation with the Earth Council, a newly formed non-governmental initiative created to provide a moral voice for sustainability.

  (World Travel and Tourism Council, 1994).

Again, in the international scene, in 1993, the International hotel industry established the International Hotels Environment Initiative (IHEI) which is co-ordinated by the Prince of Wales Business Leader Forum in order to foster the continual upgrading of environmental performance in the industry world-wide. The IHEI produced a manual called *Environmental Management for Hotels: the Industry Guide to Best Practice.* The manual provides a most useful reference and blueprint for improving environmental policy and procedures. It is believed that in the future, more and more major hotels and international tourism groups will become increasingly involved with best practice environmental management.

4.4.3. Self-Regulation

According to WTTERC's (1993) definition, self-regulation is the introduction and adaptation of business practices to meet environmental criteria with self-imposed targets and monitoring system, possibly enforced by membership of trade associations. It is believed that increasing environmental regulation by government is inevitable. Such regulation plays an essential role in the environmental management for tourism industry. However, self-regulation which may in turn influence and guide regulatory measure, can offer the best prospect of achieving excellent environmental performance. As WTTERC states, self-regulation can address the specific issues leading to environmental improvement without the imposition of the mandatory regulation and expense of regulatory control. It can be tested within companies prior to implementation, and it can be flexible enough to be adapted to changing circumstances. Self-regulation usually originates in large international companies providing leadership to the industry as a whole. The benefits and experience they achieve can be passed on through trade associations, tourist boards, and codes of practice, to smaller companies, who would normally escape the regulatory net (World and Travel and Tourism Environment Research Centre, 1993).

The government also favours tourism industry self-regulation. The Australian government states:

> The Federal Government also favours industry self-regulation. The Government's overall objective is to minimise regulations impeding industry growth to create a framework for the development of a productive and efficient industry while still protecting the public

> interest. Government regulation should only occur where there is a demonstrated need, for example, to ensure safety or environment protection.
>
> (Commonwealth Department of Tourism, 1994:3).

There are two forms of self-regulation noted by tourism industry which are emerging. One is that individual association is taking voluntary action to develop and adopt the codes of conduct and of good practice, and provide its members with the necessary information to implement, such as WTTC's Environmental Guidelines and Green Globe Environmental Program for the Travel and Tourism Industry (1993), PATA's Code of Environmental Practice (1991), and ATIA's Code of Environmental Practice and Environmental Guidelines for Tourism Development (1990). Another form of self-regulation is to adopt standards for environmental audits for an individual company or group of operations. In this situation, the environmental manuals created and implemented are among the most effective means of self-regulation to achieve environmental performance improvement (World Travel and Tourism Council, 1993). These manuals, typically audit-based, specify detailed environmental procedures which go far beyond compliance. Two such successful examples of self-regulation which have been publicised in the tourism industry are the Inter-Continental Hotel Group and the Canadian Pacific Hotel and Resorts (CPH&R) Group and these will be discussed in the following section.

4.4.4. Some Examples of Self-Regulation

On the international tourism scene, a number of large hotel corporations and airlines are implementing environmental management programs based on self-regulation in areas such as waste management, energy consumption, transport noise, purchasing policy, and staff training (Pigram and Ding, 1995). For example, Canadian Pacific Hotels and Resorts has produced a manual called The Green Partnership Guide (Troyer, 1992) which deals with the impact of hotels on the environment and the CPH&R's response. The main objective of this program is to institute the highest possible standards of environmental responsibility throughout the hotel chain in order to identify environmental improvements which, at the same time, could result in lower operating costs. The corporation also undertook an internal environmental auditing program, the aim of which was to identify those areas of hotel operations which could be changed to induce more environmentally benign practices and products, and to determine the level of support for environmental initiatives among its employees (Checkley, 1992).

Another example is British Airways' comprehensive environmental management program in which the main aims are to make the airline "a good neighbour", concerned for the community and the environment (British Airways, 1992). The airline places the emphasis on the following main areas: noise, emission and fuel efficiency, waste water, energy, materials, and congestion. It also recognises the importance of sponsorship, recycling, staff training, and environmental responsibility. Through these activities, the airline has increased its awareness of the importance of

identifying and ensuring compliance with environmental regulations affecting the environment.

In Australia, the Inter-Continental Hotel in Sydney, Australia, adopted the international corporation's Environmental Reference Manual as its internal environmental auditing guidelines. The aim was to increase awareness of environmental concern, to provide direct responses for application in the hotel, to reduce pollution to a minimum, and to be environmentally sensitive in all aspects of hotel operation.

Again, in Australia, Green Island Resort off the coast of far north Queensland has been redeveloped in keeping with environmental constraints, and with attention to siting, design, materials, sources of supplies, and disposal of wastes. Said to be Australia's only five star "ecotourist" resort built on a coral cay, Green Island Resort offers luxurious accommodation under the rainforest canopy, with structures suspended to protect the delicate ecology of the forest floor. The resort represents an impressive approach to resort development in harmony with environment (Pigram and Ding, 1995).

A further example in Australia is Aanuka Beach Resort near Coffs Harbour. Aanuka is a relatively small, secluded resort created in a natural rainforest setting close to the beachfront. The emphasis is on the attractions of the fauna and flora of the sub-tropical environment, with construction materials, architectural design, and landscaping in keeping with the inherent scenic appeal of the site. Operation of

Aanuka incorporates many features of best practice environmental management in the tourism industry. Comprehensive programs for recycling and management of wastes, energy and water conservation, and protection of the natural environment, are features of resort operations. Advertising programs feature the "greenness" of the resort and its management. The success of Aanuka beach resort is perhaps a good indication of the marketing advantage to be gained from environmentally sensitive tourism development in the coastal zone. Moreover, the demonstration effect of the successful appeal to tourists of a nature-based resort is already being reflected in the promotion of neighbouring "green" beach resorts in Australia. Annuka also provides convincing evidence of the benefits of monitoring environmental performance, and the role of self-regulation and environmental auditing. The resort has detailed procedures in place for detecting and correcting any environmental impacts which occur, and for checking on levels of compliance with operational procedures. The primary responsibility for sustainable management of beach resorts presumably rests with regulatory authorities and planning agencies. However, an important component of environmental management program should also be self-regulation (Pigram and Ding, 1995).

The adoption of internal environmental auditing procedures to monitor the setting and observance of appropriate standards of environmental excellence, as is the case at Aanuka Beach Resort, serves as a useful benchmark for other tourism developments in the coastal zone. The experience at Aanuka and similar resorts is important, because the example of large scale international corporations, mentioned earlier, may not translate readily to the level of individual resorts. The challenge is to devise an

effective, user-friendly environmental auditing system for tourism undertakings and demonstrate its benefits for specific sectors of the industry at defined scales of operation (Pigram and Ding, 1995).

4.5. Co-operation of Public and Private Sectors

Effective and efficient environmental management for sustainable tourism development is a big challenge. It requires partnership and co-operation between the tourism industry and government. Effective co-operation will ultimately enhance the improvement of environmental performance of the tourism industry, and the importance of this co-operation in environmental management is rapidly gaining acceptance (World Travel and Tourism Council, 1993).

As discussed above, both public and private sectors have responsibilities in effective environmental management for tourism development. It is essential to maintain close co-operation between the public and private sectors throughout the implementation and management process (McIntyre, 1993). It has been suggested that self-regulation by industry works only within a framework of environmental constraints dictated by legislation and regulation (Buckley, 1991a). Self-regulation, alone, has proven to be an ineffective policy in a range of environmental activities. On the other hand, if legislation and regulation are to achieve the goals of environmental protection, they need the willing support of tourism industry. Anderson (1994) calls for self-regulation as "co-regulation" where the tourist industry should firmly identify its own readiness, willingness and ability to accept full responsibility for a fairly high standard of

internal environmental management within a legislative framework, so that it can create much closer collaboration between industry and government. Buckley (1991a) also states:

> self-regulation" is never likely to achieve adequate environmental planning and management in the tourist industry. Externally imposed environmental policy measures, whether regulatory, technical or economic, are needed to provide the incentive for individual tourist operator and development corporation to undertake good environmental planning and management.
>
> (Buckley, 1991a: 229)

Buckley (1989) also criticises the lack of co-operation in environmental management for the Australian tourism industry.

As explained above, the respective roles of government and tourism industry vary, depending on the circumstances of the nature of development subject to different policy decision, and organisational structures. A number of mechanisms exist to co-ordinate environmental management for tourism development, and operate at Federal, State and local levels. Tourism is a fragmented industry, and as with many other aspects of environmental management for tourism, these co-ordination mechanisms have been created in response to particular demands within particular sectors. Much of the co-ordination mechanisms are designed to meet specific objectives, and although they may be effective in dealing with specific issues, they have limited capacity to deal effectively with broad strategic issues (Resources Assessment

Commission, 1992). These limitations mean that current environmental management cannot operate effectively. Considering the fragmented characteristics of the tourism industry, an effective regulatory system, along with close cooperation in environmental management, should be maintained in order to cope with the increasing demands for the improvement of environmental performance of tourism development. It is important that such close co-operation should be maintained at the local level. A common organisational approach is to establish a co-ordinating body on tourism in the area, such as a tourism advisory board or co-ordinating committee comprised of representatives of government, the local community and the private sector. Such a body would meet regularly to exchange ideas and information, co-ordinate activities and pursue programs of common interest, and advise responsible authorities to take appropriate action, jointly when necessary. With all public and private sectors assuming their responsibilities, much progress can be made in improving the environmental performance of tourism development.

4.6. Summary

Environmental management for tourism development is one of the biggest challenges facing government and the tourism industry. The effectiveness of management is a function of the effectiveness of the organisational structure. All levels of governments, communities and the tourism industry have responsibilities for improving the environmental performance of tourism development. It is important that government provides strong leadership to carry out a sound environmental management program. In Australia, the current regulatory frameworks governing

environmental management for tourism development in the Commonwealth, State and local government areas are complex, and lack uniformity and cooperation in both objectives and administrative structure. The state and local governments are and will remain crucial in day-to-day management activities. In particular, it is at the level of local government that many decision about tourism development which have environmental impacts are made. However, local governments rarely have adequate information, resources and expertise to carry out effective environmental management activities. State governments have organised their own environmental legislation and environmental agencies to carry out environmental management responsibilities in the areas of setting quality standards and regulating compliance by a variety of means, including monitoring, permits, pollution control equipment, etc. However, at the level of State government, a multitude of agencies and programs, often with different objectives and priorities, are involved in environmental management. There is a absence of focus, or even co-ordination, which sometimes has led to conflicting advice being given to local government about environmental matters. Notwithstanding constitutional limitations, the Commonwealth Government can still play an active role in environmental management through its own environmental legislation and various agencies. The Commonwealth has also developed a range of responsibilities through becoming a party to several international agreements and conventions which cover environmental issues in Australia. National co-operation can also be facilitated by several Commonwealth-State Ministerial Councils which consider aspects of environmental issues of tourism development. In the areas of environmental concern, communities tend to be particularly active and can often give support to sustainable tourism development.

The tourism industry is becoming more environmentally aware in its operational activities. Often through industry associations, tourism can perform an essential role by self-regulation in environmental management matters, setting industry environmental guidelines and standards.

It is essential that both public and private sectors closely co-ordinate their efforts and programs toward common goals in promoting the effectiveness of environmental management. With all these parties assuming their responsibilities, much progress can be made in improving the environmental performance of tourism development in Australia.