Environmental tourism Conservation and its role on urban Ecosystem

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ABSTRACT

The institutional arrangements framework in this research needs the variables of analysis and seeks to outline how urban green tourism can be an effective approach to addressing the issues of Ecotourism in cities growth, waste, etc., and demonstrates how sustainable tourism options can capitalize on the existing features of a city. This article undertakes an institutional analysis of tourism and recreation management in the protected natural area systems and development and launch of the map is discussed and some of the problems encountered are examined. Key strategies for launching green tourism products are presented in the recommendations.

Key words: Conservation, Assessment, Environment, Tourism, Management

Introduction

From an ecological view, cities may be viewed as living organisms, and analysed from this perspective to improve their environmental performance and long-term sustainability. In other words, an Ecocity is one that is environmentally superior, where nature is preserved, conserved, and sustained. A number of principles have been suggested for defining an Ecocity (Graedel, 1999):

• The city must be sustainable over the long term.
• The city must utilize a systems approach to evaluating its environmental interactions.
• The city design must be flexible enough to evolve gracefully as the city grows and changes.
• The open space of an ecocity must serve multiple functions.
• The city must be part of regional and global economies.
• The city must be attractive and workable.

For more than 500 years Western society has created parks to be used by people (Eagles & McCool, 2002). Since the creation of the first national parks in the ‘New World’ (United States, Canada, New Zealand, and Australia) at the end of the 19th century, protected natural areas have become important tourist attractions in many countries (Butler & Boyd, 2000). This trend has increased in recent years with the development of nature-based tourism and a growing outdoor recreation industry.(1)

There has been considerable debate about the possible structure of the future world. Unrestrained development and rapid consumption of many non-renewable resources has raised questions about the long-term sustainability and even the continued existence of humanity. Malthus’ (1766-1834) gloomy tome (Essays on the Principle of Population) was perhaps the first message of a future that may not be what humanity hoped for. Fortunately Malthus’ fears have thus far proved to be wrong perhaps because humanity has managed to develop sufficient technological fixes to solve the issues of overpopulation that concerned him. Or has technology merely delayed the inevitable course of events predicted by Malthus? That is not an issue that will be pursued in this paper. The need to change our ethos of development from one of domination to coexistence with the ecosystem has been apparent for many decades, but so far, few steps have been taken globally to incorporate such a transformation.

Yang (2004) noted that the four most common terms used to indicate Ecocities were: a city that is green, environmentally friendly, is sustainable and is based on natural ecology. Further, Yang (2004) identified six South Korean cities that were working towards establishing themselves as Ecocities but noted that these cities had yet to adopt holistic ecological systems and functions and therefore could not be defined as true Ecocities. The most radical interpretation of an Ecocity is “a city that lives by a priority scheme, and puts wildlife first” (Vandeman, 1995) including a perspective that human courts have no jurisdiction over wildlife thus putting wildlife are above the law. This is seen as a view at the extreme as humans consume
animals for food, a practice that would be incompatible with recognising wildlife as equal citizens of the community.

The ‘Ecocity’ movement has grown, incorporating initial principles of sustainability and environmental protection, with ideas of restoration, community values and support, and a new lifestyle within these cities in order to achieve a balance with nature. The actual ability to create and sustain an Ecocity awaits the future. The more cynical observer will note that at the heart of western capitalism is the view that profit drives all decisions and without profit a concept such as Ecocities is doomed. A more realistic view might be that without some movement towards the concept of sustainable cities human populations face extreme peril from failing ecosystems and that, based on the price mechanism, Ecocities might be able to provide the range of services required to continue to sustain a high standard of living within a sustainable ecosystem.

To achieve the ideals of the Ecocity, transport systems need to be directed away from the car dominated model of many western cities towards cities that are built around public transport and non-motorized travel. However, city planners face a dilemma achieving these aims. Within many developed countries two types of housing demand patterns are currently evident: the recent trend to transform inner cities into high density residential areas allowing residents to be close to work and entertainment; and the decades long trend of low density living that has created the massive and energy inefficient urban sprawl characteristic of cities in North America, parts of Europe, Australia and increasing in Asia. From a transport planning perspective the former is the easiest type of city to provide transport service for. In areas of high density it is relatively easy, though expensive, to design mass transport systems based on a mix of buses, trains and light rail services with some allowance for private motor vehicles. Public transport services can be operated on a high frequency basis and through interchanging, most areas of cities can be made relatively accessible. With high density and effective city planning walking, stylizing and light rail systems can offer residents fast, cheap and effective transport between home, shops, entertainment and work.

In cities where cars have become the dominant form of transport roads and parking places dominate the landscape. Roads, especially freeways, effectively isolate residential areas and make the provision of public transport a difficult task for planners. To be effective public transport needs to be able to offer services that are frequent, operate at night and early morning, are mechanically safe as well as perceived to be safe from the threat of violent crime against the person, user friendly, yet reliable, provide routes that offer close to door to door service standards and are not overly costly. The low density of suburban areas is the antithesis of these characteristics and as a result public transport in many suburban communities offers services that lack frequency, may not operate early morning and late night services, does not always offer the door to door service of transport in high density areas is often not user friendly and is usually expensive.

Environmental Arrangements Framework(1)

Nelson (1978a, p.48), in proposing a structural framework for the study of national parks and other land use, includes as one of its four basic components ‘institutional arrangements’, which he defines as “forms of government, agencies, civil and criminal laws, legislation, and other means of influencing human behaviour and effects on land use”. It is important to note in this definition the relationship that Nelson has made between the institutions and the ‘effects on land use’. Nelson underlines the importance of recognising that institutional arrangements are social phenomena that often have an “indirect and unappreciated effect on land use and landscape” (1978a, p. 48). Nelson (1978b) presents a general guide for preparing national or regional reviews of national parks in which ‘institutional arrangements’ are considered one of the components that can be divided into two elements:

I. Legislation, Organisation, Financing;

II. Major Management Techniques:

Another interesting exercise comparing protected natural area systems in the world was undertaken by the Commission on National Parks and Protected Areas (CNPPA) of the World Conservation Union (IUCN) (McNeely, Harrison, & Dingwall, 1994). The study reviewed regional protected areas including the following components:

- Historical perspective,
- Current protected area coverage,
- Additional protected areas required,
- Institutions in protected areas,
- Current levels of financial investment in protected areas,
- Human capacity in the management of protected areas,
- Priorities for future investment in protected areas,
• Major issues in protected areas in the region, and
• Priorities for action in the region.

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<th>Table 1.1: Variables for ‘Institutional Arrangements’ Analysis</th>
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Adapted from (Mitchell, 1989; Nelson, 1978b)

Inputs for conservation:

The costs of conservation consist principally of the sums paid for the purchase of land areas and the compensation payable to the owners of land remaining in private hands. Estimates of the potential costs have set out from the assumption that the terms of compensation will conform to existing regulations. Under the Nature Conservation Act and Land Redemption Act, forest owners are to be paid “compensation in full according to current prices”, or if the current price does not compensate the owner fully for his loss, the compensation must be based on the yields to be expected from the holding. If land is acquired under other laws, compensation must be based on the provisions made in those laws. The calculated costs to the State of the supplementation of the Natura 2000 network are about 15.3 million euros.

Importance of Green Zones in Urban Ecosystem:

Trees have been part of the urban environment for centuries. What are spoken of today as the benefits of urban trees/urban forestry have been known for many years, though the expression of these benefits has been altered somewhat. The social aspect of the using of trees and tree-lined parks and walks where people congregate and engage in business or leisure has a long tradition in Europe. In the past a limited range of trees has been used in urban areas.

Though a wider selection of tree species and cultivars developed for urban areas are now planted in cities, there is still a major reliance on a few genera such as Plane (Platanus), Lime (Tilia), Horse Chestnut (Aesculus) and Maple (Acer). In the past many trees were lost due to Dutch Elm Disease (Ophiostoma novo-ulmi) and at present Cameraria, a butterfly native to Macedonia, is causing serious damage to Horse Chestnuts in Europe.

Tourism in the Urban Ecosystem:

There are three classes of attractions: built, natural and social/cultural attractions. Built refers to an enormous range of structures that includes heritage, accommodation, places for entertainment, transport infrastructure, worship, commerce, learning and government as well as precincts where people gather. Natural include areas where nature dominates or is predominate and includes shorelines, river banks, undisturbed land where natural ecosystems continue to function and parks including those that have been modified to those that retain some elements of their prehuman structure. Social/cultural experiences refer to those activities that focus on the human experience and while taking place within a built structure or in nature are centered around interaction between people. These forms of experiences are diverse and may include rock concerts, shopping, entertainment, sport, recreational activities, theatre, dining and sex tourism.

Cities usually offer the visitor a range of built attractions and social/cultural experiences, the size and diversity of which will be largely a function of size, power and the ranking of the city in the national hierarchy of cities. Small cities may have relatively less attractions than large cities that by virtue of their larger economic base have more wealth and are able to support a greater diversity of institutions, places, tastes and experiences.

Cities are often unable to offer a great diversity of natural experiences within their boundaries as natural landscapes have been modified to accommodate human populations. To meet this area of tourism demand cities may develop pseudo natural attractions within the city boundary as well as develop natural attractions in adjoining hinterland areas. Within the city boundaries one response to demands by visitors for nature experiences has been the creation of pseudo natural attractions that are built and operated as commercial enterprises or as community amenities by the public sector. These include zoos, parklands and other ‘designed’ and ‘controlled’ landscapes within the boundaries of the city. It is this response to the demand for experiences of nature by both hosts and guests that led to the creation of new artificial urban ecosystems that often feature a mix of endemic and introduced species in highly modified environments. Facilities of this nature rarely mirror
the diversity of the ecosystems they replace. A second response has been to preserve remnant elements of the
original landscape and develop these areas for tourism consumption. A third form has been to preserve
remaining natural areas in their original state. In one example of this form of preservation environmental groups
in the Australian coastal city of Noosa successfully halted large scale clearing of coastal forests and were able
to convince the local government authority to cap the town’s population. The resulting preserved areas were so
appealing that rather than handicapping tourism development the ambience of the town’s natural areas became a
major attraction resulting in Noosa becoming a major destination for high income, high yield tourists.

If the Ecocity concept is embraced as the basis for city development there is some temptation to label nature
based tourism experiences with the prefix ‘eco’ however in many cases this may be inappropriate particularly
where there are large disturbed natural areas. The term ‘nature tourism’ is a more appropriate description of
tourism undertaken within natural areas in cities. Unfortunately, in the commercial tourism industry and in the
minds of many tourists the term ecotourism has a much broader understanding and includes any form of contact
with nature. In many regions the natural areas that surround cites have become major foci for tourism
particularly where there are relatively large tracks of undisturbed land and where the prehuman ecosystems
continue to function. Because of the nature of farming many of these undisturbed areas are in mountainous areas
unsuitable for farming.

The structure, location and demand for cities’ built, natural and social/cultural activities will largely
determine the structure of the tourism transport system that is required. These issues will be discussed in the
next section.

\textit{Transport and its Importance for Ecocities:}

The transport tasks in any city can be divided into three components; travel into and out of the city, transport within the city, and transport from the city to hinterland attractions. The mode of transport used for travel to a city will usually be a function of the following factors:

- Distance between the generating region and destination
- Modes of transport available for travel to the city
- The structure of transport services within the city
- The position of the city within the tourist’s itinerary as either the only, one of a number or last city to be visited, and
- The time and money that tourists have available to fund a specific trip

In effect tourism creates the need for a specialised transport system that may have quite different
characteristics to those transport requirements of the cities’ residents (Prideaux, 2000). For a city to continue to
attract tourism the city must provide a transport system that matches the needs of the tourism industry while
continuing to provide services for residents. While there are often areas of overlap between the demands of
tourists and residents there are a number of transport tasks that may be specifically orientated to tourism
(Prideaux 2003). These include the ability to travel from transport entry points such as railway stations, ports
and airports to the areas where tourism accommodation is clustered. Scheduled public transport or specialist operators including
tour coach operators may undertake these demands.

The structure of a cities’ transport system is dependent upon a number of factors including:

- The nation in which the city is located
- The cities’ size including population and physical area
- The pattern of development on a spectrum that ranges from compact high density to sprawling low density
- The location of tourism attractions
- Dispersal patterns
- The composition of inbound visitor sectors

These factors govern the structure of residential transport as well as tourism transport. In large cities such as
Hong Kong, Singapore and Tokyo the transport system is organized around public transport. Tourists visiting
these countries quickly become accustomed to the use of public transport even if they are private car owners in
their home country. In large cities such as Los Angles, Phoenix and Sydney public transport, except in down
town areas, is relatively poor because private vehicles undertake most of the transport task. The latter cities
spread out over a large area while the former are relatively compact.

The ability of a city to provide adequate public transport will to some extent depend on the source of its
visitors. For example, if tourists elect to use their own private transport, as is the case in many European, North
American and Australian cities, private cars will become a primary form of transport for many visitors. Cities
focusing on this market will need to develop car based transport systems to attract this market but in doing so
are forced to dispense with many of the elements that are characteristic of an Ecocity such as a reliance on
public and non motorized transport.
Cities of this nature usually have significant areas of high density residential development and the transport demands created by tourism can be relatively easily incorporated within the pre-existing public transport network.

In all cities dispersal patterns are determined by the relative locations of tourism accommodation and attractions. Where cities have a well-developed public transport systems tourists will generally use pre-existing transport networks and become largely indistinguishable from residents. Where most sites of interest are accessible by public transport the demand for tourist coaches will be small. In motorized cities the structure of the transport system is likely to be governed by a number of factors: the proportion of total visitors who either drive their own vehicle to the destination or rent a vehicle on arrival; the quality of the down town public transport system; and the location of attractions relative to public transport networks. Where attractions are accessible by public transport a pattern similar to public transport orientated cities will develop and tourists will become largely indistinguishable from residents. Where attractions cannot be visited via public transport visitors will generally select coach tours that provide an alternative transport system for visitors only.

The location of attractions is an important element of the structure of tourism transport networks. If attractions are located outside of the city either in the immediate hinterland or periphery a tourism specific transport system will need to be developed. This may be based on either public transport, private vehicle or tourist coach or a combination of these. Figure One illustrates two cases. Case one represents a city where most attractions are located within the precincts of the city while Case two illustrates a city that has a significant number of attractions outside of the city.

Transport Network in the Urban Ecosystem:

A) outside the City:

B) within the City:

In case one the transport network radiates out from the city and may also have some links between attractions depending on the characteristics of the destination. In this case tourist coaches will be a significant element of the tourism transport network where there are inadequate public transport links. In case two, attractions are generally located within the city boundaries and tourists are able to utilise public transport if available or tourist coaches where there are no public transport services.

Urban Ecosystem Activities:

Over the last 20 years Cairns has grown rapidly as tourism has replaced farming as the major local industry. Until recently most development has focused on the conversion of former cane farms to urban settlement. Few areas of high ecological quality have been involved in this process and as a consequence there has never been a debate between advocates of growth and advocates of conservation. This is now changing as new development is taking place on the boundaries of parks or using still undeveloped freehold land that has not been previously cleared. It has been difficult for the Cairns LGA, the Cairns City Council, to resist this recent form of development because of the large pro-development lobby that exists in the city. It is apparent that many residents have yet to realize the problems that are beginning to emerge particularly when they are aware of the large areas of protected mountains that are visible from all parts of the city. For many residents the location of the city within sight of significant protected areas gives a false sense of actually living in an Australian prototype of an Ecocity. This is not the situation and there needs to be considerable education to alert residents of the need for sustainability and to support measures to preserve the natural areas that now constitute the core of the cities’ tourism product and is its major asset. Currently the Cairns City Council (2004) is under development a new Planning Scheme for the City. Currently in draft form, the plan titled Cairns Plan is designed to provide the framework for managing growth and development of Cairns over the next 10 to 15 years. A basic tenet of the plan is to manage growth sustainability, without compromising residents quality of life, environmental diversity or economic viability. The ability of this new plan to increase sustainability and retain the visual amenity of the city while managing growth will be an important factor in the cities future claim to being a world class nature based destination.

To date the LGA governing Cairns has failed to adequately recognize the need to introduce local planning regimes that are more sensitive to the local environment. There are a number of reasons for this including the failure to recognize the fragility of the environment particularly in a time of environmental change, the conversion of large areas of former sugar cane plantations to residential development has removed planners from having to directly confront issues related to the environment, the introduction of building styles from southern areas of Australia that are not environmentally sensitive to the region’s climate, the large number of immigrants to the region who are not familiar with the region’s environmental values, a workforce that is not
particularly environmentally sensitive and who are prepared to leave it to the authorities to manage the environment on their behalf, an attitude that the current uses of the environment are not damaging it, a development mentality that has yet to recognize the needs of the environment and from a LGA perspective reliance on adhering to general state wide standards many of which have not been developed with the particular needs of the local Cairns environment in mind.

As it is currently structured the Cairns transport network is primarily geared to service the needs of the cities’ 135,000 residents rather than the 2.22 million tourists who visit the city each year. Civic authorities and the tourism industry have failed to address the significant deficiency in public transport for two apparent reasons: the demands of residents take precedent over those of the tourist because electoral power resides in the residents; and because the private sector has substituted a de facto transport system based on tour coaches. When prices of travel to attractions are compared, public transport is usually much cheaper than tour coaches partly because of the high costs of the distribution system required to support the coach companies. It is possible that the city would be more competitive if transport costs were lower.

Conclusions:

The range of research work being undertaken in the areas of planning, establishing and managing trees in and around cities is discussed fully.

Due to its location between two significant world heritage listed natural areas the city is an ideal candidate for redevelopment as an Ecocity. Moreover, the city has access to considerable scientific research to assist planners and the tourism industry determine levels of sustainability. However, the city has failed to embrace the principles of the Ecocity movement. The emerging problems of sustainability, particularly of the tourism industry, in an era of global warming may be the trigger that creates an awareness of the need to adopt the concept of the Ecocity.

From a tourism perspective adoption of the Ecocity concept would give the city considerable opportunity to promote itself as a unique environmental city that harmonizes with, rather than dominates the surrounding landscape. Given that the cities’ current primary attractions are the Great Barrier Reef and the Wet tropics adoption of Ecocity principles should be seen as an immediate priority and that rather than disrupting resident’s lifestyles would enhance living in the city and boost the cities’ tourism economy. If these principles were adopted transport structures would change with a greater emphasis being given to non motorized transport further enhancing the cities’ appeal particularly in segments where public transport use is currently low.

References


